



ILLINOIS

ACADEMIC CATALOG 2017-2018

GENERAL INFORMATION

The *University of Illinois at Urbana-Champaign 2017-2018 Academic Catalog* is the official listing of courses, programs, and degree requirements for undergraduate and graduate students. Information on courses, curricula, fees, policies, regulations and other matters is subject to change during the period for which the *Catalog* is in effect.

The class schedule is available each term in the *Course Explorer* (<http://courses.illinois.edu>). The class schedule lists those courses that will be offered during specific terms, as well as times and locations. Not all courses listed in this *Catalog* are offered every term.

Course Descriptions

The *Catalog* lists courses of instruction alphabetically by subject and numerically by course number. The course number denotes the level of the course:

Courses numbered 000-099 are for preparatory work that does not count toward a degree but do count for tuition and load.

Courses numbered 100-199 are intended primarily for freshmen and correspond to entry-level work. They may be taken by sophomores, juniors, and seniors.

Courses numbered 200-299 are intended for lower division students who satisfy the published prerequisite(s), if any. Transfer credit from two-year colleges around the state would correspond to 100 and 200-level offerings.

Courses numbered 300-399 are intended primarily for juniors and seniors who satisfy the published prerequisite(s), if any. Transfer work from a community college does not correspond to these numbers.

Courses numbered 400-499 are intended for upper division undergraduate students, sometimes also for graduate students.

Courses numbered 500-599 are intended for graduate and professional school students.

Courses numbered 600-799 are available for certain professional school courses with restricted enrollments. These courses apply primarily to law and veterinary programs.

Course credit is listed after each course title. The University counts credit in credit hours. Following the credit hours is a brief description of the content, requirements for registration to the course (if any), and other advisory statements. Additional information relating to the course content is available in the *Course Explorer* (<http://courses.illinois.edu>). For information on credit policies, see the *Student Code*.

A **crosslisted** course refers to a course offered under the same course title by a different department. Courses may be crosslisted with one or several departments and will be noted by the statement: "**Same as.**" The description of a crosslisted course is found only in the entry for the controlling department. Reference to the controlling department's course is noted by "See...."

Prerequisites are advisory statements that refer to special requirements for registration in certain courses. These may include one or more courses that must be completed prior to, or in the same term. These statements may also recommend knowledge, skills or standards, or class standing that must be demonstrated prior to registration.

Degree Programs

The undergraduate degree programs of study are organized by Colleges and Schools. Specific majors can be found by clicking on degree programs in the left-hand navigation or by exploring offerings in each college or school or by using the "Undergraduate Programs" link in the upper navigation bar to find an alpha list of programs offered as majors, minors or concentrations. Graduate programs of study are organized by program. A listing of programs is found in the left-hand navigation as well as the "Graduate Programs" tab in the upper navigation bar.

Degree Requirements

General Education Requirements

The University of Illinois at Urbana-Champaign requires that all undergraduate students take General Education - or "Gen Ed" - courses to gain and use broad knowledge beyond the specialized learning they will do in a major field of study. These Gen Ed requirements cover the kinds of knowledge all students should have: the humanities and arts, social and behavioral sciences, natural sciences and technology, quantitative reasoning, composition/writing, and cultural studies.

General Education courses at Illinois are mindful of our students' diverse backgrounds, needs, and interests, and are an essential component of the transformative learning that prepares our graduates to become alumni who make a significant societal impact. These courses build students' abilities to think critically, solve problems, generate new ideas and create knowledge, make connections between academic disciplines, respect and understand differences, and develop as citizens and leaders.

General Education at Illinois is more than a set of required courses; it is a gateway into the Illinois experience.

Courses are noted as fulfilling one or more of the following categories:

- Composition I
- Advanced Composition
- Humanities and the Arts: Literature & the Arts or Historical & Philosophical Perspectives
- Natural Sciences and Technology: Life Science or Physical Science
- Quantitative Reasoning
- Social and Behavioral Sciences
- Cultural Studies: Western/Comparative Cultures, Non-Western Cultures, or US Minority Cultures

For a list of current courses approved for General Education credit, please visit the Course Explorer (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

Written Communication Requirement

Undergraduate Students:

- Satisfactory proficiency in written communication is a requirement for all undergraduate degrees awarded at the University of Illinois at Urbana-Champaign. This proficiency can be certified by the satisfactory completion of the "Composition I" general education requirement via the one-semester, four-hour course Rhetoric 105 (Writing and Research); the two-semester, eight-hour sequence of Rhetoric 101 (Principles of Writing) and 102 (Principles of Research) with Rhetoric 100 tutorials in both semesters; or the two-semester, six-hour sequence Communication 111 and 112 (Oral & Written Communication I and II).

- A student who achieved, prior to enrolling in college-level coursework, a sufficiently high score on either the appropriate college-preparatory English exam (currently ACT, SAT, AP, or IB) will earn course credit that fulfills the general education "Composition I" requirement and thus will satisfy the Written Communication requirement for graduation. More information can be found under "Proficiency Testing" at go.illinois.edu/pnp (<http://go.illinois.edu/pnp>).
- Non-native English-speaking students who are mandated to take the English Placement Test (EPT) and given an English as a Second Language (ESL) placement must fulfill their Written Communication requirement by taking the two-semester, six-hour sequence of ESL 111 and 112 or the one-semester, four-hour ESL 115 course. They might also be required to take ESL 110 (Pronunciation). Non-native English-speaking students who are not required to take the EPT due to sufficiently high TOFEL iBT or IELTS scores may elect to satisfy the Written Communication requirement by taking the ESL, or the Rhetoric, or the Communication sequences. Students in this category who wish to take ESL must take the EPT to determine correct placement.
- If the academic credentials of a transfer student do not indicate fulfillment of coursework equivalent to fulfill the Written Communication graduation requirement, the student will need to do additional coursework to satisfy this requirement. Non-native English-speaking transfer students may be required to take the English Placement Test (EPT).
- Normally no more than ten hours of proficiency credit for the study of a single language other than English at the elementary and intermediate level shall be counted for graduation in the College of Liberal Arts and Sciences. Additional credit may be granted for advanced courses emphasizing literature and language structure rather than communicative competence in the language.
- Students who have earned the State Seal of Biliteracy will earn eight hours of credit, which will appear on their transcript as eight total hours of 100-level language credit (UFL1 1– for four hours and UFL2 1– for four hours).

Credit for Undergraduate Open Seminar Courses

- Credit in each 199 course shall not exceed four credit hours per semester.
- A student may accumulate an unlimited number of credit hours in 199 courses, but no more than 12 such hours listed on the student's transcript may be counted toward fulfilling graduation requirements, except in cases in which a larger number of credit hours in 199 courses is an integral part of a formal, college-approved program of study (e.g., Individual Plans of Study).
- A 199 course appears on a student's transcript with the departmental rubric and the title "Undergraduate Open Seminar" when a specific section title has not been assigned by the department offering the course.

Graduate Students:

- Satisfactory proficiency in academic writing in English is a requirement for all graduate degrees awarded at the University of Illinois at Urbana-Champaign.
- Graduate students who are admitted on limited status because they do not meet this proficiency requirement prior to admission may be placed into mandatory ESL courses based on the results of the EPT exam.
- Proficiency can then be certified by the satisfactory completion of a one-semester course (ESL 515) or the two-semester sequence (ESL 511 and 512). Students may also select equivalent coursework from the "English for specific purposes" tracks available through ESL (e.g., business track ESL 521, 522). International graduate students may also be required to take ESL 510 (Pronunciation).
- Mandatory ESL course assignments must be fulfilled in order to be eligible for graduation.

Kinesiology, Language Other Than English, and Undergraduate Open Seminar Credit

Credit for Kinesiology

Kinesiology courses numbered from 100 through 110 are activity courses. Credit earned in kinesiology activity courses may be included in the grade point average at the discretion of the individual colleges and may, at the discretion of the individual colleges, be included in the total hours required for graduation.

Language Other Than English Credit

- Except as prohibited or limited by the established policy of the student's college, credit in University of Illinois at Urbana-Champaign language courses other than English taken to remove high school entrance deficiencies may, at the discretion of the college:
 1. be counted in the total hours required for graduation, or
 2. be accepted in partial or complete satisfaction of the language other than English requirement for the degree.

Policy Notes

Illinois Copyright Policy

The University of Illinois at Urbana-Champaign makes every effort to comply with laws and institutional policies on copyright and to encourage awareness within its community of both responsibilities and appropriate actions for compliance.

Copyright law can be a complex topic to navigate, and the issues students, faculty and staff must confront when it comes to copyright are often different. For that reason, the University has compiled a variety of resources to help you navigate your copyright responsibilities.

Copyright Resources (<http://copyright.illinois.edu/resources>)

Annual Copyright Notice to Students (p. 3)

In addition, a variety of laws and regulations shape the specifics of copyright law. The Higher Education Opportunity Act is one of the laws that shapes copyright policies and education efforts at colleges and universities in America. How the University of Illinois at Urbana-Champaign satisfies the requirements of HEOA are outlined on this page (<http://copyright.illinois.edu/compliance>).

Religious Observances

The University of Illinois at Urbana-Champaign complies with the University Religious Observances Act (110 ILCS 110/). Details of the Act are available here (<http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1076&ChapterID=18>).

Smoke-Free Campus

As of January 1, 2014, smoking is prohibited on all campus property at the University of Illinois at Urbana-Champaign, both indoors and outdoors, in university-owned vehicles and in privately-owned vehicles parked on campus property. The advertising, sale, or free sampling of tobacco products is also prohibited on campus property. Littering the

remains of tobacco products or any other related waste product on campus property is further prohibited. The complete policy is available here (<http://cam.illinois.edu/v/v-B-2.1.htm>).

Student Code

Policies and procedures applying apply to all undergraduate, graduate, and professional students enrolled at the University of Illinois at Urbana-Champaign are found in the Student Code (<http://studentcode.illinois.edu>).

Student Consumer Information

Information and disclosures regarding institutional accreditation, programs, and services at the University of Illinois at Urbana-Champaign is available on the Office of the Provost's website (<http://provost.illinois.edu/student-consumer-information>). This includes a description of the institution's accreditation and state authorization, contact information for filing complaints with the accreditor and the state, financial aid, campus security, intercollegiate athletics, gainful employment programs, and student outcomes. A paper copy of the information on the website can be made available upon request.

Annual Announcement of Copyright Policies

Provided below is the University of Illinois at Urbana-Champaign annual announcement of copyright policies, please note that it is not necessary to reply to this email.

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under Section 106 of the Copyright Act (Title 17 of the United States Code). Infringement may occur when a copyright protected work is reproduced or distributed without authorization, including when it is uploaded or downloaded from the Internet or otherwise published without permission. Protected works may include (among other works) music, movies and television programs. Although there are limited exceptions not requiring permission, such as the doctrine of fair use, sharing substantial portions of such works, including on peer-to-peer networks, without authorization by the rights owner or by meeting the exception requirements is an infringement.

Penalties for copyright infringement include civil and criminal penalties. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or "statutory" damages set at not less than \$750 and not more than \$30,000 per work infringed. For "willful" infringement, a court may award up to \$150,000 per work infringed. A court can, in its discretion, also assess costs and attorneys' fees. For details, see Title 17, United States Code, Sections 504 and 505.

Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense.

All universities of the University of Illinois System make every effort to comply with laws and institutional policies on copyright. Students that receive a copyright infringement notice may face disciplinary actions. These disciplinary actions may include, and are not limited to, loss of network access, mandatory training about copyright infringement, sanctions of record on academic transcripts, and potential dismissal from the University.

For more information about copyright at the University of Illinois, please visit: <http://copyright.illinois.edu>.

Agricultural, Consumer and Environmental Sciences, College of

227 Mumford Hall
1301 W. Gregory
Urbana, IL 61801-9015
PH: (217) 333-0460
<http://aces.illinois.edu>

The College of Agricultural, Consumer and Environmental Sciences plays a key role in national and international research initiatives in biological, physical, social, and economic sciences. The scope of the College has broadened dramatically since its founding in 1867, while its purpose remains focused on advancing scientific knowledge that makes life better, healthier, safer, and more profitable for people in Illinois and around the globe. The College offers 10 undergraduate majors with 39 different concentrations.

The ACES College enrolls more than 2,700 students in its seven departments, leading to a Bachelor of Science degree. Students can select from majors and concentrations that direct the focus of study to their specific interests.

Teaching, research, and outreach opportunities are supported by excellent resources. The College of ACES Library and Information Center houses the college's collection of educational resources, computing facility and the College of ACES career development and placement office, which assists students in personal and career development through internships and placement after graduation. The Family Resiliency Center, Institute for Genomic Biology, Child Development Laboratory and extensive research centers in Champaign-Urbana and across the state are other examples of unique and excellent college resources. For instance, the Morrow Plots, a national historic landmark established in 1876, are the oldest agronomic research plots in the United States. The Morrow Plots are located on campus next to the undergraduate library.

The ACES James Scholar Honors Program and the Jonathan Baldwin Turner Undergraduate Research Program offer excellent opportunities for students to be involved in cutting edge research and solving contemporary challenges. Research is conducted in the broad areas of consumer behavior, biotechnology, environmental quality and protection, financial planning, food science, human nutrition, natural resource systems, and individual and family well-being.

Increasing the international knowledge and experience of students and faculty helps meet the growing demand for graduates who are internationally literate and able to work effectively in different countries, in different languages and with people of different cultures. The academic programs office provides initiative and focus to College international study abroad programs as well as integrating an international dimension to the educational experience.

The distinguished faculty, innovative programs, and pioneering achievements in teaching, research, and outreach activities, together with an enthusiastic and competitive student body, place the College of ACES among the top institutions in the country in a survey of peers.

Departments and Curricula

The Department of Agricultural and Biological Engineering offers two majors: Agricultural and Biological Engineering/Agricultural Engineering Sciences and Technical Systems Management. Students in the Agricultural and Biological Engineering major earn that degree from the College of Engineering and have the option of a second degree in Agricultural Engineering Sciences. This major is designed to produce graduates who have a basic engineering education for careers of engineering service to the agricultural, environmental, and biofuels industries. The intent of the program is to provide a combination of engineering theory and applications courses to permit students to pursue goals in academia, government or industry. The graduates are expected to provide engineering solutions in agricultural production, bioprocesses and product utilization, natural resources conservation, and are exposed to current social and cultural concepts and ideas. The Technical Systems Management major is designed to prepare students for careers requiring the application, management, and marketing of engineering technologies. Students study technological systems, business and economics (including organization, operations, management, marketing, and sales), and oral and written communications. Graduates of the TSM program accept positions of employment at highly competitive salaries.

The Department of Agricultural and Consumer Economics offers programs designed to prepare students for business- or policy-related fields with special emphasis on agriculture, consumers, and environmental protection. Students' study is concentrated in one of the following areas: agri-accounting; finance in agribusiness; agribusiness markets and management; consumer economics and finance; environmental economics and policy; farm management; financial planning; policy, international trade and development; and public policy and law.

The Department of Animal Sciences offers undergraduate students unique opportunities to conduct research projects with faculty. In addition, many students gain animal experience by working part-time at the U of I Farms. Internships and field study trips are additional avenues of gaining knowledge and experience. Study Abroad experiences are also strongly encouraged. Areas of concentration are companion animal and equine science; science, pre-veterinary and medical; and technology and management.

The Department of Crop Sciences major in Crop Sciences offers concentrations of study in plant biotechnology and molecular biology, crop agribusiness, biological sciences, agroecology, plant protection, horticultural food systems, and crops. In each of these concentrations students receive a strong grounding in science and can apply that knowledge through internship experiences with a wide range of agricultural employers. Each concentration can lead to employment immediately after completion of the B.S. degree, or to graduate or professional study.

The Department of Food Science and Human Nutrition offers concentration of study in dietetics, food science, hospitality management, and human nutrition. Courses in the department include the applications of biology, engineering, chemistry, physics, and microbiology to the processing, formulation, packaging, and distribution of food.

The Department of Human Development and Family Studies' major allows students to choose to concentrate their study in either child and adolescent development or family studies. The program prepares students for graduate education or employment in areas such as child care services, family life education, social work, human services, marriage

and family counseling, pediatric services in hospitals, cooperative extension work or business activities related to children and families. Students select course work according to their interests in human development, such as infancy, early childhood or adolescence, or family studies, such as the marital relationship, parent-child interaction, family change or conflict and conflict management in the family. Basic courses in these areas are linked to practical experiences in educational and community settings, and most courses emphasize issues related to cultural diversity and gender.

The Department of Natural Resources and Environmental Sciences provides students the opportunity to study resource and wildlife conservation and management, restoration ecology, the impacts of global change, and human dimensions of the environment. NRES is an interdisciplinary program that brings biological, physical, and social scientists together to teach and discover techniques to improve the health and integrity of urban and natural ecosystems.

Agricultural Communications is a major offered jointly by the Colleges of ACES and Media. The program is administratively housed in the College of ACES. Students specialize in advertising or journalism and go on to careers and graduate study in newspaper and magazine writing and publishing, advertising, broadcasting, and public relations.

The program in Agricultural Education offers the Agricultural Leadership and Science Education major. Students select a concentration of either Agricultural Leadership Education or Agricultural Science Education. This curriculum prepares students for positions requiring expertise in formal and non-formal education. Examples include teaching agriculture in the public schools; cooperative extension work; training and program development; and other education-related positions in agricultural and environmental agencies and businesses. Students completing the agricultural science education concentration will be eligible for Illinois teacher certification in agricultural education, and will have instruction in key pedagogical areas as well as agriculture. For teacher education requirements applicable to all curricula, see the Council on Teacher Education (www.cote.illinois.edu/ (<http://www.cote.illinois.edu/>)).

Admission Requirements

Freshman applicants must meet general course pattern admission requirements of the University.

Applicants for freshman admission are evaluated on the basis of their ACT scores, high school percentile rank, and statements of personal and professional interest, among other factors. Detailed information on the admission process may be obtained from the Office of Undergraduate Admissions.

Transfer applicants are evaluated on the basis of their transfer grade point averages and completion of core course requisites. Transfer applicants to the Dietetics and Human Nutrition major must have a grade point average of at least 3.0 (A = 4.0); applicants to Agricultural and Consumer Economics and Agricultural Science Education need a minimum GPA of 2.75, and all other curricula require at least a grade point average of 2.5. Applicants are encouraged to consult the Office of Undergraduate Admissions for specific course requirements.

Graduation Requirements

The minimum number of hours required for graduation varies between 126 and 130 for all curricula within the college. Included in the total must be all courses prescribed in the given curriculum and a sufficient number of electives to obtain the total number.

Each candidate for graduation must have a grade point average of not less than 2.0 (A = 4.0), including grades in courses transferred from other institutions, and a grade point average of not less than 2.0 in all courses taken at the University of Illinois at Urbana-Champaign. Candidates for graduation from Dietetics, Human Nutrition, and Agricultural Science Education must have institutional and overall grade point averages of at least 2.5 (A = 4.0).

Scholarship Information

A number of scholarships for undergraduate students enrolled in the College of ACES are made available through the generous support of alumni and friends of the College. Incoming and currently enrolled ACES students are eligible for consideration for merit-based awards that are awarded annually by the College. Additional information on scholarships for ACES students can be found at academics.aces.illinois.edu/ scholarships (<http://academics.aces.illinois.edu/scholarships>).

- Agricultural and Biological Engineering (p. 5)
- Agricultural Communications (p. 79)
- Agricultural and Consumer Economics (p. 16)
- Agricultural Leadership & Sciences Education (p. 82)
- Animal Sciences (p. 25)
- Computer Science and Crop Sciences (p. 49)
- Crop Sciences (p. 41)
- Food Science and Human Nutrition (p. 58)
- Human Development and Family Studies (p. 65)
- Natural Resources and Environmental Sciences (p. 70)
- Technical Systems Management (p. 14)

- Adult Development (p. 66)
- Agricultural Safety and Health (p. 15)
- Animal Sciences (p. 25)
- Crop and Soil Management (p. 34)
- Environmental Economics and Law (p. 22)
- Food and Agribusiness Management (p. 23)
- Food and Environmental Systems (p. 85)
- Food Science (p. 64)
- Horticulture (p. 34)
- International Development Economics (p. 23)
- International Minor in ACES (p. 86)
- Leadership Studies (p. 87)
- Natural Resource Conservation (p. 78)
- Nutrition (p. 64)
- Spatial and Quantitative Methods in Natural Resources and Environmental Sciences (p. 79)
- Technical Systems Management (p. 16)

Departments

- Agricultural and Biological Engineering (p. 5)
- Agricultural and Consumer Economics (p. 16)
- Animal Sciences (p. 24)
- Crop Sciences (p. 34)
- Food Science and Human Nutrition (p. 58)
- Human Development and Family Studies (p. 64)
- Natural Resources and Environmental Sciences (p. 70)

Agricultural and Biological Engineering

Alan Hansen, Interim Head

338 Agricultural Engineering Sciences Building

304 West Pennsylvania Avenue

PH: (217) 333-3570

<http://abe.illinois.edu>

The Department of Agricultural and Biological Engineering offers two academic majors through the College of ACES: The five-year combined program in Agricultural and Biological Engineering Sciences and the major in Technical Systems Management. The Department also offers a four-year major in Agricultural and Biological Engineering through the College of Engineering.

- Major in Agricultural and Biological Engineering (p. 162)
- Dual Degree in Agricultural and Biological Engineering/Agricultural and Biological Engineering Sciences (p. 13)
- Major in Technical Systems Management (p. 14)

- Minor in Technical Systems Management (p. 16)
- Minor in Agricultural Safety and Health (p. 15)

ABE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ABE>)

Agric Biological Engineering Courses

ABE 100 Intro Agric & Biological Engrg credit: 1 Hour.

Introduction to the engineering profession with career opportunities in the agricultural and biological engineering discipline. Concepts necessary for becoming a successful engineer including time management, design concepts, ethics, and teambuilding. Familiarization with laboratories, computer facilities, internships, and other opportunities. Team design experience. Emphasis on technical communication and problem-solving skills as well as career planning.

ABE 141 ABE Principles: Biological credit: 2 Hours.

Principles of biology relevant to agriculture, food, energy, and the environment, including microbiology, biochemistry, genetics, plant and animal systems, and ecosystems. Case studies of engineering applications where these biological principles have been taken into account or leveraged for the purpose of design.

ABE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours.

ABE 223 ABE Principles: Machine Syst credit: 2 Hours.

Machinery systems for off-road applications: internal combustion engines; fluid power; tractors, and traction; chemical application; grain harvesting. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 224 ABE Principles: Soil & Water credit: 2 Hours.

Engineering principles and methods of design and management of natural resources and environmental systems; watershed and hydrologic cycle; infiltration and surveying; runoff and erosion; water quality; non-point source pollution. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 225 ABE Principles: Bioenvironment credit: 2 Hours.

Principles of environmental control for biological structures: psychrometrics; mass and heat transfer through buildings; ventilation requirements. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 226 ABE Principles: Bioprocessing credit: 2 Hours.

Principles of bioprocess engineering applied to food and agricultural products: material balances; fluid flow; heat and mass transfers; drying; evaporation; fermentation; distillation; process simulation. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 341 Transport Processes in ABE credit: 3 Hours.

Principles of transport processes involving momentum, heat, and mass as applied to biological systems in agriculture, food, energy, and the environment. Credit is not given for both ABE 341 and CHBE 421. Prerequisite: ABE 223, ABE 224, ABE 225, ABE 226, and PHYS 213.

ABE 361 Off-Road Machine Design credit: 3 Hours.

Design and development concepts of agricultural and industrial machines; analysis and synthesis of tillage, planting, harvesting, chemical application, material handling mechanisms, and precision farming tools. Prerequisite: ABE 223 and TAM 212.

ABE 397 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 398 Special Topics credit: 1 to 3 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate term if topics vary to a maximum of 12 hours.

ABE 425 Engrg Measurement Systems credit: 4 Hours.

Principles of instrumentation systems, including sensing, signal conditioning, computerized data acquisition, test design, data analysis and synthesis. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 425 and ME 360. Prerequisite: ECE 205.

ABE 430 Project Management credit: 2 Hours.

Engineering team effectiveness; project definition; assessing related technologies; marketing and business planning related to engineering; budgeting and financial analyses of engineering projects; safety, ethics and environmental considerations; intellectual property; engineering proposal presentation. Same as TSM 430. 2 undergraduate hours. 2 graduate hours.

ABE 436 Renewable Energy Systems credit: 3 or 4 Hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Renewable energy's role in reducing air pollution and global climate change. Capstone project to design a system for converting renewable energy into thermal or electrical energy. 3 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 436 and TSM 438. Prerequisite: PHYS 211.

ABE 440 Applied Statistical Methods I credit: 4 Hours.

Same as ANSC 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

ABE 445 Statistical Methods credit: 4 Hours.

Same as ANSC 445 and NRES 445. See ANSC 445.

ABE 446 Biological Nanoengineering credit: 3 or 4 Hours.

Nanodevice design through organization of functional biological components; bio-molecular function and bioconjugation techniques in nanotechnology; modulation of biological systems using nanotechnology; issues related to applying biological nanotechnology in food energy, health, and the environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: MCB 150.

ABE 454 Environmental Soil Physics credit: 3 Hours.

Provides the theoretical basis for understanding and quantifying the physical, hydrological, geotechnical, and thermal properties of soil in relation to environmental processes. Topics include general soil properties as a porous media, particle size, soil structure and aggregation, water retention and potential, flow in saturated soil, flow in an unsaturated soil, soil temperature and heat flow, soil mechanics, infiltration, and soil-plant-water relations. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335 or NRES 201 or consent of instructor.

ABE 455 Erosion and Sediment Control credit: 2 Hours.

Processes, estimation, and control of soil erosion by water, wind and resultant sedimentation. Upland, in-channel, urban, agricultural, disturbed (both military training and mining), and forested environments. Capstone experience in site planning and design. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 350 or NRES 401; CEE 380 or NRES 201.

ABE 456 Land & Water Resources Engrg credit: 3 or 4 Hours.

Hydrology, hydraulics, design, construction and cost estimating of structures for the conservation and quality control of soil and water resources; relationship of topography, soils, crops, climate, and cultural practices in conservation and quality control of soil and water for agriculture. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 457 NPS Pollution Processes credit: 2 Hours.

Principles, concepts, and analysis of processes for nonpoint source pollution involving sediment, inorganic and organic chemicals, and microbial pathogens; hydrologic and pollutant interactions, pollutant fate and transport processes from storm water runoff and percolation; impact of pollutant transport on receiving water and ecosystems. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 224 or CEE 350.

ABE 458 NPS Pollution Modeling credit: 2 Hours.

Concepts, principles, and application of modeling for assessment and management of agricultural nonpoint source pollution. Modeling of agroecosystems and land use impacts on hydrologic and water quality response of upland catchments. Model selection, calibration, validation, and application for comparative analysis. Case studies in current watershed management issues, with a focus on agricultural waste and nutrient management, using existing field and watershed nonpoint source pollution models. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 457.

ABE 459 Drainage and Water Management credit: 3 or 4 Hours.

Design, construction, performance, and maintenance of agricultural drainage systems to meet both production and water quality objectives. Modeling drainage systems. Principles of conservation drainage. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 463 Electrohydraulic Systems credit: 3 Hours.

Engineering principles of electrohydraulic control systems related to off-road vehicles. Basics of fluid power systems, concepts of electrohydraulic systems and controls, analysis and design of electrohydraulic control systems, and applications of electrohydraulic control. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 110 or both ECE 205 and ECE 206; ME 310 or TAM 335.

ABE 466 Engineering Off-Road Vehicles credit: 3 Hours.

Design and application of off-road vehicles for farm and construction use; thermodynamics of engines; measurement of power and efficiencies; power transmission and traction; chassis mechanics; operator environment. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ABE 466 and TSM 464. Prerequisite: ME 300.

ABE 469 Industry-Linked Design Project credit: 4 Hours.

Industry-submitted and sponsored design projects which utilize principles of design, engineering analysis and functional operation of engineering systems. Design teams develop concepts, evaluate alternatives, model and analyze solutions, and build and test a final product. Emphases on communication skills, technical writing, and interaction with industry representatives. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of ABE 361, CHBE 421, TAM 335; or credit or concurrent registration in ME 370.

This course satisfies the General Education Criteria for:
Advanced Composition

ABE 474 Indoor Environmental Control credit: 3 or 4 Hours.

Analysis of indoor environments and relationship with humans, animals and plants. Interactions between facilities operation and both human comfort and animal plant production. Psychrometrics, occupant health and comfort, structural heat transfer, heating and cooling loads, and energy and mass balances as related to indoor environment, air properties, and ventilation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 335, and ME 300 or CHBE 321, or consent of instructor.

ABE 476 Indoor Air Quality Engineering credit: 4 Hours.

Principles and applications of indoor air quality. Particle mechanics, gas kinetics, air quality sampling principles and techniques, air cleaning technologies such as filters, cyclones, electrostatic precipitation for indoor environments; ventilation effectiveness for pollutant control. Research or design project. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213, MATH 285, and TAM 335.

ABE 482 Package Engineering credit: 3 Hours.

Same as FSHN 469. See FSHN 469.

ABE 483 Engrg Properties of Food Mats credit: 3 Hours.

Physical properties of foods and biological materials; properties relating to equipment design and the sensing and control of food processes; thermal, electromagnetic radiation, rheological, and other mechanical properties. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 251; either CHBE 421 or both ME 330 and TAM 335.

ABE 488 Bioprocessing Biomass for Fuel credit: 3 Hours.

Engineering and scientific principles governing bioprocessing of biomass for production of ethanol and other fermentation products. Process unit operations; conventional and alternative feed stock materials; recovery of value-added coproducts and other variables involved in producing fuel ethanol; process simulation; economic analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 321 and TAM 335.

ABE 497 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 16 hours.

TSM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TSM>)

Technical Systems Management Courses**TSM 100 Technical Systems in Agr credit: 3 Hours.**

Examples, problems, discussions, and laboratory exercises pointing to present and potential engineering applications in agriculture; emphasis on power and machinery, soil and water control, electricity, and structures.

TSM 130 Basics of CAD credit: 1 Hour.

Introduction to Computer Aided Drawing and Design (CAD). Application of two and three dimensional CAD tools in construction systems for creating project plans, structures and building floor plans with fixtures and layers representing electrical and plumbing configurations. Self-paced learning through on-line tutorials with instructor guidance. Prerequisite: TSM 100.

TSM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Open seminar or experimental course on a topic in technical systems management. May be repeated to a maximum of 12 hours.

TSM 232 Materials and Construction Sys credit: 3 Hours.

Selection, use, and maintenance of hand and power tools; shop safety; selection of building and roofing materials; concrete masonry construction; and site preparation. Includes laboratory. Priority is given to technical systems management majors.

TSM 233 Metallurgy & Welding Process credit: 3 Hours.

Selecting and using metal-arc, inert-gas, submerged arc, oxyacetylene welding and plasma cutting processes for construction and maintenance. Includes laboratory. Additional fees may apply. See Class Schedule.

TSM 234 Wiring, Motors and Control Sys credit: 3 Hours.

Selecting and using wiring materials, electric motors and controls in lighting, heating, ventilation, and materials handling problems. Includes laboratory. Prerequisite: TSM 100.

TSM 262 Off-Road Equipment Management credit: 3 Hours.

Performance, costs, application, selection, and replacement of off-road machinery and field implements; analysis of mechanized field operations. Includes laboratory. Prerequisite: TSM 100.

TSM 293 Off-Campus Internship credit: 1 to 4 Hours.

Supervised off-campus experience in a field directly pertaining to technical systems management. May be repeated to a maximum of 6 hours. Prerequisite: Sophomore standing and consent of instructor.

TSM 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated to a maximum of 12 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

TSM 311 Humanity in the Food Web credit: 3 Hours.

The human food web is the complex network of technologies, environments, people, and social institutions that produces, processes, and distributes the world's food supply. Students will study the food webs of the past, present, and future and will explore various human roles, including their own, in the global technology-environment-society-food system. Course topics include domestication, mechanization, urbanization, the green revolution, biotechnology, food safety, the environment, and appropriate technologies for developing countries.

Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

TSM 352 Land and Water Mgt Systems credit: 3 Hours.

Principles of planning, implementing and utilizing land and water practices for Illinois land uses, especially agriculture. Includes laboratory.

Prerequisite: Completion of Quantitative Reasoning requirement.

TSM 363 Fluid Power Systems credit: 2 Hours.

Emphasizes basic principles of fluid power systems related to off-road vehicles. Topics include fundamentals of fluid power systems, principles of key fluid power components, and maintenance of fluid power systems. Credit is not given for both TSM 363 and ABE 223.

TSM 371 Residential Housing Design credit: 3 Hours.

Principles and practices in residential housing; space planning, house types, structures, materials, utilities, environmental control, energy conservation, remodeling, and economic influences. Includes laboratory.

TSM 372 Environ Control & HVAC Systems credit: 3 Hours.

Introduction to heating, ventilating, and air-conditioning (HVAC) systems for building environment control. Topics include: psychrometrics, basic calculation of heating and cooling loads, human comfort and ventilation requirements, typical HVAC and control systems.

TSM 381 Grain Drying & Storage Systems credit: 3 Hours.

Grain drying fundamentals, air-moisture relationships, grain drying systems for efficient energy use, fans, grain-handling devices and systems, planning of grain handling systems, grain standards, moisture measurement, grain storage, fungi and insect problems, aeration, processing and milling of corn and soybeans. Includes laboratory.

TSM 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

TSM 421 Ag Safety-Injury Prevention credit: 3 Hours.

Issues associated with agricultural injuries and their prevention. Areas include: agricultural injury situation; injury causation; injury intervention strategies and their applications to agricultural issues; and, specific safety issues in the areas of farm machinery, grain and forage systems, animals, materials handling, electricity, fire safety, special populations, and emergency preparedness. Course Information: 3 undergraduate hours. 3 graduate hours.

TSM 422 Ag Health-Illnesses Prevention credit: 3 Hours.

Overview of occupational illnesses and diseases in the agricultural industry and its practices. Hazards within agricultural production are examined and potential hazards to non-farm populations and those interacting with production personnel are explored. Agricultural industry practices are summarized and potential human health effects of specific practices identified. Specific preventative measures are outlined to reduce exposures and remediate exposure symptoms. Interaction with health/medical professionals is on-going during the semester to familiarize students with medical procedures pertinent to agricultural occupational medicine. 3 undergraduate hours. 3 graduate hours.

TSM 425 Managing Ag Safety Risk credit: 3 Hours.

Management aspects of farm and agriculturally related business safety and health. Topics include: orientation to farm and agricultural related business safety and health issues, legal and ethical responsibilities, liability issues, injury/illness incident investigation, agricultural safety and health resources, how to approach and organize a safety and health management plan, and safety and health worker education and training. Case study approach to devise a safety and health management plan for an existing farm or agricultural related business. Team work to emulate development of safety management programs in general industry. Student exposure through class discussion exercises to recent agricultural safety and health research studies conducted in North America and Europe. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent registration in TSM 421 or TSM 422, or consent of instructor.

TSM 430 Project Management credit: 2 Hours.

Same as ABE 430. See ABE 430.

TSM 435 Elec Computer Ctrl Sys credit: 3 Hours.

Microcomputer and electrical control applications; electrical fundamentals; solid-state devices; relays; biosensors; motor types and characteristics; three-phase power; logic devices; analog/digital convertors; and interfacing for agricultural control applications. Includes laboratory. 3 undergraduate hours. 3 graduate hours.

TSM 438 Renewable Energy Applications credit: 3 Hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Environmental consequences of energy conversion including how renewable energy can reduce air pollution and global climate change. Economics of alternative energy systems. 3 undergraduate hours. 3 graduate hours. Credit is not given for both TSM 438 and ABE 436. Prerequisite: Junior, senior, or graduate standing required.

TSM 464 Engine and Tractor Power credit: 3 Hours.

Construction, performance and maintenance of internal combustion engines, power trains, and hydraulic systems for off-road equipment; methods and equipment for performance testing; and weight transfer and traction. Includes laboratory. 3 undergraduate hours. 3 graduate hours. Credit is not given for both TSM 464 and ABE 466.

TSM 465 Chemical Applications Systems credit: 3 Hours.

Hydraulic principles; liquid application systems including pumps, controls, and spray nozzles; granular application systems; safe storage, handling, and disposal of pesticides and fertilizers; federal and state legal requirements. Includes laboratory. 3 undergraduate hours. 3 graduate hours.

TSM 467 Precision Agric Technology credit: 3 Hours.

Practices and equipment used in precision agriculture. Global positioning systems; geographic information systems; mapping; grid sampling of soil fertility and physical properties; yield monitoring; remote sensing; variable-rate technologies. 3 undergraduate hours. 3 graduate hours.

TSM 486 Grain Bioprocessing Coproducts credit: 3 Hours.
 Bioprocessing of cereals and oilseeds by milling, fermentation and extraction processes in the production of a wide variety of coproducts used in animal foods. Includes the effects of the process variables and bioprocess on coproduct quality and the post-processing of coproducts. 3 undergraduate hours. 3 graduate hours.

TSM 496 Independent Study credit: 1 to 4 Hours.
 Individual research, special problems, thesis, development and/or design work under the supervision of a faculty member. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: consent of instructor.

TSM 499 Seminar credit: 1 to 3 Hours.
 Group discussion or an experimental course on a special topic in technical systems management. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 12 hours.

Agricultural and Biological Engineering

The Department of Agricultural and Biological Engineering offers a four-year degree program in Agricultural and Biological Engineering through the College of Engineering that is described below.

The Department also offers a five-year dual degree program through both the College of Engineering and the College of ACES. Students who successfully complete this five-year academic program receive the Bachelor of Science in Agricultural and Biological Engineering degree from the College of Engineering as well as the Bachelor of Science in Agriculture degree with a major in Agricultural and Biological Engineering from the College of ACES. The requirements can be found here (<http://catalog.illinois.edu/undergraduate/aces/departments/ag-bio-eng/dual-major-agricultural-biological-engineering-sciences>). Both degree programs are joint between the College of Engineering and the College of ACES with students beginning as new freshmen in the College of ACES.

abe.illinois.edu/undergrad_programs (http://www.abe.illinois.edu/undergrad_programs)
 Fax: (217) 244-0323
 E-mail: abe@illinois.edu

For the Degree of Bachelor of Science in Agricultural and Biological Engineering

Agricultural and biological engineering is the application of mathematics, physical and biological science, and engineering to agriculture, food systems, energy, natural resources, the environment, and related biological systems. This ABET-accredited program has special emphasis on environmental protection and the biological interface of plants, animals, soils, and microorganisms with the design and performance of environments, machines, mechanisms, processes, and structures.

The agricultural and biological engineering program requires one of two concentrations: Agricultural Engineering and Biological Engineering.

Code	Title	Hours
Orientation and Professional Development		
These courses introduce the opportunities and resources that your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.		

ABE 100	Intro Agric & Biological Engrg ¹	1
ENG 100	Engineering Orientation ¹	0

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ²	4
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2

Agricultural and Biological Engineering Technical Core

ABE 141	ABE Principles: Biological	2
ABE 223	ABE Principles: Machine Syst	2
ABE 224	ABE Principles: Soil & Water	2
ABE 225	ABE Principles: Bioenvironment	2
ABE 226	ABE Principles: Bioprocessing	2
ABE 430	Project Management	2
ABE 469	Industry-Linked Design Project	4
CS 101	Intro Computing: Engrg & Sci	3
ECE 205	Elec & Electronic Circuits	3
SE 101	Engineering Graphics & Design	3
TAM 211	Statics ³	2-3
or TAM 210	Introduction to Statics	
TAM 212	Introductory Dynamics	3

Concentration Requirements

Students will select one concentration: 14

Agricultural Engineering Concentration

Biological Engineering Concentration

Electives

Technical electives and biological and natural science electives for the selected concentration 21

Liberal Education

The Liberal education courses develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.⁴

ECON 103	Macroeconomic Principles ⁵	3
----------	---------------------------------------	---

Electives from the campus General Education social & behavioral sciences list.	3
--	---

Electives from the campus General Education humanities & the arts list.	6
---	---

Electives either from a list approved by the college, or from the campus General Education lists for social & behavioral sciences or humanities & the arts.	6
---	---

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

RHET 105	Writing and Research	4
Advanced Composition ⁶		

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering advising Web site, give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.⁷

Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree. ⁷	6
---	---

Total Hours	128
-------------	-----

¹ External transfer students take ENG 300 instead.

² MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ The extra hour of credit for this course may be used to help meet free elective requirements.

⁴ Liberal education courses

⁵ ECON 102 or ACE 100 maybe substituted by petition.

⁶ Satisfied by completing ABE 469 in the Agricultural and Biological Engineering Technical Core.

⁷ College of Engineering advising Web site.

Concentrations

- Agricultural Engineering (p. 10)
- Biological Engineering (p. 12)

Agricultural Engineering Concentration

The B.S. Degree in Agricultural and Biological Engineering provides a concentration in Agricultural Engineering. This concentration includes the integration of physical and biological sciences as a foundation for engineering applications in agriculture, food systems, energy, natural resources, the environment, and related biological systems. Students pursuing this concentration are involved in the design of systems for renewable energy, off-road equipment, water quality, and the utilization and protection of soil and water resources. Important design constraints are economics, conservation of materials and energy, safety, and environmental quality. Within this concentration, students are strongly encouraged to select a set of coherent courses that constitutes a

specialization in their area of career interest either from the following list or a customized area chosen in consultation with an advisor:

- Renewable Energy Systems
- Off-Road Equipment Engineering
- Soil and Water Resources Engineering

Code	Title	Hours
Agricultural Engineering Concentration Requirements		
Select one of the following:		3
CEE 202	Engineering Risk & Uncertainty	
IE 300	Analysis of Data	
ABE 440	Applied Statistical Methods I ¹	
STAT 400	Statistics and Probability I ¹	
ECE 206	Elec & Electronic Circuits Lab	1
ME 300	Thermodynamics	3
TAM 251	Introductory Solid Mechanics	3
Select one of the following:		4
TAM 335	Introductory Fluid Mechanics	
CHBE 421	Momentum and Heat Transfer	
ME 310	Fundamentals of Fluid Dynamics	
Total Hours		14

¹ The extra hour of credit for this course may be used to help meet free elective requirements.

Electives

This elective course work must be completed to fulfill the concentration. The subjects build upon the agricultural and biological engineering technical core.

Code	Title	Hours
Biological and natural sciences electives chosen from a departmentally approved list of Biological and Natural Sciences Electives – Group A ¹		6
Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives – Group A, and the remainder approved Other Technical Electives – Group A. ²		15
Total Hours		21

¹ Biological and Natural Sciences Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>)

² Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>), and the remainder approved Other Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>).

Suggested Sequence

First Year

First Semester	Hours
ABE 100 Intro Agric Biological Engrg	1
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1

RHET 105 Writing and Research or SE 101 ¹	3-4	
MATH 221 ² Calculus I	4	
Liberal education elective ^{3,4}	3	
ENG 100 Engineering Orientation	0	
Semester Hours	15-16	

Second Semester

CHEM 104 General Chemistry II	3	
CHEM 105 General Chemistry Lab II	1	
MATH 231 Calculus II	3	
PHYS 211 University Physics: Mechanics	4	
SE 101 Engineering Graphics Design or RHET 105 ¹	4-3	
ABE 141 ABE Principles: Biological	2	
Semester Hours	17-16	

Second Year**First Semester**

MATH 241 Calculus III	4	
ABE 223 ABE Principles: Machine Syst	2	
ABE 224 ABE Principles: Soil Water	2	
CS 101 Intro Computing: Engrg Sci	3	
TAM 211 Statics or 210 ⁵	2-3	
PHYS 212 University Physics: Elec Mag	4	
Semester Hours	17	

Second Semester

ABE 225 ABE Principles: Bioenvironment	2	
ABE 226 ABE Principles: Bioprocessing	2	
MATH 225 Introductory Matrix Theory	2	
MATH 285 Intro Differential Equations	3	
PHYS 213 Univ Physics: Thermal Physics	2	
TAM 212 Introductory Dynamics	3	
Biological and natural science elective ^{6a}	3	
Semester Hours	17	

Third Year**First Semester**

Select one of the following:	3	
CEE 202 Engineering Risk Uncertainty	3	
IE 300 Analysis of Data	3	
ABE 440 ⁵ Applied Statistical Methods I	4	
STAT 400 ⁵ Statistics and Probability I	4	
ECE 205 Elec Electronic Circuits	3	
ECE 206 Elec Electronic Circuits Lab	1	
TAM 251 Introductory Solid Mechanics	3	
Agricultural and biological engineering technical elective ^{7a}	3	
Liberal education elective ^{3,4}	3	
Semester Hours	16	

Second Semester

ECON 103 ³ Macroeconomic Principles	3	
ME 300 Thermodynamics	3	
Select one of the following:	4	

TAM 335 Introductory Fluid Mechanics	4
CHBE 421 Momentum and Heat Transfer	4
ME 310 Fundamentals of Fluid Dynamics	4
Agricultural and biological engineering technical elective ^{7a}	3
Liberal education elective ^{3,4}	3
Semester Hours	16

Fourth Year**First Semester**

ABE 430 Project Management	2
Agricultural and biological engineering technical elective ^{7a}	3
Other technical elective ^{7a}	3
Liberal education elective ^{3,4}	3
Free elective ⁴	3
Semester Hours	14

Second Semester

ABE 469 ⁴ Industry-Linked Design Project	4
Biological and natural sciences elective ^{6a}	3
Other technical elective ^{7a}	3
Liberal education elective ^{3,4}	3
Free elective ⁴	3
Semester Hours	16
Total Hours:	128

¹ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is GE 101. Students may take CMN 111 and CMN 112 in place of RHET 105.

² MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 103 (or ECON 102 or ACE 100 by permission) must be one of the social & behavioral sciences courses, recommended to be taken early. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ One elective course must satisfy the General Education Advanced Composition requirement. ABE 469 fulfills this requirement.

⁵ The extra hour of credit for this course may be used to help meet free elective requirements.

^{6a} Students in the Agricultural Engineering concentration must complete 6 hours from the approved list of Biological and Natural Sciences Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural/>).

7a Students in the Agricultural Engineering concentration must complete 15 hours of technical electives chosen in consultation with an advisor. At least 8 hours must be from the approved list of Agricultural Engineering or Biological Engineering Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>), and the remainder selected from the approved list of Other Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>).

Biological Engineering Concentration

The B.S. Degree in Agricultural and Biological Engineering also provides a concentration in *Biological Engineering*. This concentration integrates biology and engineering to provide solutions to problems related to living systems (plants, animals, and microorganisms). Engineered biological systems vary widely in scale. At the molecular level, nanometer-scale devices consist of a few biomolecules inside individual cells. At the other extreme, regionally-scaled complex ecosystems depend upon multiple species of interacting living organisms. Such systems are becoming increasingly important in areas such as bioenergy, bioprocessing, nanotechnology, biosensing, bio-informatics, and bioenvironment. Within this concentration, students are strongly encouraged to select a set of coherent courses that constitutes a specialization in their area of career interest either from the following list or a customized area chosen in consultation with an advisor:

- Bioenvironmental Engineering
- Ecological Engineering
- Food and Bioprocess Engineering
- Nanoscale Biological Engineering

Code	Title	Hours
Biological Engineering Concentration Requirements		
ABE 341	Transport Processes in ABE	3
CHBE 321	Thermodynamics	4
CHEM 232	Elementary Organic Chemistry I ¹	3
MCB 150	Molec & Cellular Basis of Life	4
Total Hours		14

¹ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.

Electives

This elective course work must be completed to fulfill this concentration. The subjects build upon the agricultural and biological engineering technical core.

Code	Title	Hours
Biological and natural sciences electives chosen from a departmentally approved list of Biological and Natural Sciences Electives – Group B; must include 1 course with a lab component ¹		6
Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives - Group B, and the remainder approved Other Technical Electives – Group B; must include one course with a lab component ²		15
Total Hours		21

¹ *Biological and Natural Sciences Electives – Group B* (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-BioNatSciElectives>)

² *Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives - Group B* (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-TechElectives>), and the remainder approved *Other Technical Electives – Group B* (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-TechElectives/#tag1>)

Suggested Sequence

The schedule that follows for each concentration is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken. Refer to the appropriate sequence below for each concentration.

First Year

First Semester	Hours
ABE 100 Intro Agric Biological Engrg	1
CHEM 102 General Chemistry I	3
Liberal education elective ^{3,4}	3
CHEM 103 General Chemistry Lab I	1
ENG 100 Engineering Orientation	0
RHET 105 Writing and Research or SE 101 ¹	3-4
MATH 221 ² Calculus I	4
Semester Hours	
	15-16

Second Semester

SE 101 Engineering Graphics Design or RHET 105 ¹	4-3
CHEM 105 General Chemistry Lab II	1
PHYS 211 University Physics: Mechanics	4
ABE 141 ABE Principles: Biological	2
CHEM 104 General Chemistry II	3
MATH 231 Calculus II	3
Semester Hours	
	17-16

Second Year

First Semester

ABE 223 ABE Principles: Machine Syst	2
TAM 211 Statics or 210 ⁵	2-3
ABE 224 ABE Principles: Soil Water	2
CS 101 Intro Computing: Engrg Sci	3
MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
Semester Hours	
	17

Second Semester

ABE 225 ABE Principles: Bioenvironment	2
ABE 226 ABE Principles: Bioprocessing	2
MATH 225 Introductory Matrix Theory	2
MATH 285 Intro Differential Equations	3
CHEM 232 ⁶ Elementary Organic Chemistry I	3
PHYS 213 Univ Physics: Thermal Physics	2

TAM 212	Introductory Dynamics	3
Semester Hours		17
Third Year		
First Semester		
ABE 341	Transport Processes in ABE	3
ECE 205	Elec Electronic Circuits	3
MCB 150	Molec Cellular Basis of Life	4
Agricultural and biological engineering technical elective ^{7b}		3
Liberal education elective ^{3,4}		3
Semester Hours		16
Second Semester		
CHBE 321	Thermodynamics	4
ECON 103 ³	Macroeconomic Principles	3
Agricultural and biological engineering technical elective ^{7b}		3
Biological and natural sciences elective ^{6b}		3
Liberal education elective ^{3,4}		3
Semester Hours		16
Fourth Year		
First Semester		
ABE 430	Project Management	2
Agricultural and biological engineering technical elective ^{7b}		3
Other technical elective ^{7b}		3
Liberal education elective ^{3,4}		3
Free elective ⁴		3
Semester Hours		14
Second Semester		
ABE 469 ⁴	Industry-Linked Design Project	4
Biological and natural sciences elective ^{6b}		3
Other technical elective ^{7b}		3
Liberal education elective ^{3,4}		3
Free elective ⁴		3
Semester Hours		16
Total Hours:		128

¹ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is SE 101. Students may take CMN 111 and CMN 112 in place of RHET 105.

² MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 103 (or ECON 102 or ACE 100 by permission) must be one of the social & behavioral sciences courses, recommended to be taken early. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ One elective course must satisfy the General Education Advanced Composition requirement. ABE 469 fulfills this requirement.

⁵ The extra hour of credit for this course may be used to help meet free elective requirements.

^{6b} Students in the Biological Engineering concentration must complete 6 hours from the approved list of Biological and Natural Sciences Electives – Group B (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-BioNatSciElectives>).

^{7b} Students in the Biological Engineering concentration must complete 15 hours of technical electives chosen in consultation with an advisor. At least 8 hours must be from the approved list of Agricultural Engineering or Biological Engineering Technical Electives – Group B (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-TechElectives>), and the remainder selected from the approved list of Other Technical Electives – Group B (<http://abe.illinois.edu/undergrad/ABE-Curriculum/BIOE-TechElectives>).

⁸ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.

Dual Degree in Agricultural & Biological Engineering/Agricultural & Biological Engineering Sciences

Students who successfully complete this five-year academic program receive the Bachelor of Science with a major in Agricultural and Biological Engineering from the College of Engineering as well as Agricultural and Biological Engineering Sciences from the College of ACES. Students first enroll in the College of ACES and then transfer to the College of Engineering after two years. Students then complete the ABET-accredited degree in Agricultural and Biological Engineering in the College of Engineering before entering a fifth year in ACES, in the Agricultural and Biological Engineering Sciences program. The suggested program of study that follows fulfills graduation requirements for both the College of Engineering and the College of ACES.

Agricultural and biological engineering is the application of mathematics, physical and biological science, and engineering to agriculture, food systems, energy, natural resources, the environment, and related biological systems. This program has special emphasis on environmental protection and the biological interface of plants, animals, soils, and microorganisms with the design and performance of environments, machines, mechanisms, processes, and structures. Graduates are

employed by industry, consulting firms, and government for research, education, and manufacturing.

Overview of Curricular Requirements

The curriculum for the dual major requires 158 hours for graduation, of which 128 hours are specified for the major in Agricultural and Biological Engineering from the College of Engineering. Curriculum requirements specific to the dual major are organized as follows.

Code	Title	Hours
Completion of degree requirements for Agricultural and Biological Engineering major		128
Communication		3
CMN 101	Public Speaking	
Biological Sciences Coursework ¹		4
Agricultural Sciences Coursework ²		15
Open Electives ³		
Total hours required to receive a B.S. in Agricultural and Biological Engineering and a B.S. in Agricultural and Biological Engineering Sciences		158

¹ In addition to the Biological and Natural Science Elective hours required for the Agricultural Engineering Concentration (6 hours) and the Biological Engineering Concentration (6 hours), a further 4 hours of biological sciences must be completed from biology, entomology, microbiology, plant biology, physiology, or zoology to make up a **total of 10 hours**. These hours can be selected from the Biological and Natural Science Elective lists for the two concentrations. Other courses with strong biological science content may be approved by the department.

² Fifteen hours of agricultural sciences with courses from at least two subject areas other than Agricultural and Biological Engineering and Technical Systems Management, and approval of advisers are required.

³ Sufficient open electives selected to total minimum curriculum requirement of 158 hours. All requirements of the combined curriculum must be completed to satisfy the requirements for both degrees.

Major in Technical Systems Management

For the Degree of Bachelor of Science in Technical Systems Management

This major in Technical Systems Management is designed to prepare students as problem solvers for systems involving the application, management, and/or marketing of agricultural engineering technologies. Students are instructed in engineering and business principles in preparation as technically competent business persons for professional careers as entrepreneurs, marketing representatives, or plant managers working with service organizations, manufacturers, corporate farms, retail dealers, power suppliers, contractors, or management companies from production through processing and distribution.

Students can specialize in Construction Systems Management; Environmental Systems Management; Mechanization, Marketing, and

Technology Management Systems; Production Systems; or Renewable Energy Systems.

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent (see college Composition I requirement))	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
Two courses; one Western culture and one non-Western/US minority culture course.		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
MATH 234	Calculus for Business I (or equivalent)	4
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
STAT 100	Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
PHYS 101	College Physics: Mech & Heat	5
Select one of the following:		4-5
PHYS 102	College Physics: E&M & Modern	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
Biological sciences (see campus approved list)		3-5
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
ACE 100	Agr Cons and Resource Econ	4
ECON 103	Macroeconomic Principles	3
Social and behavioral sciences. Select from campus approved list.		3-4
ACES Prescribed		
ACES 101	Contemporary Issues in ACES	2
TSM Required		
ACE 161	Microcomputer Applications (or equivalent)	3
ACCY 200 or ACCY 201	Fundamentals of Accounting Accounting and Accountancy I	3

CPSC 112	Introduction to Crop Sciences	4
NRES 201	Introductory Soils	4
TSM 100	Technical Systems in Agr	3
TSM 430	Project Management	2
TSM elective courses. A total of 18 hours selected from the following courses. A minimum of six hours must be selected from TSM 295 or TSM 396, or at the 300- or 400-level.		18
TSM 199	Undergraduate Open Seminar	
TSM 232	Materials and Construction Sys	
TSM 233	Metallurgy & Welding Process	
TSM 234	Wiring, Motors and Control Sys	
TSM 262	Off-Road Equipment Management	
TSM 295	Undergrad Research or Thesis	
TSM 352	Land and Water Mgt Systems	
TSM 363	Fluid Power Systems	
TSM 371	Residential Housing Design	
TSM 372	Environ Control & HVAC Systems	
TSM 381	Grain Drying & Storage Systems	
TSM 396	UG Honors Research or Thesis	
TSM 435	Elec Computer Ctrl Sys	
TSM 464	Engine and Tractor Power	
TSM 465	Chemical Applications Systems	
TSM 496	Independent Study	
TSM 499	Seminar	

Specialization Electives

Select 15 hours from the following:		15
ACE 210	Environmental Economics	
ACE 222	Agricultural Marketing	
ACE 231	Food and Agribusiness Mgt	
ACE 232	Management of Farm Enterprises	
ACE 240	Personal Financial Planning	
ACE 310	Natural Resource Economics	
ACE 345	Finan Decision Indiv Sm Bus	
ACE 403	Agricultural Law	
ACE 406	Environmental Law	
ACE 428	Commodity Futures and Options	
ACE 432	Farm Management	
ACE 448	Rural Real Estate Appraisal	
ACE 456	Agr and Food Policies	
ACES 409	Bioenergy Systems	
AGCM 270	Ag Sales and Persuasive Communication	
AGED 260	Intro to Leadership Studies	
ANSC 201	Principles of Dairy Production	
ANSC 223	Animal Nutrition	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 467	Applied Animal Ecology	
BADM 300	The Legal Environment of Bus	

BADM 310	Mgmt and Organizational Beh	
BADM 320	Principles of Marketing	
BADM 322	Marketing Research	
BTW 261	Principles Tech Comm	
BTW 271	Persuasive Writing	
CEE 330	Environmental Engineering	
CEE 421	Construction Planning	
CEE 422	Construction Cost Analysis	
CPSC 226	Introduction to Weed Science	
CPSC 414	Forage Crops and Pasture Eco	
CPSC 418	Crop Growth and Management	
ENVS 336	Tomorrow's Environment	
FIN 221	Corporate Finance	
FIN 241	Fundamentals of Real Estate	
HORT 360	Vegetable Crop Production	
NRES 419	Env and Plant Ecosystems	
NRES 474	Soil and Water Conservation	
NRES 488	Soil Fertility and Fertilizers	

Total Hours 126

Minor in Agricultural Safety and Health

Note: This minor has prerequisites of a minimum of 30 hours with a 2.5 GPA.

Code	Title	Hours
TSM 421	Ag Safety-Injury Prevention	3
TSM 422	Ag Health-Illnesses Prevention	3
TSM 425	Managing Ag Safety Risk	3
A minimum of three credit hours is required from the following courses:		3
TSM 293	Off-Campus Internship	
TSM 295	Undergrad Research or Thesis	
TSM 496	Independent Study	
A minimum of six credit hours selected from:		6
CHLH 101	Introduction to Public Health	
CHLH 244	Health Statistics	
CHLH 274	Introduction to Epidemiology	
CHLH 304	Foundations of Health Behavior	
CHLH 469	Environmental Health	
CHLH 474	Principles of Epidemiology	
CHLH 540	Health Behavior: Theory	
FSHN 480	Basic Toxicology	
HDFS 105	Intro to Human Development	
KIN 262	Motor Develop, Growth & Form	
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 358	Human Factors	
PSYC 456	Human Performance and Cognition in Context	
Total Hours		18

Minor in Technical Systems Management

Note: This minor has prerequisites of a minimum of 60 hours with a 2.5 GPA; completion of MATH 234 or equivalent; PHYS 101 or equivalent; CHEM 102 and CHEM 103 or equivalent; and PHYS 102 or CHEM 104 and CHEM 105 or equivalent.

Code	Title	Hours
TSM 100	Technical Systems in Agr	3
Fifteen Hours, at least six of which must be at the 400 level, selected from:		15
TSM 232	Materials and Construction Sys	
TSM 233	Metallurgy & Welding Process	
TSM 234	Wiring, Motors and Control Sys	
TSM 262	Off-Road Equipment Management	
TSM 352	Land and Water Mgt Systems	
TSM 363	Fluid Power Systems	
TSM 371	Residential Housing Design	
TSM 372	Environ Control & HVAC Systems	
TSM 381	Grain Drying & Storage Systems	
TSM 435	Elec Computer Ctrl Sys	
TSM 464	Engine and Tractor Power	
TSM 465	Chemical Applications Systems	
TSM 496	Independent Study	
Total Hours		18

Agricultural and Consumer Economics

Sean Fox, Department Head

332 Mumford Hall, 1301 West Gregory Drive, Urbana

PH: (217) 333-1810

<http://ace.illinois.edu>

The Department of Agricultural and Consumer Economics (ACE) has roots that reach back over 75 years at the University of Illinois at Urbana-Champaign, a world-wide reputation for its academic excellence, and a forward-looking vision for excellence in teaching, research, and outreach related to important economic and social challenges. Visit the ACE faculty (<http://ace.illinois.edu/faculty>) websites to learn more about each faculty member's interests, publications, and current projects. Sample highlights include:

- Publications in high impact journals such as *Science*, *PNAS*, the *American Journal of Agricultural Economics*, the *Journal of Environmental Economics and Management*, *Food Policy and World Development*
- Steady funding through competitive research grants from sources like the NSF, USDA, DOD, and EPA
- Editor of the *AJAE* and Associate Editors of other top journals
- Fellows of the Agricultural and Applied Economics Association
- Elected leadership positions in professional organizations (Agricultural and Applied Economics Association, Association of Environmental and Resource Economists)

GRADUATE PROGRAM: Our graduate program is highly ranked nationally and received a rating of "Excellent" on the Tier-1 research university campus of UIUC. We have three department seminars in which students can see and present work in progress, strong core coursework, and professional development through the second-year research paper requirement and end-of-program job-market seminar. Our graduate students have excellent placement both in and out of academia.

UNDERGRADUATE PROGRAM: Our thriving undergraduate program has over 700 students. We offer concentrations in subjects like agribusiness, accounting, finance in agribusiness, consumer economics and finance, environmental economics, farm management, financial planning, policy and law, and international trade and development. Our hallmarks are experiential learning outside the classroom; research opportunities in classes and through independent studies; and excellent placements both in employment and in graduate and law schools.

Synergies between the undergraduate and graduate programs give graduate students opportunities for professional development in instruction and undergrad students opportunities to learn about career options from graduate student role models.

For the Degree of Bachelor of Science in Agricultural and Consumer Economics Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech¹		
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent (see College Composition I requirement))	7
Advanced Composition²		
Select one of the following:		3
BTW 250	Principles Bus Comm	
BTW 261	Principles Tech Comm	
BTW 263	Writing in the Disciplines	
RHET 233	Adv Rhetoric & Composition	
CMN 220	Communicating Public Policy	
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of:		7-8
MATH 124	Finite Mathematics	
MATH 125	Elementary Linear Algebra	
MATH 231	Calculus II	
Select one of:		
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II³		
Select one of:		4-6
ACE 261	Applied Statistical Methods	
ECON 202 & ECON 203	Economic Statistics I and Economic Statistics II	

Humanities and the Arts

Selected from campus approved list.	6
Natural Sciences and Technology	
Selected from campus approved list.	6
Social and Behavioral Sciences	
Selected from campus approved list.	6
Cultural Studies	
Select one course from Western culture and one from non-Western/U.S. minority culture from campus approved list.	6
ACES Prescribed	
ACES 101 Contemporary Issues in ACES (for freshmen only)	2
Department Requirements	
Minimum Hours in the College of ACES of which 20, excluding ACE 161 and ACE 261, must be in the Department of ACE	35
Minimum of two 400-level courses in ACE	6
ACE 100 Agr Cons and Resource Econ ¹	4
ACCY 201 Accounting and Accountancy I	3
ECON 103 Macroeconomic Principles	3
ECON 302 Inter Microeconomic Theory ²	3
ACE 161 Microcomputer Applications	3
or CS 105 Intro Computing: Non-Tech	
At least 12 hours of credit for study abroad or one international course selected from:	12
ACE 435 Global Agribusiness Management	
ACE 436 Intl Business Immersion	
ACE 451 Agriculture in Intl Dev	
ACE 452 The Latin American Economies	
ACE 454 Econ Dev of Tropical Africa	
ACE 455 Intl Trade in Food and Agr	
Required Concentration	15-27
Concentration prescribed courses. See specific requirements for each concentration listed below.	
Total Hours	126

Approved Concentrations:

- Agri-Accounting (p. 21)
- Agribusiness Markets and Management (p. 21)
- Finance in Agribusiness (p. 22)
- Consumer Economics and Finance (p. 21)
- Environmental Economics and Policy (p. 22)
- Farm Management (p. 22)
- Financial Planning (p. 22)
- Policy, International Trade and Development (p. 24)
- Public Policy and Law (p. 24)

¹ Requirement must be satisfied by end of first year.

² Students are encouraged to complete this requirement prior to the seventh semester.

³ Students pursuing Agricultural Accounting or Finance in Agribusiness must select ECON 202 and ECON 203.

- Minor in Food and Agribusiness Management (p. 23)
- Minor in Environmental Economics and Law (p. 22)
- Minor in International Development Economics (p. 23)

ACE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ACE>)

Courses

ACE 100 Agr Cons and Resource Econ credit: 4 Hours.

Principles of microeconomics; demand, production, supply, elasticity, markets, and trade are presented and used in the analysis of decisions of individuals relating to agricultural production, food and textile consumption, and natural resource use. Macroeconomic concepts are also introduced. Credit is not given for ACE 100 if credit for ECON 102 has been earned.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ACE 161 Microcomputer Applications credit: 3 Hours.

Instruction and practice in solving data-related problems with microcomputers and general purpose software packages.

ACE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in agricultural and consumer economics. Topic may not be repeated except in accordance with the Code. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated up to 5 hours in a semester, to a maximum of 12 hours.

ACE 210 Environmental Economics credit: 3 Hours.

Economic issues surrounding environmental quality, including: costs and benefits of environmental protection; economics of environmental policies (such as those dealing with toxics, water, and air pollution, and municipal solid waste); and economics of international environmental problems (such as ozone depletion and climate change). Same as ECON 210, ENV5 210, NRES 210, and UP 210.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ACE 222 Agricultural Marketing credit: 3 Hours.

Examines factors affecting the size of the market for agricultural products and the scope of marketing activities; functions and services performed; pricing agricultural products, including the nature and causes of price fluctuations; and costs of marketing and efforts to reduce costs and improve the marketing system. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

ACE 231 Food and Agribusiness Mgt credit: 3 Hours.

Overview of management in the food and agribusiness sector. Major topics covered include: introduction to the food and agribusiness sector; the environment of the firm; fundamentals, structural design, and change in organizations; leadership, motivation, communication; and planning and control. Coverage is at the introductory level with a focus on textbook material and current issues. Prerequisite: Sophomore standing and ACE 100 or ECON 102.

ACE 232 Management of Farm Enterprises credit: 3 or 4 Hours.

Economic principles are applied to the management of farms using budgeting system analysis, record analysis, financial management, and lease analysis. Problems related to resource appraisal and business organization are also addressed. Three hours credit without home farm problem, or four hours credit with home farm problem. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

ACE 240 Personal Financial Planning credit: 3 Hours.

Examines principles of financial planning applied to individuals and households, with attention to organizing and analyzing financial information, budgeting, acquiring financial assets, managing credit, planning for taxes, investments, risk management, retirement, and estate planning. Prerequisite: Sophomore standing or consent of instructor.

ACE 251 The World Food Economy credit: 3 Hours.

Examination of global food production, consumption, and trade; problems of hunger and population; the role of agricultural development, trade, and aid in relieving hunger. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

ACE 254 Economic Systems in Africa credit: 3 Hours.

Examines systems of production and exchange in Africa. Through lectures, discussions, readings and films participants will study the ways African people interact in local markets and the impact of national and international markets on their welfare. Same as AFST 254.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

ACE 255 Econ of US Rural Poverty & Dev credit: 3 Hours.

Examination of rural poverty and development issues in the United States, with particular attention to current anti-poverty policies and programs and alternative programs. Topics include measurement of poverty; causes of rural poverty; income maintenance, education, and employment policies and their consequences; and rural development strategies. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ACE 261 Applied Statistical Methods credit: 4 Hours.

Statistical methods and computer applications for agricultural and consumer economics, including descriptive statistics, probability distribution, interval estimation, hypothesis testing, analysis of variance, simple and multiple regression, and non-parametric methods. Credit is not given for ACE 261 if credit for any of ECON 202, CPSC 440, STAT 100, or equivalent has been earned. Prerequisite: MATH 124 or MATH 125.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

ACE 270 Consumer Economics credit: 3 Hours.

Introduction to the study of the consumer in the American economy; sources of consumer information and consumer protection; and examination of current consumer issues within an economic framework.

Prerequisite: Sophomore standing or consent of instructor.

ACE 291 Ag Policy & Leadership credit: 3 Hours.

Current policy issues affecting agriculture and the legislative and rulemaking process that determines those policies will be studied. A trip to Washington, DC during spring break will give the students an opportunity to interact with legislators, federal agencies, organization leaders and representatives of the national and international agricultural policy community to better understand the policy making process and the issues moving through it. Student participation will focus on developing leadership skills and having an opportunity to meet with leaders who are actively engaged in creating and changing public policy. Additional fees may apply. See Class Schedule. Prerequisite: Junior or Senior standing required or the approval of the instructor.

ACE 292 Farm, Food & Environmental Policy credit: 3 Hours.

This course seeks to broaden students' understanding of the breadth and complexity of agriculture in the United States and the challenges and opportunities to be found in the U.S. food and agricultural system. It includes a week-long trip to an area outside of Illinois (such as California) during spring break where students will meet with farm, food and environmental leaders who are deeply involved in driving the issues shaping farm, food, and environmental policy. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore, Junior or Senior standing required AND approval of the instructor.

ACE 293 Off-Campus Internship credit: 1 to 4 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in agricultural and consumer economics. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated up to 4 hours in a semester, to a maximum of 10 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the internship is arranged, and consent of instructor.

ACE 294 On-Campus Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated up to 4 hours in a semester, to a maximum of 10 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the internship is arranged, and consent of instructor.

ACE 295 Independent Study credit: 1 to 4 Hours.

Individual or small group research, special problems, or other studies under the supervision of an appropriate member of the faculty. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms as topics vary. May be repeated up to 4 hours in a semester, but no more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

ACE 306 Food Law credit: 3 Hours.

Explores the legal and political dimensions of food law, policy and trade in the United States and major trading partners. Examines the development of major national and state laws that apply to production, distribution and retail sale of food. Evaluates current issues in food regulation, including: biotechnology, organics, health labeling claims, food safety and products liability litigation. Discusses food regulation in other countries within the context of international treaties such as the World Trade Organization and United Nations.

ACE 310 Natural Resource Economics credit: 3 Hours.

Economic principles are used to analyze a broad range of natural resource policy and management issues. Economic concepts developed include public goods, social welfare, discounting, dynamic efficiency, and resource scarcity. Natural resources examined include biodiversity, fisheries, forests, minerals, soil, and water resources. Same as ENVS 310 and NRES 310. Prerequisite: ACE 100 or ECON 102.

ACE 321 Principles of Public Policy credit: 3 Hours.

Same as ACCY 321, BADM 303, and PS 321. See PS 321.

ACE 335 Food Marketing and Behavior credit: 3 Hours.

This course will explore the food choices consumers make and what this means in the food and agribusiness industries. Students will also learn how to conduct basic research related to consumer behavior, including developing a research question, designing high quality surveys/experiments, and analyzing data.

ACE 341 Issues&Careers in Applied Econ credit: 1 or 2 Hours.

Students study contemporary issues and career opportunities associated with various concentrations in the Department of Agricultural and Consumer Economics. An in-depth dialogue with industry professionals helps develop an understanding of the skill sets needed to succeed in each of the different career paths discussed. May not be repeated for credit.

ACE 345 Finan Decision Indiv Sm Bus credit: 3 Hours.

Introduction to financial decision-making for small businesses and individuals. Examines financial statement preparation and analysis; capital structure (use of debt and equity); investment analysis and portfolio theory; time value of money; interest rates and term structure; asset markets (pricing theories); evaluation of financial risk and insurance concepts, and an introduction to credit markets and financial capital suppliers. In addition, there is a class project involving a visit to either a lender or a financial planner/advisor, and other experiences to introduce students to services and careers in financial sectors. Prerequisite: ACCY 201 or equivalent, or consent of instructor.

ACE 346 Tax Policy and Finan Planning credit: 3 Hours.

Explores the federal tax system, including income, social security, Medicare, and estate taxes, and state and local tax systems. Students learn basic tax principles, public policy issues embedded in the tax systems, and how tax law influences financial plans and decisions. Helps students make wiser financial decisions through increased understanding of the tax impacts of those decisions, participate knowledgeably in public debates surrounding tax policy, and prepare for careers as financial planners. Prerequisite: Sophomore standing.

ACE 360 Spreadsheet Models & Applic credit: 2 Hours.

Spreadsheet development and modeling skills intended for economics and finance applications. Advanced uses of spreadsheet software, development of user-defined functions, use of Visual Basic and comparable external interface languages, data query designs, and advanced data analyses, summary and presentation skills are stressed. Intended to serve as a prerequisite for advanced modeling courses in specific disciplinary areas. Prerequisite: ACE 100 or equivalent, ACE 161 or CS 105, and completion of ACE 261 or ECON 203 or equivalent.

ACE 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms as topics vary. May be repeated up to 4 hours in a semester, but no more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

ACE 398 Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in agricultural and consumer economics. Approved for both letter and S/U grading. May be repeated to 3 hours in a semester, up to a maximum of 12 total hours. Prerequisite: Junior standing and consent of instructor.

ACE 403 Agricultural Law credit: 3 to 4 Hours.

Relation of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing.

ACE 406 Environmental Law credit: 3 to 4 Hours.

Examination of environmental law issues. Topics include common-law pollution control; role of administrative agencies and courts; federal and state power; air and water pollution; regulation of toxic substances; protection of land, soil and other natural resources. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 403, or BADM 300, or BADM 301 recommended.

ACE 410 Energy Economics credit: 3 or 4 Hours.

Use of economics tools to understand and evaluate public policy issues surrounding energy markets and related environmental markets. Focus is on the economic drivers of energy production and use, biofuel policy, transportation and storage of energy commodities, regulation of energy markets, and policies designed to mitigate the impact of energy production and consumption on the environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ACE 411 Environment and Development credit: 3 to 4 Hours.

Relationship between economic development and environmental sustainability through application of cost-benefit analysis and environmental economics. Developing and developed country issues are considered with an emphasis on hands-on applications of project appraisal, social benefit-cost analysis, green accounting, and non-market valuation. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ACE 427 Commodity Price Analysis credit: 3 Hours.

A comprehensive and in-depth survey of commodity price analysis with emphasis on the fundamental factors affecting prices of agricultural products; sources of information relating to production and demand factors; government activities as they relate to prices of agricultural products; technical analysis of agricultural product prices; and market efficiency and forecasting. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 100 or ECON 102; ACE 261, or equivalent.

ACE 428 Commodity Futures and Options credit: 3 Hours.

Development of futures trading; operation and governance of commodity exchanges; economic functions of futures trading; operational procedures and problems in using futures markets; public regulation of futures trading; evaluation of market performance. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 222 or FIN 300 or equivalent.

ACE 430 Food Marketing credit: 3 Hours.

Performance of the food system; marketing margins; transportation, advertising, and retailing of food products; structure, conduct, and performance of food marketing firms and industries; government and public interest in the food system. Same as FSHN 425. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 100 or ECON 102, ACE 222 recommended.

ACE 431 Agri-food Strategic Management credit: 3 Hours.

Process of strategic decision-making in food and agribusiness firms; methods for analysis of business and regulatory environment; organizational issues in strategy choice for firms and supply chains. Same as BADM 438. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 231, BADM 320, or ACE 222; or consent of instructor.

ACE 432 Farm Management credit: 3 or 4 Hours.

Students develop expertise in evaluating and making decisions similar to those faced by farm operators and managers. 3 undergraduate hours. 4 graduate hours. Prerequisite: ACE 232; credit or concurrent registration in ACE 360 or equivalent.

ACE 435 Global Agribusiness Management credit: 3 Hours.

Examination of the economic and strategic management of food, textile, and agribusiness firms within a global business environment; topics include the global business environment and its institutions, organizational strategies and policies, and business operations in global agricultural, food and textile industries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 231, ACE 222, or BADM 320 or consent of instructor.

ACE 436 Intl Business Immersion credit: 4 Hours.

Provides participants an in-depth, experiential immersion into the complex issues and constraints that confront international marketing channel participants. Contextually grounded and themed in a specific industry, the course combines on-campus lectures with an intensive international immersion experience to Europe, Asia, or Latin America. By following the complete marketing channel from raw materials procurement to final consumption, participants gain first-hand knowledge of the necessary managerial decision-making skills required to successfully operate in today's global business environment. Same as BADM 436. 4 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 undergraduate and/or 8 graduate hours. Prerequisite: Consent of instructor.

ACE 440 Finan Plan for Professionals credit: 3 or 4 Hours.

Capstone course applies financial planning principles and concepts in realistic case studies of specific planning needs, requires a comprehensive financial planning exercise, and covers professional ethics and responsibilities. 3 undergraduate hours. 4 graduate hours. Prerequisite: Concurrent enrollment in or completion of ACE 345, ACE 346, ACE 444, and ACE 449.

ACE 444 Finan Serv & Invest Plan credit: 3 or 4 Hours.

Advanced skills in and understanding of asset pricing, equity and debt investment, portfolio theory and diversification, asset allocation, financial risk management, and financial intermediation and regulation emphasizing applications in financial planning and agricultural finance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 240, ACE 345, or FIN 221, and ECON 302 or consent of instructor.

ACE 445 Intermediate Personal Fin Plan credit: 4 Hours.

Financial planning philosophies, techniques, and procedures. Course uses case studies and problem-solving activities to construct financial plans for individuals and families in various life cycle stages and family structures. 4 undergraduate hours. 4 graduate hours. Prerequisite: ACE 240, ECON 302, and junior standing or consent of instructor; FIN 230 is recommended.

ACE 446 Modeling App's Finan Plan credit: 2 Hours.

Improves ability to make effective financial plans and decisions. Involves development of decision tools that are applied to "real world" financial data sets and planning/decision-making circumstances. Topics include applied data management techniques (designing queries/storable forms), financial statement analysis, numeric optimization tools, leverage assessment, incorporating risk in decisions, capital budgeting and time value of money, term structure of interest rates, and currency exchange. 2 undergraduate hours. 2 graduate hours. Prerequisite: One of ACE 240, ACE 345, FIN 221; or consent of instructor and advanced knowledge of spreadsheet software equivalent to the coverage of ACE 360.

ACE 447 Case Stud Agr Accy & Fin Plan credit: 3 Hours.

Capstone course for agricultural accounting, agricultural finance, and financial planning; applies business and planning concepts and tools to real-world situations; emphasizes group decision making; industry professions participate in the learning experience. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of ACCY 301, ACE 444, FIN 300; or consent of instructor.

ACE 448 Rural Real Estate Appraisal credit: 3 or 4 Hours.

Valuation methods and value bases of rural real estate; legal aspects of property rights, appraisal theory and procedures, condemnation appraisal, characteristics of the rural land market, soil identification and productivity, and other legal, economic, agronomic, and engineering aspects of real estate valuation. Laboratory field trips, including a practice appraisal; see Class Schedule for approximate cost. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 232 or ACE 360; NRES 201.

ACE 449 Retirement & Benefit Planning credit: 3 or 4 Hours.

Employee benefit and retirement planning, including employer-sponsored or individually managed options, with particular attention to determining benefit and retirement needs and managing risks in specific planning situations. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both ACE 449 and FIN 434. Prerequisite: ACE 240, ACE 345, and ECON 302 or consent of instructor.

ACE 451 Agriculture in Intl Dev credit: 3 to 4 Hours.

Economics of agricultural development and the relationships between agriculture and other sectors of the economy in developing nations; agricultural productivity and levels of living in the less developed areas of the world; and studies of agricultural development in different world regions including Africa, Asia, and Latin America. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 452 The Latin American Economies credit: 2 to 4 Hours.

Same as ECON 452. See ECON 452.

ACE 454 Econ Dev of Tropical Africa credit: 2 to 4 Hours.

Types of African economies and growth of the exchange economy; development of natural resources, industry, trade, finance, and education; analysis of economic integration, governmental planning, and development projects; and demographic, land tenure, and institutional influences on development. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 455 Intl Trade in Food and Agr credit: 3 Hours.

Economic theory used to analyze trends and patterns of international trade in major agricultural commodities and to understand interaction between economic development, policy, and trade; welfare implications of policies affecting production, consumption, and trade; implications of protectionism, free trade, regional trade blocs, and multilateral trade liberalization, and the role for international trade institutions. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 456 Agr and Food Policies credit: 3 to 4 Hours.

Analysis of agricultural and food policies and programs and their effects on producers and consumers of agricultural products. Formulation of agricultural and food policies are examined with an emphasis on historical and current economic problems affecting agriculture and rural America. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 471 Consumer Economic Policy credit: 3 Hours.

Analysis of choice-making, buying, using, and disposing of consumer goods by families, social policy Perspectives considered. 3 undergraduate hours. No graduate credit. Prerequisite: ACE 100 or equivalent and junior standing.

ACE 474 Econ of Consumption credit: 3 to 4 Hours.

Concepts, theories, and methods for analysis of the micro and macro aspects of consumption; includes standards and content of consumption and description of consumption patterns and trends in the USA and selected other countries. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor; a course in statistics; junior standing.

ACE 476 Family Economics credit: 2 to 4 Hours.

Economic welfare of American families, application of economic theory to the behavior of families and individuals with respect to time allocation between the home and the market; family forms; human capital accumulation; gender differences in income; income inequality; and poverty. Role of public policy is considered. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: ECON 302 or consent of instructor; a course in statistics; senior standing.

ACE 496 Practicum credit: 4 to 12 Hours.

Cooperatively supervised field experience in management and administration in a textile marketing business. Only four hours may be applied to the total required for a graduate degree. At the undergraduate level, up to four hours may be counted toward the hours required in Agricultural and Consumer Economics. 4 to 12 undergraduate hours. 4 to 12 graduate hours. Approved for both letter and S/U grading. Prerequisite: Consent of instructor. Not available to students on probation.

ACE 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in agricultural and consumer economics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated in the same semester to 4 hours, or subsequent terms to a maximum of 12 hours as topics vary.

Agri-Accounting Concentration

Students in Agri-Accounting complete a comprehensive program that enables them to apply accounting principles in production, processing, or retailing sectors in agribusiness industries. Graduates find professional opportunities as consultants and managerial accountants.

Code	Title	Hours
Required for the Agri-Accounting Concentration in Addition to Department Requirements		
ACCY 202	Accounting and Accountancy II	3
ACCY 301	Atg Measurement & Disclosure	3
ACCY 302	Decision Making for Atg	3
ACCY 303	Atg Institutions and Reg	3
ACCY 304	Accounting Control Systems	3
ACE 231	Food and Agribusiness Mgt ¹	3
ACE 360	Spreadsheet Models & Applic	2
ACE 444	Finan Serv & Invest Plan	3
ACE 447	Case Stud Agr Accy & Fin Plan	3
FIN 221	Corporate Finance	3
Total Hours		29

¹ BADM 310 may also satisfy this requirement.

Agribusiness Markets and Management Concentration

Students in Agribusiness Markets and Management obtain management skills; strategy development and implementation; and an awareness of the interaction among agricultural technology, supply, distribution, processing, and marketing firms in the business environment. Graduates are prepared for entry-level management, sales and marketing, and technical analyst positions, and are sought by firms involved in the production, marketing, sales, and financing of farm inputs, agricultural commodities, and food and other retail products.

Code	Title	Hours
Required for the Agribusiness, Markets and Management Concentration in Addition to Department Requirements		
ACE 222	Agricultural Marketing	3
ACE 231	Food and Agribusiness Mgt	3
ACCY 202	Accounting and Accountancy II	3
Select three of the following:		9
ACE 427	Commodity Price Analysis	
ACE 428	Commodity Futures and Options	
ACE 430	Food Marketing	
ACE 431	Agri-food Strategic Management	
ACE 435	Global Agribusiness Management	
Total Hours		18

Consumer Economics and Finance Concentration

Students in Consumer Economics and Finance develop knowledge and skills to help consumers with everyday problems. Coursework in consumer economics, personal finance, and economics gives students a broad-based background and an understanding of the role of consumers in the marketplace. Students can choose an emphasis in consumer economics, family economics, or financial planning and counseling, which leads to career opportunities with government and public agencies, marketing and sales firms, and financial institutions.

Code	Title	Hours
Required for the Consumer Economics and Finance Concentration in Addition to Department Requirements		
ACE 240	Personal Financial Planning	3
ACE 270	Consumer Economics	3
ACE 474	Econ of Consumption	3
ACE 476	Family Economics	3
Select two of the following:		6
ACE 345	Finan Decision Indiv Sm Bus	
ACE 346	Tax Policy and Finan Planning	
ACE 444	Finan Serv & Invest Plan	
ACE 445	Intermediate Personal Fin Plan	
ACE 455	Intl Trade in Food and Agr	
ACE 456	Agr and Food Policies	
ACE 471	Consumer Economic Policy	
ECON 440	Economics of Labor Markets	

ECON 482	Health Economics	
FIN 221	Corporate Finance	
Total Hours		18

Environmental Economics and Policy

Students in Environmental Economics and Policy study environmental and resource management issues at the local, state, national, and international levels. Graduates are prepared for positions in governmental, environmental, and resource management agencies; interest groups; and the environmental area of private firms. Course concentrations include law, policy, management, administration, quantitative methods, and sociology, as well as economics.

Code	Title	Hours
Required for the Environmental Economics and Policy Concentration in Addition to Department Requirements		
ACE 210	Environmental Economics	3
ACE 310	Natural Resource Economics	3
ACE 406	Environmental Law	3
ACE 411	Environment and Development	3
Select one of the following:		3
GEOG 379	Intro to GIS Systems	
NRES 454	GIS in Natural Resource Mgmt	
UP 418	GIS for Planners	
Total Hours		15

Farm Management Concentration

Students in Farm Management study the principles of economics, finance, risk and the decision-making process - all central to the successful management of a farm enterprise. Students develop skills to combine and manage land, labor, and capital resources for a competitive return. Also, students may learn how to appraise farmland and other assets. Farm (and other asset) appraisal is a growing part of professional farm management and can be pursued as a profession in itself.

Code	Title	Hours
Required for the Farm Management Concentration in Addition to Department Requirements		
ACE 222	Agricultural Marketing	3
ACE 232	Management of Farm Enterprises	3-4
ACE 345	Finan Decision Indiv Sm Bus	3
ACE 360	Spreadsheet Models & Applic	2
ACE 432	Farm Management	3
ACE 444	Finan Serv & Invest Plan	3
ACE 448	Rural Real Estate Appraisal	3
Total Hours		20-21

Finance in Agribusiness Concentration

Students in Finance in Agribusiness study finance as used in agribusiness, farming, financial institutions, and more broadly, in the financial services industry. In addition to positions as loan officers in banks and other lending institutions, recent graduates are working in trust and other banking operations, investments and securities firms,

rural appraisals, financial management, financial planning, insurance, real estate, and related fields.

Code	Title	Hours
Required for the Finance in Agribusiness Concentration in Addition to Department Requirements		
ACE 345	Finan Decision Indiv Sm Bus	3
ACE 360	Spreadsheet Models & Applic	2
ACE 444	Finan Serv & Invest Plan	3
ACE 446	Modeling App's Finan Plan	2
ACCY 202	Accounting and Accountancy II	3
FIN 221	Corporate Finance	3
Select two of the following:		6
ACE 427	Commodity Price Analysis	
ACE 428	Commodity Futures and Options	
ACE 447	Case Stud Agr Accy & Fin Plan	
ACE 449	Retirement & Benefit Planning	
FIN 300	Financial Markets ¹	
Total Hours		22

¹ Registration may be restricted by the department offering the course; access cannot be assured.

Financial Planning Concentration

Students in the Financial Planning concentration study finance and economics as they apply to individuals, households, and small businesses in the course of accumulating and using financial resource.

Students are introduced to issues of credit management, insurance and other risk management strategies, saving and investing, retirement planning, and estate planning. Students also study the financial marketplace as it relates to the needs of households and small businesses.

Code	Title	Hours
Required for the Financial Planning Concentration in Addition to Department Requirements		
FIN 230	Introduction to Insurance	3
ACE 240	Personal Financial Planning	3
ACE 345	Finan Decision Indiv Sm Bus	3
ACE 346	Tax Policy and Finan Planning	3
ACE 440	Finan Plan for Professionals	3
ACE 444	Finan Serv & Invest Plan	3
ACE 449	Retirement & Benefit Planning	3
Select one of the following:		
ACE 445	Intermediate Personal Fin Plan	
ACE 446	Modeling App's Finan Plan	
ACE 447	Case Stud Agr Accy & Fin Plan	
ACE 476	Family Economics	
Total Hours		24

Minor in Environmental Economics and Law

The minor in Environmental Economics and Law is designed to provide students with basic skills in economic and legal analysis, and to teach

them how to apply those tools to environmental problems. Students will emerge from this minor with in-depth knowledge about issues related to environmental protection and natural resource management and possibly sustainable development or land-use planning. The 300- and 400-level courses may have additional prerequisites not included in requirements for the minor.

Code	Title	Hours
Required for the Minor in Environmental Economics and Law		
ACE 210	Environmental Economics	3
ACE 310	Natural Resource Economics	3
Select one of the following:		3-4
ACE 100	Agr Cons and Resource Econ	
ECON 102	Microeconomic Principles	
Select two of the following:		6
ACE 306	Food Law	
ACE 403	Agricultural Law	
ACE 406	Environmental Law	
BADM 300	The Legal Environment of Bus	
UP 211	Local Planning, Gov't and Law	
Select one of the following:		3
ACE 411	Environment and Development	
CEE 434	Environmental Systems I	
ECON 414	Urban Economics	
ECON 484	Law and Economics	
Total Hours		18-19

A minimum of 18 hours must be completed for this minor. Courses in the minor cannot be completed Credit/No Credit.

Enrollment in the Environmental Economics and Law minor is not available to students enrolled in the Environmental Economics and Policy concentration of the Department of ACE. Enrollment is also not available to those enrolled in the Human Dimensions of the Environment concentration of the major in Natural Resources and Environmental Sciences if enrolled in that concentration was prior to January, 2013.

Minor in Food and Agribusiness Management

The Food and Agribusiness Management minor is designed for students to deepen their knowledge of the economics and management of agribusinesses as a complement to studies and practices in their major field. Courses will address food, biofuels, biotechnology, agriculture, the environment, and management within the global agribusiness system.

Code	Title	Hours
Required for the Minor in Food and Agribusiness Management		
ACE 100	Agr Cons and Resource Econ	3-4
or ECON 102	Microeconomic Principles	
ACE 222	Agricultural Marketing	3
ACE 231	Food and Agribusiness Mgt	3
Select at least three hours from:		3
ACE 210	Environmental Economics	
ACE 251	The World Food Economy	
ACE 306	Food Law	

ACE 345	Finan Decision Indiv Sm Bus	
Select two of the following:		6-7
ACE 427	Commodity Price Analysis	
ACE 428	Commodity Futures and Options	
ACE 430	Food Marketing	
ACE 431	Agri-food Strategic Management	
ACE 435	Global Agribusiness Management	
ACE 436	Intl Business Immersion	
ACE 444	Finan Serv & Invest Plan	
Total Hours:		18-20

A minimum of 18 hours must be completed for this minor. Courses in the minor cannot be completed Credit/No Credit.

Enrollment in the Food and Agribusiness Minor is not available to students enrolled in the Agribusiness Markets and Management concentration of the Department of ACE, but students in other concentrations in ACE may be admitted to the minor. The 300- and 400-level courses may have additional prerequisites not included in requirements for the minor.

Minor in International Development Economics

Code	Title	Hours
Required for the Minor in International Development Economics		
ACE 100	Agr Cons and Resource Econ	3-4
or ECON 102	Microeconomic Principles	
ACE 251	The World Food Economy	3
Select one of the following:		3
ACE 222	Agricultural Marketing	
ACE 254	Economic Systems in Africa	
ACE 255	Econ of US Rural Poverty & Dev	
ACE 270	Consumer Economics	
Select two of the following:		6
ACE 411	Environment and Development	
ACE 436	Intl Business Immersion	
ACE 451	Agriculture in Intl Dev	
ACE 452	The Latin American Economies	
ACE 454	Econ Dev of Tropical Africa	
ACE 455	Intl Trade in Food and Agr	
At least 12 hours taken from the preceding two categories		3
TOTAL HOURS		18-19

Some of these courses have additional non-ACE prerequisites. A semester-long study abroad experience in an emerging market or development economy (i.e. countries not part of the OECD) will be accepted in lieu of one of these courses.

The minor should consist of at least 18 hours of course work. At least 6 hours of the minor must be advanced (300 or 400) level courses.

Courses in the minor cannot be completed Credit/No-Credit.

Minor advising information available from:
Dr. Kathy Baylis

Associate Professor, Department of ACE
302B Mumford Hall
mailto:jallensm@illinois.edu (jallensm@illinois.edu)

Policy, International Trade and Development Concentration

Students in Policy, International Trade, and Development enjoy a broad exposure to policy, international trade, and agricultural development from an economics perspective. The concentration provides a global and societal perspective ideally suited for exploring studies in administration, government, policy analysis, social processes, and international economics. Graduates are prepared for positions in firms with international business; in federal or state government agencies dealing with policy, trade, or development; in trade organizations; and in public interest groups.

Code	Title	Hours
Required for the Policy, International Trade and Development Concentration in Addition to Department Requirements		
ACE 251	The World Food Economy	3
ACE 455	Intl Trade in Food and Agr	3
ACE 456	Agr and Food Policies	3
Select two of the following:		6
ACE 411	Environment and Development	
ACE 451	Agriculture in Intl Dev	
ACE 454	Econ Dev of Tropical Africa	
ECON 452	The Latin American Economies	
Total Hours		15

Public Policy and Law Concentration

Students in Public Policy and Law become expert in the economics of public policy in general and in its application to specific areas of interest. This concentration will expose students to the legal and institutional structures in which policies are developed, the analysis of the economics impacts of policies, and special circumstances of public policy and law pertaining to the environment, consumers, the agricultural sector, international relations, and other.

Code	Title	Hours
Required for the Public Policy and Law Concentration in Addition to Department Requirements		
PS 220	Intro to Public Policy	3
ECON 411	Public Sector Economics	3
Select one of the following:		3
ACE 210	Environmental Economics	
ACE 251	The World Food Economy	
ACE 255	Econ of US Rural Poverty & Dev	
ACE 270	Consumer Economics	
Select one of the following:		3
ACE 306	Food Law	
ACE 403	Agricultural Law	
ACE 406	Environmental Law	
ECON 484	Law and Economics	
Select three of the following: (excluding courses taken to meet above "choose one" requirement)		9

ACE 306	Food Law	
ACE 310	Natural Resource Economics	
ACE 403	Agricultural Law	
ACE 406	Environmental Law	
ACE 411	Environment and Development	
ACE 451	Agriculture in Intl Dev	
ACE 454	Econ Dev of Tropical Africa	
ACE 455	Intl Trade in Food and Agr	
ACE 456	Agr and Food Policies	
ACE 471	Consumer Economic Policy	
ACE 474	Econ of Consumption	
ACE 476	Family Economics	
Total Hours		21

Animal Sciences

Douglas Parrett, Interim Department Head
116 Animal Sciences Laboratory, 1207 West Gregory, Urbana
PH: (217) 244-1681
<http://ansci.illinois.edu>

Welcome to the Department of Animal Sciences, an academic family that includes more than 6,000 alumni, 500 undergraduate students, and more than 100 graduate students. We are proud of our legacy, and we are dedicated to enhancing the quality of life for our students and stakeholders through excellence in teaching, research and outreach programs.

Why Animal Sciences?

Students in Animal Sciences combine their interests in biology and animals in a learning environment that extends beyond the classroom. The Department of Animal Sciences offers our students opportunities to conduct undergraduate research, gain hands-on experience working in our laboratories and farms, participate in internships, and become active in a number of student organizations. For instance, our students work with beef cattle and poultry in state-of-the-art research facilities, serve internships in animal shelters and zoos, and conduct discovery research in cutting-edge programs in immunology and reproductive biology. We provide opportunities for virtually every area of interest and our students become skilled in applying their knowledge to address real-world problems.

The work of the Department of Animal Sciences is important. Our research, teaching, and Extension programs address subjects such as bioenergy, the environment, food production, animal health, and animal behavior. We study production efficiency, profitability, and well-being of dairy and beef cattle, pigs, and poultry to enhance the supply of food for a growing world population. Our programs in companion animal biology and humane education create information for pet owners and help us understand the value of positive relationships between humans and animals. Fundamental research in physiology, nutrition, and behavior solve animal sciences problems and have significant impact on improving human health.

Our Commitment

We have a diverse and nationally respected faculty who solve problems of real importance to society and who are deeply committed to providing the best educational experiences to our students. We care about the

success of our students and we provide a high-quality education that will equip them to identify and solve the challenges of the future.

The learning opportunities in the Department of Animal Sciences and the University of Illinois are without limit. Come see for yourself why the Department of Animal Sciences is held in high regard in the nation and throughout the world.

For the Degree of Bachelor of Science with a Major in Animal Sciences

Students pursuing this major select one of three concentrations:

- Companion Animal and Equine Science Concentration (p. 30)
- Food Animal Production and Management Concentration (p. 31)
- Science, Pre-Veterinary and Medical Concentration (p. 32)

Minor in Animal Sciences

The minor in Animal Sciences is designed to provide students with a basic understanding and knowledge of a discipline subject matter area of their choice. Subject matter areas include animal production and management, nutrition, genetics, animal behavior, immunology, meat science/muscle biology, microbiology, reproductive physiology, and molecular biology. Courses in the minor cannot be completed Credit/No Credit.

Code	Title	Hours
Courses Required		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
Select two of the following:		6-7
ANSC 223	Animal Nutrition	
ANSC 224	Animal Reproduction and Growth	
ANSC 221	Cells, Metabolism and Genetics	
ANSC 222	Anatomy and Physiology	
Courses Required		
Minimum two additional 300- or 400-level ANSC courses. These courses must be distinct from the student's major or an additional minor. ANSC 398 and ANSC 499 do not count toward the minor.		6-8
Total Hours		20

ANSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ANSC>)

Courses

ANSC 100 Intro to Animal Sciences credit: 4 Hours.

Survey of beef and dairy cattle, companion animals, horses, poultry, sheep, and swine. Includes the importance of product technology and the basic principles of nutrition, genetics, physiology, and behavior as they apply to breeding, selection, feeding, and management. Lecture and lab.

ANSC 101 Contemporary Animal Issues credit: 3 Hours.

Provides an understanding of fundamental issues impacting the care and use of animals, and their role in human welfare. Topics addressed include the fundamental principles of animal domestication and its impact on humans, animal welfare and care, animal-environmental interactions, food safety, diet and health issues, economic and societal issues facing the world today, and bioethical issues.

ANSC 103 Working With Farm Animals credit: 2 Hours.

Introductory course that will provide novice students with the fundamentals of animal-animal and animal-human interactions for domestic farm animals. Emphasizes hands-on experiences to develop a background in the concepts and practice of recognizing and understanding the animal's physiology and behavior, animal well being, and animal responses to human interactions. Prerequisite: ANSC 100.

ANSC 110 Life With Animals and Biotech credit: 3 Hours.

Lecture/discussion course that will provide students an overview of biotechnology and animals. Focuses on biotechnological achievements involving animals and how they influence the global development of agriculture, medicine, and industry. Topics will be covered from scientific, discovery, historical, social, and political perspectives.

This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

ANSC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

An experimental course on a special topic in animal sciences. Topic may not be repeated except in accordance with the Code. May be repeated to a maximum of 12 hours. No more than 12 hours may be counted toward graduation.

ANSC 201 Principles of Dairy Production credit: 3 Hours.

Surveys the dairy industry; examines principles of breeding, selection, reproduction, feeding, milking and management of dairy cattle. Prerequisite: ANSC 100.

ANSC 204 Intro Dairy Cattle Evaluation credit: 2 Hours.

Evaluation of physical traits of dairy cattle in relation to economic value and genetic improvement; sire selection, mating systems, and genetic merit for dairy cattle. Field trip required. Prerequisite: ANSC 100 or consent of instructor.

ANSC 205 World Animal Resources credit: 3 Hours.

Examination of the world's animals, domesticated and wild, and their uses in various climatic, economic and cultural contexts. Exploration of their contemporary management and their future prospects. Provides background for international experiences, such as ACES 298 and ACES 299. Prerequisite: Completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for: Advanced Composition

ANSC 206 Horse Management credit: 3 Hours.

Focus on the principles of managing horses from birth through breeding; topics include reproductive physiology, breeding management, nutrition, diseases, parasites, herd health programs, genetics, facility design and exercise physiology.

ANSC 207 Companion Animal Biology & Care credit: 3 Hours.

An introduction to companion animal biology through consideration of the physical structure, nutrition, behavior, and reproduction of animal species most commonly kept as companions. The basic information is applied to discussion of basic preventive health care. Course content is largely focused on cats and dogs, although other mammals, birds and reptiles will be briefly considered. Legal and economic issues, and ethical considerations associated with companion animals are also incorporated into the course discussion.

This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

ANSC 211 Breeding Animal Evaluation credit: 3 Hours.

Application of current scientific tools, methods, and performance programs available to livestock breeders for improving beef cattle, swine, and sheep; emphasis on the changing nature of modern breeds of livestock as influenced by selection, economics, and consumer and market trends. Course requires visits (including weekends) to farms, related companies, and events to observe the latest techniques and scientific principles associated with livestock selection and evaluation. Students are responsible for personal expenses on the field trips.

Prerequisite: Junior standing.

ANSC 219 Meat Technology credit: 3 Hours.

Student participation in the transformation of live animals through harvest and carcass fabrication into food products for human consumption; includes laboratory. Purchase of personal equipment is required.

ANSC 221 Cells, Metabolism and Genetics credit: 3 Hours.

Provides an introductory background in basic aspects of cell biology, physiology, and genetics. Topics addressed include cell structure, cell organelles, and different types of cells, protein synthesis and gene expression, chromosome structure, basic mechanisms of chromosome replication, basic principles of quantitative and population genetics, and an introduction to genomics and proteomics. Prerequisite: ANSC 100, CHEM 102 and 103 or concurrent enrollment.

ANSC 222 Anatomy and Physiology credit: 3 Hours.

Provides an introductory background in basic and fundamental principles of animal anatomy and physiology. The major organ systems (muscle, skeletal, neural, endocrine, cardiovascular, respiratory, and renal) will be presented with an emphasis on comparative anatomy, integrated function, and specific homeostatic mechanisms. Prerequisite: ANSC 100.

ANSC 223 Animal Nutrition credit: 3 Hours.

Provides an introductory background in the fundamental principles of animal nutrition and how nutrition impacts animal well-being and performance. Students will develop comprehensive knowledge in gastrointestinal and digestive anatomy and physiology, nutrient function and requirements, and energy utilization in various species. Specific topics include different classes and properties of nutrients, differences in digestive mechanisms in monogastric vs. ruminant animals, and how carbohydrates, lipids, proteins, minerals, and vitamins contribute to the nutrient requirements of animals. Prerequisite: ANSC 100, ANSC 221, and CHEM 104 and CHEM 105.

ANSC 224 Animal Reproduction and Growth credit: 4 Hours.

Study of the basic principles of reproduction, lactation, growth, and hormonal regulation in animals as well as humans, including cell growth and differentiation, processes of reproduction, biotechnological methods of reproductive control, manipulation, performance enhancement of lactation and growth. Prerequisite: ANSC 100, ANSC 221.

ANSC 250 Companion Animals in Society credit: 3 Hours.

Explores the current and historical functions and influences of companion animals in American society. Topics include the evolution of animal protection, the use of assistance and service animals, and the growth of the pet supply industry. Controversial issues which are of current concern to society will also be examined.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

ANSC 256 Horse's Role in Human History credit: 3 Hours.

Provides an understanding of the crucial roles that horses have played in the development and expansion of human civilization, including how the role of the horse in culture and society has changed throughout history. Topics addressed include an understanding of the evolution and domestication of horses, use of horses for transportation, sport, warfare and power, and the impact of horses on societal issues facing the world today.

ANSC 293 Internship Off Campus credit: 1 to 4 Hours.

Supervised, off-campus learning experience in an animal-related enterprise. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Good academic standing; ANSC 100.

ANSC 294 Intern On Campus Practical Exp credit: 1 to 5 Hours.

Supervised, on-campus learning experience associated with subject matter specific to animal sciences. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Good academic standing; ANSC 100.

ANSC 295 UG Research or Thesis credit: 1 to 5 Hours.

Individual research in animal sciences. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Minimum GPA of 2.5; not open to students on probation; consent of instructor.

ANSC 298 Undergraduate Seminar credit: 1 Hour.

Presentations and discussion of employment opportunities, departmental research activities, and topics relevant to animal agriculture. Prerequisite: Sophomore standing.

ANSC 299 Animal Mgt Field Studies credit: 1 or 2 Hours.

Field studies of farms and service industries; discusses and demonstrates management practices on commercial farms. Trip normally taken during spring break. May be repeated up to 8 hours in separate terms if topics vary.

ANSC 301 Food Animal Production, Management, and Evaluation credit: 3 Hours.

Provides an overview of how nutrition, genetics, and environment affect beef cattle, swine, and sheep growth, development, and end-product quality and value. Students get hands-on experience evaluating and determining value of live animals and carcasses. Prerequisite: Credit or concurrent enrollment in ANSC 223 and ANSC 224; or consent of instructor.

ANSC 305 Human Animal Interactions credit: 3 Hours.

Explores the relationships between humans and companion animals and the roles and functions that animals play in today's society. Examines the evolution of the human/companion animal bond, benefits and disadvantages of this bond, and working/nonworking roles of companion animals. Controversial issues which are of current concern to society will be examined in detail. Writing and in-class discussions are emphasized. Prerequisite: ANSC 250.

ANSC 306 Equine Science credit: 3 Hours.

Understand and apply current scientific research and principles of equine science to intensive horse production. An in-depth approach to equine reproductive physiology, nutrition, anatomy and exercise physiology will be followed using a combined lecture and laboratory format. Emphasis on current research and hands-on techniques. Prerequisite: ANSC 206, ANSC 222 or equivalent, and credit or concurrent enrollment in ANSC 224 or equivalent; or consent of instructor.

ANSC 307 Companion Animal Management credit: 3 Hours.

This course provides an advanced overview of companion animal biology through consideration of the physical structure, nutrition, behavior, and reproduction of animal species most commonly kept as companions. Course content is applied to discussion of best management practices and basic preventive health care. Course content is largely focused on cats and dogs, although other mammals, birds and reptiles are briefly considered. Legal and economic issues, ethical considerations, and career opportunities associated with companion animals are also incorporated into course discussion. Credit is not given for both ANSC 307 and ANSC 207.

ANSC 309 Meat Production and Marketing credit: 2 Hours.

General approach to meat utilization with emphasis on selecting, grading, cutting, and pricing meat for the retail, restaurant, and food service industry. This course includes laboratory and may use field trips to establishments to highlight course concepts.

ANSC 310 Meat Selection and Grading credit: 3 Hours.

Study characteristics associated with the value of carcasses, primal and retail cuts from meat animals; emphasize USDA grading and specifications as well as written communication. Field trips to meat packing plants are required.

ANSC 312 Advanced Livestock Evaluation credit: 3 Hours.

Advanced instruction in the selection of breeding animals of beef, sheep, and swine species and in the evaluation of market animals for slaughter. This course requires visits to farms, related companies, and events to observe the latest techniques and scientific principles associated with livestock selection and evaluation. Prerequisite: ANSC 211 or consent of instructor.

ANSC 313 Horse Appraisal credit: 2 Hours.

Advanced course for students interested in improving their performance and conformation evaluation skills; provides exposure to the horse show industry and the career opportunities associated with this facet of the horse industry; students may compete in intercollegiate judging contests.

ANSC 314 Adv Dairy Cattle Evaluation credit: 2 Hours.

Advanced instruction in the selection of breeding dairy animals. Involves visits to farms, related companies and events to observe the latest techniques and scientific principles associated with dairy cattle selection and evaluation. Field trips for cattle judging are required. May be repeated to a maximum of 4 hours. Prerequisite: ANSC 204 or consent of instructor.

ANSC 322 Livestock Feeds and Feeding credit: 3 Hours.

Livestock feeds and practical feeding applications for livestock will be addressed. Feed identification and ration formulation will be strongly emphasized. One session of this class will take place at the UIUC Feed Mill. Prerequisite: ANSC 223.

ANSC 331 Biology of Reproduction credit: 2 to 4 Hours.

Study of comparative reproduction, lactation, behavior, reproductive strategies, assisted reproduction, and reproductive diseases in domestic and wild animals including mammals, birds, reptiles, and amphibians. Prerequisite: Sophomore standing; IB 104 or one introductory level biology course.

ANSC 350 Cellular Metabolism in Animals credit: 3 Hours.

Principles and regulation of cellular metabolism in animals, emphasizing energy derivation and its relationship to domestic animal and food production. Prerequisite: CHEM 104, CHEM 105, and ANSC 221 or equivalent.

ANSC 363 Behavior of Domestic Animals credit: 4 Hours.

Introduction to concepts of animal behavior with emphasis on domestic animals; lecture and lab. Prerequisite: ANSC 100.

ANSC 366 Animal Behavior credit: 3 Hours.

Same as ANTH 342 and IB 329. See IB 329.

ANSC 370 Companion Animal Policy credit: 3 Hours.

This course provides an overview of public policy with respect to the use and treatment of companion animals in the United States. Current and alternative policies are considered in terms of their effectiveness in improving or otherwise altering the treatment of companion animals. The influences of animal protection organizations, consumer groups, politicians, the scientific community, and other stakeholders on the development and enforcement of policies are examined in detail. Prerequisite: ANSC 250.

ANSC 396 UG Honors Research or Thesis credit: 1 to 5 Hours.

Independent study, under the supervision of a faculty member, on a problem of appropriate scope and character that culminates in writing a thesis. Intended primarily for honors students who plan on conducting research or pursuing graduate study. Thesis projects must be supervised by a faculty member and reviewed by a departmental committee. Students must present a satisfactory thesis to receive credit. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: Junior standing, minimum GPA of 3.4; consent of a faculty member.

ANSC 398 UG Experiential Learning credit: 1 to 5 Hours.

Student-directed experiential learning on special topics directly pertaining to subject matter in animal sciences. Students are required to complete a Memorandum of Agreement prior to enrolling in this course. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated up to 5 hours per semester, up to a maximum of 10 total hours.

ANSC 400 Dairy Herd Management credit: 3 Hours.

The technology of modern milk production practices; application of principles in nutrition, physiology, economics, health and hygiene, waste management, and facilities design for efficient dairy herd management systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 201 or consent of instructor.

ANSC 401 Beef Production credit: 3 Hours.

The principles of the management of beef cattle enterprises. Applies science and technology to the breeding, selection, feeding, health and production of beef and beef products. Emphasizes the use of research findings in decision-making. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ANSC 401 and ANSC 213. Prerequisite: ANSC 223 or equivalent.

ANSC 402 Sheep Production credit: 3 Hours.

Study of management, nutrition, reproduction, genetics, marketing, economics, housing, health and production record programs as they apply to sheep production. History of the U. S. sheep industry will be explored along with a study of wool production, marketing and processing. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 403 Pork Production credit: 3 Hours.

Applies science and technology to the selection, breeding, feeding, housing and management of swine in a production enterprise; emphasizes use of research findings in decision making. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ANSC 403 and ANSC 213. Prerequisite: ANSC 221 or equivalent; ANSC 223 or equivalent; ANSC 467; and ANSC 224 or equivalent or ANSC 431.

ANSC 404 Poultry Science credit: 3 Hours.

Basic principles of genetics, physiology, nutrition, and health of avian species; the application of science and technology in solving the breeding, nutrition, disease, housing, and other management problems encountered in commercial egg and poultry meat production. 3 undergraduate hours. 3 graduate hours.

ANSC 405 Advanced Dairy Management credit: 2 Hours.

Advanced dairy management complements the four other classes offered in the dairy certificate program featuring applied management principles and practices needed in modern dairy production. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 201 or equivalent or consent of instructor.

ANSC 406 Zoo Animal Conservation Sci credit: 3 Hours.

Topics related to the conservation, physiology and management of exotic animal species in a captive setting will be addressed. These include conservation biology, population genetics, nutrition, reproduction (natural and assisted), behavior, exhibitry, environmental enrichment and veterinary care. Also covers taxonomy, zoo research, the role of zoos in conservations, and the ethics of maintaining captive animals. 3 undergraduate hours. 3 graduate hours. One Saturday field trip may be required. Prerequisite: ANSC 221 or IB 104, or equivalent.

ANSC 407 Animal Shelter Management credit: 3 Hours.

Basic management concepts related to maintaining the physical and behavioral health of companion animals in a shelter setting will be addressed. Population dynamics and management will be heavily emphasized. Utilizes practical resources available through local and national animal welfare organizations. Two class sessions will take place at the Champaign County Humane Society. One Saturday field trip is required. 3 undergraduate hours. No graduate credit. Prerequisite: ANSC 207 or ANSC 307.

ANSC 409 Meat Science credit: 3 Hours.

Fundamental biological principles that influence composition, processing, preservation, and quality of meat and meat products. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 221 or equivalent, ANSC 222 or equivalent, ANSC 223 or equivalent, and ANSC 224 or equivalent.

ANSC 420 Ruminant Nutrition credit: 3 Hours.

Physiology and microbiology of digestion in the ruminant, and biochemical pathways of utilization of the absorbed nutrients for productive purposes. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 421 Minerals and Vitamins credit: 3 Hours.

Nutritional implications and metabolic roles of minerals and vitamins in animal metabolism. The course is designed to instill a basic understanding of vitamin and mineral functions, absorption, metabolism, and excretion. Research methodologies used in the study of vitamin and mineral nutrition will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent, credit or concurrent registration in MCB 450 or ANSC 350, or consent of instructor.

ANSC 422 Companion Animal Nutrition credit: 3 Hours.

Digestive physiology and basic nutritional considerations of companion animals, with primary focus on dogs and cats. Topics discussed include nutritional idiosyncrasies of dogs and cats, the importance of nutrition in various physiological states, and nutrient needs during disease. Information on pet food regulations, common ingredients and formulation, manufacturing methods, and trends in the pet food industry will also be covered. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 423 Advanced Dairy Nutrition credit: 2 Hours.

All aspects of dairy cattle nutrition will be discussed including nutrients, phase feeding (milk curve analysis, dry matter intake, and body weight loss), dry and transition cow programs, forage feeding systems, feed delivery approaches, metabolic disorders related to nutrition, and application of various dairy feeding guides. 2 undergraduate hours. 2 graduate hours. Prerequisites: ANSC 201 or equivalent, or consent of instructor.

ANSC 424 Pet Food & Feed Manufacturing credit: 3 Hours.

Integrates principles of animal nutrition with various aspects pertaining to pet food and animal feed manufacturing. Topics discussed in this course include processing technologies (e.g., extrusion, retorting, baking) involved in the manufacturing of pet foods and animal feeds, principles of diet formulation and nutritional guidelines, and an overview of regulatory affairs, quality control, and good manufacturing practices. This course includes two field trips to a pet food manufacturing facility and a food and feed ingredient company. 3 undergraduate hours. 3 graduate hours. Prerequisite: Required - ANSC 223; Recommended - ANSC 322 and ANSC 422.

ANSC 431 Advanced Reproductive Biology credit: 3 Hours.

Course is an upper-level undergraduate or entry-level graduate course dealing with reproductive biology. It will include the study of basic cell biology of reproduction, lactation, growth and hormone regulation of domestic and non-domestic animals as well as humans, including biotechnology methods of reproduction control, manipulation, performance enhancement of lactation and growth, and disease control. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 224 or equivalent.

ANSC 435 Milk Quality and Udder Health credit: 2 Hours.

An advanced course on the physiological basis of mammary growth, milk secretion, and udder health. Topics covered includes mammary gland anatomy, hormonal control, causes and control of mastitis, milk harvesting, and milk quality. The course will be delivered via CD and web-based synchronous discussion. Students should have a basic course in dairy/animal sciences, or physiology, or consent of the instructor before taking this course. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 201 or equivalent or consent of instructor.

ANSC 437 Adv Reproductive Management credit: 2 Hours.

The focus of this course is advanced techniques and technologies used to manage production livestock. The course will emphasize advanced and emerging technologies such as embryo transfer, cloning, semen sexing, and ultrasound pregnancy diagnosis and fetal sexing and innovations in existing procedures including artificial insemination, reproductive health management, and estrus synchronization. Implementation of existing and emerging techniques and technologies and research and discovery will be covered for individuals focusing on careers in livestock production, clinical veterinary medicine, education, technical service/support, and research and development. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 331 or equivalent, or consent of instructor.

ANSC 438 Lactation Biology credit: 4 Hours.

Examines the structural and functional development of the mammary gland, cell biology, and control of milk synthesis, and composition and biochemistry of milk. Compares and analyzes the physiological processes of lactation in mammals. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 224 or equivalent.

ANSC 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

ANSC 441 Human Genetics credit: 3 or 4 Hours.

Same as ANTH 441. See ANTH 441.

ANSC 444 Applied Animal Genetics credit: 3 Hours.

Principles of heredity and their application to the problems of animal improvement. 3 undergraduate hours. 3 graduate hours.

ANSC 445 Statistical Methods credit: 4 Hours.

Design and analysis of experiments: multiple regression, method of fitting constants, factorial experiments with unequal subclass numbers, analysis of covariance, experimental design; computer applications to agricultural experiments using statistical packages. Same as ABE 445 and NRES 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: CPSC 440, or equivalent.

ANSC 446 Population Genetics credit: 3 or 4 Hours.

Conceptual and mathematical approach to the genetics of populations: estimation of allele and genotype frequencies; Hardy-Weinberg principle; measures of genetic diversity and distance; selection; non-random mating; genetic drift; mutation; neutral theory; migration and population subdivision; linkage and recombination; coalescence and phylogenetic inference. Applications to animals, plants, human health and wildlife conservation. Same as IB 416. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students desiring 4 hours credit do additional work in some area of population genetics. Prerequisite: An introductory genetics course (ANSC 221 or IB 204); one of MATH 220, MATH 221, or MATH 234; or consent of instructor.

ANSC 447 Advanced Genetics and Genomics credit: 4 Hours.

Current principles and methods in genetics and genomics to better understand genome function, genome evolution, the genetic architecture of complex traits, the genetic basis of human and animal diseases, and animal productivity. To build a strong foundation for the application of novel genomic tools, the course will provide an overview of main concepts in genetics and genomics, including gene-environment interaction and epigenetic modifications. The focus of the course will be on mammals, but novel applications of the new sequencing technologies to other systems will be discussed. In addition to the presentation of scientific concepts and discoveries, the course will include a significant practical component. Students will learn software programs used for genetic mapping and bioinformatics analysis, will review and present scientific papers, and will write a research paper proposing their own experiments. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 221, MCB 150, or IB 150.

ANSC 448 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Introduction to deterministic and stochastic mathematical models for the life sciences, statistical methods for fitting and testing models, and computer simulation programs. Applications to populations, processes, and products of animals, plants, and humans. Same as IB 487 and STAT 458. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students desiring 4 hours credit do additional work in some area of mathematical modeling in the life sciences. Prerequisite: IB 104; a course in calculus, and a course in computer sciences; or consent of instructor.

ANSC 449 Biological Modeling credit: 3 or 4 Hours.

Same as CPSC 448, GEOG 468, and IB 491. See GEOG 468.

ANSC 450 Comparative Immunobiology credit: 4 Hours.

Advanced concepts of immunophysiology and immunogenetics. Immunophysiology with an emphasis on immune-neuroendocrine interactions. The molecular and cellular basis of self-nonself recognition with an emphasis on the major histocompatibility complex in vertebrates and innate immunity in both vertebrates and invertebrates. The mucosal immune system, which requires a complex interplay between innate and acquired immunity to protect mucosal surfaces exposed to the environment. A working knowledge of genetics and cellular and molecular biology is recommended. Same as MCB 442 and PATH 410. 4 undergraduate hours. 4 graduate hours.

ANSC 451 Microbes and the Anim Indust credit: 3 Hours.

Fundamental aspects of the ecology of microorganisms and their biochemical activities related to the degradation of organic matter with emphasis on the gastrointestinal tract of production animals. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 100, and ANSC 350, MCB 300, MCB 424, or equivalent.

ANSC 452 Animal Growth and Development credit: 3 or 4 Hours.

Basic principles of animal growth from early fetal development through typical marketing ages for the major domestic animal species. Topics discussed include molecular and cellular determinants of tissue development and whole animal growth, with coverage of current and future technologies for manipulating growth to enhance animal production. 3 or 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 221, ANSC 222, ANSC 223, and ANSC 224.

ANSC 453 Stem Cell Biology credit: 3 or 4 Hours.

The history of stem cell biology as well as up-to-date topics in stem cell research will be presented and discussed with emphasis on experimental approaches. Each student is expected to present research articles relative to each focus area and lead the discussion for the whole class every week. Topics include Molecular Reproductive Biology, Genetics, Physiology of both adult- and embryo-derived stem cells, and their application to Biotechnology and Regenerative Medicine. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 100 or equivalent, MCB 316, ANSC 221, ANSC 224, or equivalent; or consent of instructor.

ANSC 467 Applied Animal Ecology credit: 3 Hours.

An in-depth multidisciplinary approach (physiology, behavior, immunology, neuroscience) to understanding animal-environment interactions (including thermal, air, microbial, photic and behavioral factors) as basis for prescribing practical environments for keeping animals. Courses in physiology, biology, nutrition, microbiology, and genetics are recommended. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 221 or equivalent, ANSC 222 or equivalent, and ANSC 223 or equivalent; or consent of instructor.

ANSC 471 ANSC Leaders & Entrepreneurs credit: 3 Hours.

Designed to familiarize students with the tools and skills necessary for successful business operation in industry and entrepreneurial environments including food animal production farms. The overall aim is to explore how enhanced interpersonal and leadership skills facilitate positive relations in business. Students will design a business plan, an entrepreneurial enterprise, that will be read by an external committee of professors, community members, and business owners and evaluated for its viability and creativity. This course is relevant for leaders as well as future entrepreneurs interested in acquiring valuable skills that may be applied to many careers. 3 undergraduate hours. 3 graduate hours. Prerequisites: Any advanced composition course.

ANSC 483 Outreach Education Skills credit: 3 Hours.

Same as CPSC 483. See CPSC 483.

ANSC 498 Integrating Animal Sciences credit: 2 Hours.

Introduction to the theoretical basis of and skills associated with leadership, inquiry, and collaborative learning. Capstone experience in integrating knowledge, practicing skills, and applying theory through collaborative projects that address current issues in animal sciences. Projects relate to the impact of animals and animal use on humans and societal issues facing the world today. 2 undergraduate hours. 2 graduate hours. Prerequisite: Must have completed one of the following: ANSC 293, ANSC 294, ANSC 295, ANSC 299, ANSC 396, ANSC 398, ACES 293, ACES 298 or ACES 299.

ANSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in animal sciences. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

Companion Animal and Equine Science Concentration

The companion animal and equine science concentration is designed for students intending to pursue a career in those industries generally not associated with traditional meat animal or dairy production. Students will take courses that prepare them for careers in specialized fields of animal care, animal health and animal well-being associated with zoos, kennels, research laboratories, and the racing industry.

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
One Western culture and one non-Western U.S. minority culture course		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
STAT 100	Statistics	
SOC 280	Intro to Social Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4

CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5

Humanities and the Arts

Courses selected from campus approved list	6
--	---

Social Sciences

ECON 102 or ACE 100	Microeconomic Principles Agr Cons and Resource Econ	3
Additional social or behavioral science course; cannot be an economics course.	3-4	

ACES Required

ACES 101	Contemporary Issues in ACES	2
----------	-----------------------------	---

Animal Sciences Required

ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning ²	1
ANSC 498	Integrating Animal Sciences	2

Companion Animal and Equine Science Concentration Required

Choose one group: ¹	6	
ANSC 250 & ANSC 307	Companion Animals in Society and Companion Animal Management	
or		
ANSC 206 & ANSC 306	Horse Management and Equine Science	
Select two of the following Applied Sciences courses: ¹	6	
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management ¹	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society ¹	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science ¹	
ANSC 307	Companion Animal Management ¹	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	

ANSC 401	Beef Production
ANSC 402	Sheep Production
ANSC 403	Pork Production
ANSC 404	Poultry Science
ANSC 405	Advanced Dairy Management
ANSC 407	Animal Shelter Management
ANSC 424	Pet Food & Feed Manufacturing
ANSC 435	Milk Quality and Udder Health
ANSC 437	Adv Reproductive Management
ANSC 471	ANSC Leaders & Entrepreneurs
Select two of the following Basic Sciences courses: 6	
ANSC 331	Biology of Reproduction
ANSC 350	Cellular Metabolism in Animals
ANSC 363	Behavior of Domestic Animals
ANSC 366	Animal Behavior
ANSC 406	Zoo Animal Conservation Sci
ANSC 409	Meat Science
ANSC 420	Ruminant Nutrition
ANSC 421	Minerals and Vitamins
ANSC 422	Companion Animal Nutrition
ANSC 431	Advanced Reproductive Biology
ANSC 438	Lactation Biology
ANSC 440	Applied Statistical Methods I
ANSC 441	Human Genetics
ANSC 444	Applied Animal Genetics
ANSC 445	Statistical Methods
ANSC 446	Population Genetics
ANSC 447	Advanced Genetics and Genomics
ANSC 448	Math Modeling in Life Sciences
ANSC 449	Biological Modeling
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 453	Stem Cell Biology
ANSC 467	Applied Animal Ecology
ANSC 509	Muscle Biology
ANSC 510	Science of Animal Well-Being
ANSC 520	Protein and Energy Nutrition
ANSC 521	Regulation of Metabolism
ANSC 522	Advanced Ruminant Nutrition
ANSC 523	Techniques in Animal Nutrition
ANSC 524	Nonruminant Nutrition Concepts
ANSC 525	Topics in Nutrition Research
ANSC 526	Adv Companion Animal Nutrition
ANSC 533	Repro Physiology Lab Methods
ANSC 541	Regression Analysis
ANSC 542	Applied Bioinformatics
ANSC 543	Bioinformatics
ANSC 545	Statistical Genomics
ANSC 554	Immunobiological Methods
ANSC 561	Animal Stress Physiology

Additional elective courses must be completed to yield at least 126 total Hours for graduation. 28-32

Total Hours 126

¹ ANSC 206, 250, 306 and 307 may NOT be used to meet more than one requirement.

² ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

Food Animal Production and Management

The Food Animal Production and Management Concentration is designed for students intending to pursue a career in animal care and management or one of the associated food production industries. It emphasizes the scientific disciplines and the application of technology involved in animal production and animal products, as well as providing the opportunity to enhance a student's practical knowledge through business courses.

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent (see college Composition I requirement))	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
One Western culture and one non-Western U.S. minority culture course		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
STAT 100	Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5

Humanities and the Arts

Courses selected from campus approved list	6
--	---

Social and Behavioral Sciences

ECON 102	Microeconomic Principles	3-4
or ACE 100	Agr Cons and Resource Econ	

Additional social or behavioral science course; cannot be an economics course.	3-4
--	-----

ACES required

ACES 101	Contemporary Issues in ACES	2
----------	-----------------------------	---

Animal Sciences Required

ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning ¹	1-5
ANSC 498	Integrating Animal Sciences	2

Technology and Management Concentration Required

Select four of the following Applied Sciences courses:	12
--	----

ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 307	Companion Animal Management	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	

Select two of the following Basic Sciences courses:	6
---	---

ANSC 306	Equine Science	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 445	Statistical Methods	
ANSC 446	Population Genetics	
ANSC 447	Advanced Genetics and Genomics	
ANSC 448	Math Modeling in Life Sciences	
ANSC 449	Biological Modeling	
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 453	Stem Cell Biology	
ANSC 467	Applied Animal Ecology	
ANSC 509	Muscle Biology	
ANSC 510	Science of Animal Well-Being	
ANSC 520	Protein and Energy Nutrition	
ANSC 521	Regulation of Metabolism	
ANSC 522	Advanced Ruminant Nutrition	
ANSC 523	Techniques in Animal Nutrition	
ANSC 524	Nonruminant Nutrition Concepts	
ANSC 525	Topics in Nutrition Research	
ANSC 526	Adv Companion Animal Nutrition	
ANSC 533	Repro Physiology Lab Methods	
ANSC 541	Regression Analysis	
ANSC 542	Applied Bioinformatics	
ANSC 543	Bioinformatics	
ANSC 545	Statistical Genomics	
ANSC 554	Immunobiological Methods	
ANSC 561	Animal Stress Physiology	

Additional elective courses must be completed to yield at least 126 total Hours for graduation.	23-32
---	-------

Total Hours	126
-------------	-----

¹ ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

Science, Pre-Veterinary and Medical Concentration

The science and pre-veterinary medical concentration is specifically designed for students interested in graduate school, professional

training, or technical positions after the undergraduate degree. It is intended to satisfy most entrance requirements to post-graduate programs and emphasizes basic science courses. The concentration enables a student to complete all of the pre-veterinary science requirements while working towards a B.S. degree.

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent (see college Composition I requirement))	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
One Western culture and one non-Western U.S. minority culture course		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
STAT 100	Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
Humanities and the Arts		
Courses selected from campus approved list		6
Social and Behavioral Sciences		
ECON 102 or ACE 100	Microeconomic Principles Agr Cons and Resource Econ	3-4
Additional social or behavioral science course; cannot be an economics course.		3-4
ACES required		
ACES 101	Contemporary Issues in ACES	2
Animal Sciences Required		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3

ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning ¹	1
ANSC 498	Integrating Animal Sciences	2
Science, Pre-Veterinary and Medical Concentration Required		
Select two of the following Applied Sciences courses:		6
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 307	Companion Animal Management	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	
Select four of the following Basic Sciences courses:		12
ANSC 306	Equine Science	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	

ANSC 440	Applied Statistical Methods I
ANSC 441	Human Genetics
ANSC 444	Applied Animal Genetics
ANSC 445	Statistical Methods
ANSC 446	Population Genetics
ANSC 447	Advanced Genetics and Genomics
ANSC 448	Math Modeling in Life Sciences
ANSC 449	Biological Modeling
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 453	Stem Cell Biology
ANSC 467	Applied Animal Ecology
ANSC 509	Muscle Biology
ANSC 510	Science of Animal Well-Being
ANSC 520	Protein and Energy Nutrition
ANSC 521	Regulation of Metabolism
ANSC 522	Advanced Ruminant Nutrition
ANSC 523	Techniques in Animal Nutrition
ANSC 524	Nonruminant Nutrition Concepts
ANSC 525	Topics in Nutrition Research
ANSC 526	Adv Companion Animal Nutrition
ANSC 533	Repro Physiology Lab Methods
ANSC 541	Regression Analysis
ANSC 542	Applied Bioinformatics
ANSC 543	Bioinformatics
ANSC 545	Statistical Genomics
ANSC 554	Immunobiological Methods
ANSC 561	Animal Stress Physiology

Additional elective courses must be completed to yield at least 126 total Hours for graduation. 23-32

Total Hours 126

¹ ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

Crop Sciences

Germán A. Bollero

AW-101 Turner Hall, 1102 South Goodwin, Urbana

PH: (217) 333-3420

<http://cropsciences.illinois.edu>

Plant your future in the Department of Crop Sciences at the University of Illinois. Join our efforts to advance science to meet the needs of a growing world population. From plant breeding and molecular biology to sustainable food and fuel production systems, our internationally recognized faculty are prepared to educate the future leaders of our industry to use the latest advancements in science and technology to improve food and fuel production.

Our department offers students opportunities to succeed and find their niche. When our students graduate, they often have more than one lucrative job opportunity waiting. The demand for our students is high and the future looks even more promising for well-trained scientists as societal demands change. For example, by 2020, estimates say 1,430

new graduates will be needed with a master's degree or Ph.D. in plant breeding alone.

The Bachelor of Science in Crop Sciences allows students to choose from concentrations in plant biotechnology and molecular biology, plant protection, agroecology, crop agribusiness, biological sciences, crops, and horticultural food systems. Sponsored jointly by the departments of Computer Science and Crop Sciences, the Bachelor of Science in Computer Science and Crop Sciences is a flexible program for undergraduate students who plan to pursue careers in the agricultural field that have a technology focus. This degree will prepare students for advanced study at the graduate level as well as immediate entry into the workforce. The Department of Crop Sciences also offers advanced degree programs tailored to your specific interests that will prepare you for enriching careers with a spectrum of public and private organizations in a global agricultural industry.

In order to reach our mission, we are developing and delivering educational and research programs that foster the creation and adoption of agricultural plant production systems that are profitable, environmentally sound, socially responsible and sustainable.

We are developing well educated, highly skilled and creative individuals with the potential to be national and international leaders in their field. If you are looking for a challenging, exciting career that will make a difference, I am confident our department can meet your needs.

- Bachelor of Science in Crop Sciences (p. 41)
- Bachelor of Science in Computer Science and Crop Sciences (p. 49)

Minor in Crop and Soil Management (p. 57)

Minor in Horticulture (p. 57)

CPSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CPSC>)

Crop Sciences Courses

CPSC 111 Farming Systems credit: 2 Hours.

General introduction to the equipment and practices commonly used on Midwest farms. Classes will consist of short lectures followed by demonstrations. All classes and demonstrations will be conducted at the University of Illinois Crop Sciences Research and Education Center. Includes field trips to local production and agribusiness facilities.

CPSC 112 Introduction to Crop Sciences credit: 4 Hours.

Introductory course covering the principles and practices of crop production and sustainable agroecosystem management. Topics include plant growth and development, environmental factors influencing plant productivity, soil management, fertility, and nutrient cycling, pest control principles, and sustainability challenges facing modern crop production. Concepts are discussed in lecture and reinforced in hands-on laboratory sections.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 113 Environment, Agric, & Society credit: 3 Hours.

Introduction to agriculture and the environment; examine the largest managed ecosystem and its influence on natural ecosystems; develop a working understanding of natural and agriculture ecosystems and their interaction; examine various agriculture management strategies that can be used to produce food for an increasing world population while maintaining or improving environmental quality.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

Cultural Studies - Western

CPSC 116 The Global Food Production Web credit: 3 Hours.

Introduces students to the global web involved in the production of food we consume on a daily basis. Selected ecosystems of plants, people, and cultures in Asia, Africa, and Latin America will be studied based on involvement with various crops. Presents the origin and biology of plants; their evolution with humankind in various cultures; the spread and economic importance of crops around the world; and considers current hunger and environmental issues resulting from the global food web. Interactive communications with selected scientists, producers, and traders around the world through the World Wide Web and email system of the INTERNET permit students to get personal exposure to information and activities.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

CPSC 117 Agriculture and Science of Coffee credit: 3 Hours.

The growth and production of coffee and its impact on society and culture. The botanical aspects of coffee, coffee varieties/cultivars, and technologies for coffee growth, harvesting, post-harvest processing, and roasting will be discussed. The wide variety of coffee beverages, coffee flavor evaluation, coffee chemistry, coffee economics, and the physiological effects of coffee will also be examined.

CPSC 131 Agriculture in Mythology credit: 3 Hours.

Compare and contrast the role agriculture and plant sciences played in the development of ancient cultures. Study agricultural references in ancient global mythology. Develop an appreciation of how agricultural diversity of various ancient cultures influenced mythology in the cultures in different regions.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

CPSC 180 Medicinal Plants and Herbology credit: 3 Hours.

Same as HORT 180. See HORT 180.

CPSC 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Experimental course on a special topic in crop sciences. Topic may not be repeated except in accordance with the Code. Approved for Letter and S/U grading. May be repeated up to a maximum of 12 hours in separate terms if topics vary.

CPSC 213 Evolution in Action credit: 2 Hours.

Introduction to evolutionary theory. Examination of how domesticated species have evolved. Develops an appreciation of how agroecosystems have influences evolution of adjacent natural ecosystems. Elucidation of evolutionary mechanisms necessary for agricultural species to adapt to global climate change.

CPSC 215 The Prairie and Bioenergy credit: 3 Hours.

Designed for students who are interested in bioenergy and its production from prairie land. Instructors will provide information on the global trend of bioenergy production and consumption, importance of bioenergy, the role of Illinois prairie land in bioenergy production, potential U.S. bioenergy production, biofuels from plants, and socio-environmental benefits of bioenergy.

CPSC 226 Introduction to Weed Science credit: 3 Hours.

Fundamentals of weed biology, ecology, and management. Emphasis is placed on basic principles and specific management strategies that are relevant to both crop and non-crop ecosystems. Includes a laboratory/discussion. Same as HORT 226. Prerequisite: CPSC 112 or HORT 100 or IB 103.

CPSC 241 Intro to Applied Statistics credit: 3 Hours.

Introduces fundamental statistical procedures used to analyze and interpret data. General principles of descriptive and inferential statistics, measures of central tendency and dispersion, probability, correlation and regression, and tests of hypotheses are covered. An emphasis is placed on biological, environmental, and agricultural sciences, but numerous examples from other areas are discussed. Course content enhances students' ability to critically assess statistical information encountered in professional and every day activities. Credit is not given for both CPSC 241 and STAT 100 or ACE 261.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

CPSC 261 Biotechnology in Agriculture credit: 3 Hours.

Basic introduction to the techniques and application of biotechnology to a wide range of agricultural areas, and specific examples are given. May serve as either a terminal course explaining the techniques or as an introductory base for future studies. Same as HORT 261. Prerequisite: Any 100-level course in a biosciences discipline.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 265 Genetic Engineering Lab credit: 3 Hours.

Laboratory/discussion course that provides a hands-on introduction to the techniques and principles of genetic engineering, recombinant DNA and the impact of molecular genetics on society. Students will isolate DNA from plants and clone specific genes into bacterial plasmids, perform polymerase chain reactions, DNA restriction analysis and DNA blotting, and discuss the relevance of these techniques to both medicine and agriculture. Prerequisite: A general biology course.

CPSC 266 Data in Biology and Agriculture credit: 4 Hours.

This course focuses on the use of computing and data analysis to solve problems in biology and agriculture and includes an overview of computer methods and limitations of current computer, network and storage hardware for big data sets. The nature, use and future potential of different types of computer hardware and software in biology and agriculture (e.g. mobile applications, high performance computing, wireless networking) will be discussed. Examples of computing-related and computing-limited problems in biology and agriculture, such as image analysis, remote sensing and genetic analysis will be used as case studies. The potential of computing to improve the food system, medicine and other applications will be presented.

CPSC 270 Applied Entomology credit: 3 Hours.

Lectures, laboratory, and field trips cover the biology of insects and the recognition and management of insect pests of agricultural, forest, and urban ecosystems. Covers insect structure and physiology, classification, life histories, behavior, and pest management. Same as IB 220 and NRES 270.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 293 Off-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in crop sciences. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, cumulative GPA of 2.0 or above at the time the internship is arranged, and consent of instructor.

CPSC 294 On-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, on-campus learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

CPSC 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

CPSC 336 Tomorrow's Environment credit: 3 Hours.

Introduction to interdisciplinary methods of analysis of environmental problems in a finite world; examination of the concept of the limits to growth; development of a working understanding of natural systems and environmental economics; and examination of various management strategies (technical, economic, and social) that can be used to improve environmental quality. Same as CHLH 336, and ENVS 336. Prerequisite: One course in the life sciences and one course in the social sciences, or consent of instructor.

CPSC 352 Plant Genetics credit: 4 Hours.

The principles of heredity in relation to plant improvement. Same as NRES 352. Prerequisite: IB 103 or IB 104.

CPSC 382 Organic Chem of Biol Processes credit: 4 Hours.

An overview of the structure, properties, and reactions of carbon-containing compounds relevant to biological processes and cellular structure. The chemistry of hydro carbon, aromatic, as well as oxygen-nitrogen-, phosphorus-, and sulfur-containing compounds will be examined. Macromolecular structures including biological membranes, carbohydrates, proteins and nucleic acids will also be discussed. Prerequisites: CHEM 102 and CHEM 104 or CHEM 202 and CHEM 204.

CPSC 396 Undergrad Honors Res or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

CPSC 407 Diseases of Field Crops credit: 3 Hours.

Same as PLPA 407. See PLPA 407.

CPSC 408 Integrated Pest Management credit: 3 Hours.

Examination of fundamental concepts of pest management including a historical review of pests and pest management; an overview of major pests (insects, weeds, plant diseases and vertebrate) in a variety of settings (agronomic, specialty crops, urban and structural); management options (area-wide, chemical, biological, cultural and physical); regulatory issues; and topics of current interest. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or CPSC 270 or equivalent, both are preferred but only 1 is required.

CPSC 412 Principles of Crop Advising credit: 3 Hours.

Fundamentals in crop development and management, soil structure, management, and fertility, and how crops and soils interact are examined. Students learn how to diagnose real-world problems in fields and field crops grown in the Midwestern US, and to develop practical solutions to such problems. Prepares students to be competitive in careers within commercial crop agriculture and to pass the Certified Crop Adviser examination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 and NRES 201, or equivalent, or consent of instructor.

CPSC 413 Agriculture, Food, and the Environment credit: 2 Hours.

Advanced course in the complex interactions of food production resulting from different agricultural systems and the environment. Develop an appreciation of the intricacies of producing food for a growing world population while minimizing the impact on the natural environment. Understand the implementation of new technology and strategies for future food production. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 112 or CPSC 113 or equivalent course or consent of instructor. For Online MS Program.

CPSC 414 Forage Crops and Pasture Eco credit: 3 Hours.

Forages, their plant characteristics, ecology, and production; grasslands of farm and range as related to animal production and soil conservation. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: An introductory class in biology.

CPSC 415 Bioenergy Crops credit: 3 Hours.

Provides an overview and understanding of biomass feedstock production systems for sustainable biofuels production. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 or consent of instructor.

CPSC 416 Native Plants and Agroecosystems credit: 4 Hours.

Introduction to native plants and to their conservation use and agronomic benefit. Topics include learning to identify native plants using a regional flora, knowing the different ecological niches in the state of Illinois and which plants inhabit them, and choosing appropriate native plants to enhance the interaction between agronomic crops and natives. 4 undergraduate hours. 4 graduate hours. Credit is not given for CPSC 416 if credit for NRES 415 has been earned. Prerequisite: HORT 100 or IB 103.

CPSC 418 Crop Growth and Management credit: 3 Hours.

Crop physiology and management as influenced by environment, plant species, and cropping system; relates plant growth processes to crop production practices based on current research. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or CPSC 112 or equivalent, or consent of instructor.

CPSC 419 Midwest Agricultural Practices credit: 1 Hour.

Introduces agronomic production practices in the Midwest and economics of the crop production value chain. Specifically designed for beginning graduate students in crop genetic improvement from non-agricultural backgrounds. 1 undergraduate hour. 1 graduate hour.

CPSC 426 Weed Mgt in Agronomic Crops credit: 3 Hours.

Principles of weed ecology and biology, and their application to weed management. Herbicides and their use in corn, soybeans and other agronomic crops. Specialized topics include weed management in reduced tillage, herbicide tolerant crops and management of problem weeds. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or consent of instructor.

CPSC 428 Weed Science Practicum credit: 2 Hours.

Intensive course on field diagnostic skills in weed science. Topics include weed and weed seed identification, sprayer calibration, herbicide application, herbicide injury symptomatology, and field diagnostics. Students who complete the course will be encouraged to enter the North Central Weed Science Society weeds contest, which occurs during the summer. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 226 or CPSC 426 or consent of instructor.

CPSC 431 Plants and Global Change credit: 3 Hours.

The science of global atmospheric and climate change in the 21st Century. Understanding of how plants, including crops, will respond and may be adapted to these changes. Using plants to ameliorate predicted climate change. Same as IB 440 and NRES 431. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 112 or IB 103.

CPSC 433 Basic Toxicology credit: 3 Hours.

Same as CB 449, ENVS 480 and FSHN 480. See FSHN 480.

CPSC 436 Conservation Biology credit: 4 Hours.

Same as ENVS 420 and IB 451. See IB 451.

CPSC 437 Principles of Agroecology credit: 3 Hours.

Examines the dynamics and function of agricultural ecosystems and reviews fundamental concepts of ecology. Agricultural systems will be compared on the basis of energy flow, nutrient cycling, diversity, stability and required inputs. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 100 or IB 103 or equivalent.

CPSC 438 Soil Nutrient Cycling credit: 3 Hours.

Same as NRES 438. See NRES 438.

CPSC 439 Env and Sustainable Dev credit: 3 Hours.

Same as NRES 439. See NRES 439.

CPSC 440 Applied Statistical Methods I credit: 4 Hours.

Statistical methods involving relationships between populations and samples; collection, organization, and analysis of data; and techniques in testing hypotheses with an introduction to regression, correlation, and analysis of variance limited to the completely randomized design and the randomized complete-block design. Same as ABE 440, ANSC 440, FSHN 440, and NRES 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 112 or equivalent.

CPSC 448 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, GEOG 468, and IB 491. See GEOG 468.

CPSC 452 Advanced Plant Genetics credit: 3 Hours.

Survey of selected contemporary topics in plant genetics and genomics. Topics include the nature of genes and genomes, crop domestication, selection, allelic diversity in populations, and genetics mapping. Serves as an introduction to functional genomics, population genetics, transmission genetics, quantitative genetics, and bioinformatics. Same as IB 478. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 352 or IB 204, or consent of instructor.

CPSC 453 Principles of Plant Breeding credit: 4 Hours.

Principles, concepts and tools used in plant breeding. Includes methods and breeding schemes used with different plant species. Same as HORT 453. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 103; CPSC 352 or equivalent.

CPSC 454 Plant Breeding Methods credit: 2 Hours.

Discussion of the application of current scientific tools and methods available to plant breeders for improving plants; emphasis on actual use of plant breeding methods and production of high quality seed. 2 undergraduate hours. 2 graduate hours. Offered summer only in alternate years. Prerequisite: CPSC 453.

CPSC 462 Plant Molecular Biology credit: 1 Hour.

Same as IB 472. See IB 472.

CPSC 466 Genomics for Plant Improvement credit: 2 Hours.

An overview of applying the methods of genomics to discover variation in genes and their expression, creating new genetic variation, and applying this information to the improvement of economically important plants. Emphasis is on recent advances in genomic science and activities where functional genomics information is used to efficiently create and manipulate desirable phenotypes. Same as IB 477. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 352 or a similar course, or consent of instructor.

CPSC 467 Plant Genomics credit: 1 Hour.

Same as IB 473. See IB 473.

CPSC 468 Plant Proteomics-Metabolomics credit: 2 Hours.

Same as IB 474. See IB 474.

CPSC 473 Mgmt of Field Crop Insects credit: 3 Hours.

Ecological principles of insect populations in agroecosystems including: sampling insect populations, threshold development, bioeconomics and decision-making, population regulation, designing management strategies for field crop insect pests, and deployment of transgenic crops for management of insect pests. Case studies describing various pest management programs in field-crop settings will be provided. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 270 or an equivalent course, or consent of instructor.

CPSC 475 Insect Pathology credit: 3 Hours.

Same as IB 483. See IB 483.

CPSC 479 Insect Pest Management credit: 3 Hours.

Same as IB 482. See IB 482.

CPSC 482 Plant Tissue Culture credit: 4 Hours.

Same as HORT 482. See HORT 482.

CPSC 483 Outreach Education Skills credit: 3 Hours.

Provides graduate and undergraduate students interested in outreach and extension education programs with opportunities to develop their skills and effectiveness in development and presentation of outreach and extension programs. Same as ANSC 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate student status.

CPSC 484 Plant Physiology credit: 3 Hours.

Same as IB 420. See IB 420.

CPSC 488 Soil Fertility and Fertilizers credit: 3 Hours.

Same as NRES 488. See NRES 488.

CPSC 489 Photosynthesis credit: 3 Hours.

Same as BIOP 432 and IB 421. See IB 421.

CPSC 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Same as INFO 491 and IS 483. See INFO 491.

CPSC 498 Crop Sci Professional Developmt credit: 1 Hour.

Topics related to professional development including resumes, interview skills, business etiquette, ethics, and presentations on opportunities in crop sciences and horticulture. 1 undergraduate hour. No graduate credit. Prerequisite: Junior standing in Crop Sciences or Horticulture.

CPSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in crop sciences. Approved for both letter and S/U grading. May be repeated to a maximum of 12 hours.

HORT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HORT>)

Horticulture Courses**HORT 100 Introduction to Horticulture credit: 3 Hours.**

Basic principles of plant growth and development as they apply to the production, marketing, and utilization of fruits, vegetables, and ornamental plants.

HORT 105 Vegetable Gardening credit: 3 Hours.

The science and art of growing vegetables and the connection between gardening and food. Topics include nutrient and pest management, history, folklore, growing requirements, and quality characteristics of vegetables. Lecture and laboratory. Additional fees may apply. See Class Schedule. Credit is not given to horticulture majors.

HORT 106 The Sustainable Home Garden credit: 3 Hours.

Create inviting and sustainable indoor and outdoor living spaces with plants, whether your landscape is several acres or a few containers on an urban balcony. This blended-format class meets 1 hour per week for lecture and discussion with additional instruction presented through independent learning activities including virtual field trips, on-line lectures, and instructional videos. Learn the fundamentals of environmentally sound resource use when designing with and maintaining flowering, fruit and vegetable plants, lawns, trees and shrubs around your home. Become a savvy horticultural consumer and develop a healthy lifestyle that supports positive physical and mental well-being by including greenspace activities in your daily life. Prerequisite: Not open to students in the Horticulture curriculum.

HORT 107 Introduction to Floral Design credit: 2 Hours.

Introduces the art of arranging flowers, foliage, and accessories according to the principles of design. Additional fees may apply. See Class Schedule.

HORT 180 Medicinal Plants and Herbology credit: 3 Hours.

The use of cultivated and wild plants in medicines and health products according to Eastern and Western medical traditions. Consideration of herbal medicine use from ancient times to the present, important medicinal chemicals produced by plants, and the evaluation of plant chemical products as potential human medicines. Same as CPSC 180.

HORT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in horticulture. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

HORT 205 Local Food Networks credit: 3 Hours.

Prepares students to be leaders and facilitators in local food networks. The focus is on providing the knowledge and skills to initiate and manage community food gardens, school gardens and curricula, institutional buying programs, farmers markets, community supported agriculture, and urban farm networks. Requires a group food network project and an experience with a local food organization. Prerequisite: An introductory course in HORT or CPSC or consent of instructor.

HORT 226 Introduction to Weed Science credit: 3 Hours.

Same as CPSC 226. See CPSC 226.

HORT 240 Plant Propagation credit: 3 Hours.

Examines theories and methods employed in propagation of plants, emphasizing anatomical, physiological, and ecological principles involved in sexual propagation (seeds) and asexual propagation (division, cuttings, budding, grafting, tissue culture, etc.) Prerequisite: IB 103.

HORT 246 Floral Design I credit: 3 Hours.

Applies principles of design to the composition and decorative use of flowers, foliage, and accessories. Additional fees may apply. See Class Schedule. Prerequisite: Enrollment in Horticulture, Human and Community Development, or Hospitality Management.

HORT 255 Multifunctional Landscapes credit: 3 Hours.

Introduction to research and technology in sustainable and multifunctional landscapes, within the context of plant science. Topics covered include: site inventory/analysis, plant biodiversity, stormwater management, green roofs, sustainable construction materials, and urban agriculture. This is a project-based course; students will develop sustainable solutions to landscape problems using multimedia applications, graphic design, written text, and video presentation.

HORT 261 Biotechnology in Agriculture credit: 3 Hours.

Same as CPSC 261. See CPSC 261.

This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

HORT 293 Professional Internship credit: 1 to 4 Hours.

Off-campus experience in a field directly pertaining to a subject matter in horticulture. Approved for S/U grading only. May be repeated to a maximum of 4 hours.

HORT 294 Resident Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 4 hours. For registration in this course, students should contact the Department Teaching Coordinator.

HORT 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

HORT 298 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in horticulture. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing.

HORT 301 Woody Landscape Plants I credit: 4 Hours.

Systematic approach to the identification, ornamental characters, culture, and use of woody landscape deciduous trees and shrubs with special emphasis on cultivated varieties. Prerequisite: IB 103.

HORT 316 Landscaping with Native Plants credit: 4 Hours.

Herbaceous native plants suitable for home and commercial landscapes. Emphasis on native plant identification, landscape use, and culture. Prerequisite: HORT 100 or IB 103.

HORT 341 Greenhouse Mgmt and Production credit: 4 Hours.

The course focuses on how controlled environments can be managed to obtain optimal plant growth. Lectures cover greenhouse operations, management, and production, including: greenhouse design, location, glazing, heating, cooling, environmental control, irrigation systems, light control, root media, fertilization, watering, integrated pest management, and automation. The course also has a large laboratory component, in which students conduct experiments in the greenhouse. A required all-day field trip to nearby greenhouse operations rounds out the course experience. Additional fees may apply. See Class Schedule. Prerequisite: NRES 201 and HORT 100.

HORT 343 Herbaceous Plants I credit: 3 Hours.

Course includes identification, culture, and landscape use of herbaceous, frost-tender ornamental plants. Emphasis on flowering annuals, tropical foliage plants used for outdoor displays, and foliage plants used for interiorscaping. Elements of design will be addressed; design projects will integrate concepts. Prerequisite: IB 103.

HORT 344 Planting for Biodiversity and Aesthetics credit: 3 Hours.

As the demand for food increases, plants in ornamental landscapes will need to provide not only beauty but also species biodiversity critical for supporting sustainable food production. Course emphasizes species identification (predominantly herbaceous perennials), management, and planting design principles. Designing for multiple contexts, such as residential and community gardens, and large scale production sites, to provide multiple ecosystem services, especially supporting human aesthetic preferences, and habitat for pollinators. Prerequisite: IB 103.

HORT 355 Landscape Graphics & Design credit: 4 Hours.

Focuses on the development of graphic skills to represent the landscape, using both hand-drawn (pencil and color rendering) and introductory digital methods (e.g., AutoCAD and Photoshop). Students will learn basic principles for organizing space and designing for function, using plant materials that are appropriate for site conditions. A variety of drafting tools and access to specific design software programs are required. AutoCAD and Photoshop will be available for students to use in the classroom.

HORT 360 Vegetable Crop Production credit: 3 Hours.

Instruction on the commercial production of vegetable crops. The first part of the class focuses on broad issues important to all crops including methods of vegetable production, basic soil and nutritional management, irrigation, and weed, insect, and disease management. Both organic and conventional production are discussed with a focus on sustainability. Basic farm and business management topics, including postharvest handling, food safety, crop and farm budgets, business structures, marketing, insurance, and regulations are also discussed. The second part of the class focuses on specific crops, emphasizing their origin, production, growth and development, insects, and diseases as well as harvesting and postharvest handling. Prerequisite: HORT 100 or equivalent.

HORT 361 Small Fruit Production credit: 2 Hours.

Technological application of biological principles to the culture of strawberry, grape, blueberry, raspberry, blackberry, currant, gooseberry, and miscellaneous small fruits. Prerequisite: HORT 100 or IB 103.

HORT 362 Tree Fruit Production credit: 2 Hours.

Examines biological principles and cultural practices involved in the growth and production of apple, pear, peach, cherry, plum, apricot, almond, and miscellaneous citrus and nut crops. Offered every fall semester. Prerequisite: HORT 100 or IB 103.

HORT 363 Postharvest Handling Hort Crop credit: 2 Hours.

Provides theoretical and practical experience in the principles and practices of postharvest handling of cut flowers, ornamentals, fruits, and vegetables, emphasizing factors that impact quality, shelf-life, and safety. Requires two field trips, one to a local produce warehouse and the other to local supermarkets. Offered every fall semester. Prerequisite: HORT 100, CHEM 102, CHEM 103, IB 103.

HORT 396 Ug Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

HORT 421 Horticultural Physiology credit: 4 Hours.

Horticultural crop growth is examined in relation to plant structure, environment, and cultural practices. Emphasizes environmental control of whole plant growth as influenced by the supply of the raw materials required for growth: water, carbon dioxide, radiant energy, including the influence of temperature and photoperiod on plant growth and development. The shoot and root interactions with the environment are characterized relative to cultural practices. 4 undergraduate hours. 4 graduate hours. Prerequisite: HORT 100 or IB 103 and junior standing.

HORT 430 Children and Nature credit: 2 Hours.

Study of research theory and evidence suggesting the importance of children's contact with natural environments including, designed urban greenspaces, managed sustainable landscapes, and wilderness, for healthy child development, ecological literacy, and pro-environmental behavior as adults. Discussion of research implications and applications for redesigning our communities' outdoor spaces, societal values, public policies and education systems to foster children's access to, and bonding with, nature. Same as LA 430. 2 undergraduate hours. 2 graduate hours.

HORT 434 Designing Urban Agriculture credit: 2 Hours.

Emphasizes the design process and principles related to food production in urban environments. Lecture topics will include assessing, planning, and transforming the landscape at multiple scales from regional to neighborhood to specific site. In group discussions students will critically review readings from peer-reviewed and popular literature. Students will engage in analysis and design of an existing site to integrate multiple functions, emphasizing the permanent infrastructure and perennial vegetation. Access to a computer that can be loaded with appropriate software (Sketchup) is necessary for mapping and design projects. Online lecture/discussion course. 2 undergraduate hours. 2 graduate hours. HORT 100 or CPSC 112 or equivalent introductory course in plant science, one course in Humanities & the Arts, and one course in Social & Behavioral Sciences. Prerequisite: Junior standing required.

HORT 435 Urban Food Production credit: 3 Hours.

Explore opportunities and challenges for maximizing the productivity and sustainability of urban food production systems, considering agricultural, environmental, energy, social, and economic issues. Students will examine the science and practice of urban agriculture through scientific and popular literature, case studies, online discussion, and service-learning opportunities. Production systems covered will include both outdoor (e.g., vacant lot urban farms) and controlled environment (e.g., hydroponics and aquaponics) agriculture. 3 undergraduate hours. 3 graduate hours. Prerequisite: HORT 100 or CPSC 112 or equivalent introductory course in plant science.

HORT 441 Floral & Nursery Crops Productn credit: 4 Hours.

An intensive study of specific production technologies used to commercially grow landscape and floriculture crops. Emphasis will be on the growth and development of major floral and nursery crops as influenced by the environmental and cultural techniques. Field trip required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: HORT 240 and HORT 341.

HORT 442 Plant Nutrition credit: 4 Hours.

Mechanisms and factors affecting the absorption, transport, distribution, and functions of the essential elements required by higher plants. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: NRES 201 and IB 420.

HORT 447 Horticultural Plant Breeding credit: 3 Hours.

Methodology, objectives, and constraints of breeding for improved cultivars of flowers, woody ornamentals, turfgrasses, fruits, and vegetables. Emphasis on breeding objectives unique to horticultural commodities such as color, appearance, flavor, shelf-life, nutritional value, and other characteristics that determine product quality. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 352.

HORT 453 Principles of Plant Breeding credit: 4 Hours.

Same as CPSC 453. See CPSC 453.

HORT 456 Sustainable Landscape Design credit: 4 Hours.

This course will allow students from different disciplines to work together developing design alternatives for a multifunctional landscape. Students will learn to work at multiple scales, considering the surrounding context, the site itself, and detailed features within the large site. For some projects, students will work in teams, since most 'real-world' projects require participation among multiple experts. Instructor- and student-led discussions will focus on scientific and popular literature in horticulture, urban agriculture, ecological design, and landscape ecology, and students are encouraged to synthesize and translate the material into design solutions. 4 undergraduate hours. 4 graduate hours. Prerequisite: Introductory courses in Horticulture and Design.

HORT 464 International Hort Products credit: 3 Hours.

Survey of the international trade in and production of horticultural foods, beverages, herbs, spices, floricultural crops, interior plants, and landscape plants. Important export and import crops will be discussed. Legal and environmental issues are explored. Term project required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112, or HORT 100 or IB 103.

HORT 466 Growth and Dev of Hort Crops credit: 4 Hours.

Factors affecting growth, development, and quality of horticultural crops, such as photoperiodism, growth regulators, and carbon dioxide levels. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 104; HORT 421 or IB 420.

HORT 475 Permaculture & Agroforestry credit: 3 Hours.

Lecture/discussion course covering the scientific basis and design of permaculture (permanent agriculture) and temperate agroforestry systems. Lecture topics will include: permaculture principles, site assessment, soil remediation, water management, agroforestry case studies, urban food forests, and integration of livestock, among others. Education resources will be provided from peer-reviewed literature and popular sources. Students will work on projects to critically review the principles of permaculture and to design a multifunctional agroforestry system for a temperate site. 3 undergraduate hours. 3 graduate hours. Prerequisite: HORT 100 or CPSC 112 or equivalent introductory course in plant science and one course in ecology, environmental sciences, or natural resources. Junior standing required.

HORT 482 Plant Tissue Culture credit: 4 Hours.

Survey, description, and applications of cell and tissue culture strategies for plant research and production. Topics include culture environment, media composition, tissue manipulation, organogenesis, embryogenesis, somatic hybridization, bioreactors and use of these techniques for plant propagation and physiological and biochemical research. Independent research project is conducted by each student. Same as CPSC 482. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 232 and IB 103.

HORT 499 Special Topics credit: 1 to 4 Hours.

Experimental course on a special topic in Horticulture. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 hours as topics vary.

PLPA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PLPA>)

Plant Pathology Courses**PLPA 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

Experimental course on a special topic in plant pathology. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

PLPA 200 Plants, Pathogens, and People credit: 3 Hours.

Plant diseases and their impact on food supplies and human history are studied in lectures, demonstrations and discussions. Issues of food production and safety, pesticide use and human health, and the environment are considered. Includes the biology of pathogens that cause plant disease. Designed for non-science and science majors. Prerequisite: RHET 105 or equivalent.

This course satisfies the General Education Criteria for:

Advanced Composition
Nat Sci Tech - Life Sciences

PLPA 204 Introductory Plant Pathology credit: 3 Hours.

Concepts relating to causal agents of representative plant diseases, symptoms and diagnosis, modes of infection and spread, effects of environment on disease development, and methods of control.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

PLPA 395 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated to a maximum of 12 hours.

PLPA 401 Plant Pathogenic Fungi credit: 4 Hours.

Principles of the biology, ecology and pathogenesis of fungi that cause plant diseases; morphology, classification, and history of these pathogens. The course includes both lecture and laboratory components. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: One year of biology or plant biology; and plant and animal genetics; and an introductory plant pathology course; or consent of instructor.

PLPA 402 Phytoparasitic Nematodes credit: 2 Hours.

Study of plant-pathogenic nematodes with emphasis on economically important groups; nematode morphology, identification, classification, development biology, ecology, and host-parasite relationships; interaction with fungi, bacteria and viruses in plant disease development, experimental and diagnostic techniques; and symptomology and control. 2 undergraduate hours. 2 graduate hours. Prerequisite: An introductory course in plant pathology and an introductory course in zoology, or consent of instructor.

PLPA 404 Plant Virology credit: 2 Hours.

Current knowledge of viruses and the diseases they cause in plants studied in lectures, discussions and laboratories. Topics include virus structure, replication, expression, taxonomy and transmission and viral disease detection, diagnosis, epidemiology and management. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: An introductory course in plant pathology and an introductory course in genetics, or consent of instructor.

PLPA 405 Plant Disease Diagnosis & Mgmt credit: 3 Hours.

Field and laboratory techniques in plant disease diagnosis and appraisal; identification of diseases of small grains, turf, corn, soybeans, forage crops, vegetables, fruit, forest and shade trees, and ornamentals, both on field trips and in laboratory exercises. Includes fundamentals of disease management. 3 undergraduate hours. 3 graduate hours. Prerequisite: PLPA 204 or equivalent.

PLPA 406 Phytobacteriology credit: 2 Hours.

Provides up-to-date coverage of prokaryotes that cause plant diseases. Lectures, discussions, and laboratories cover taxonomy, molecular biology, etiology, detection and identification, epidemiology and management of major plant pathogenic prokaryotes. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: An introductory course in Plant Pathology and Microbiology, or consent of instructor.

PLPA 407 Diseases of Field Crops credit: 3 Hours.

Studies the symptoms of major field crop diseases, life histories of causal organisms, and methods of control. Lecture and laboratory. Same as CPSC 407. 3 undergraduate hours. 3 graduate hours. Prerequisite: PLPA 204 or PLPA 401.

Bachelor of Science in Crop Sciences

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent - see College Composition I requirement)	6-7
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		

Select one course from Western culture and one from non-Western/U.S. minority culture from campus approved list.	6
--	---

Foreign Language

Coursework at or above the third level is required for graduation.

Quantitative Reasoning I

Select one of the following:	4-5
------------------------------	-----

MATH 220	Calculus
----------	----------

MATH 221	Calculus I
----------	------------

MATH 234	Calculus for Business I
----------	-------------------------

Quantitative Reasoning II

CPSC 241	Intro to Applied Statistics	3
----------	-----------------------------	---

Natural Sciences and Technology

See Specific Concentration Requirements

Humanities and the Arts

Select from campus approved list	6
----------------------------------	---

Social and Behavioral Sciences

ACE 100	Agr Cons and Resource Econ ¹	3-4
or ECON 102	Microeconomic Principles	

Select from campus approved list.	3-4
-----------------------------------	-----

ACES required

ACES 101	Contemporary Issues in ACES	2
----------	-----------------------------	---

Required Concentration	58-79
-------------------------------	-------

Concentration prescribed courses. See specific requirements for each concentration listed below.

Total Hours	126
--------------------	-----

Approved Concentrations:

- Agroecology Concentration (p. 45)
- Biological Sciences Concentration (p. 45)
- Crop Agribusiness Concentration (p. 46)
- Crops Concentration (p. 46)
- Horticultural Food Systems Concentration (p. 47)
- Plant Biotechnology and Molecular Biology Concentration (p. 48)
- Plant Protection Concentration (p. 48)

¹ ACE 100 or ECON 102 are not required for the Biological Sciences Concentration.

CPSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CPSC>)

Courses**CPSC 111 Farming Systems credit: 2 Hours.**

General introduction to the equipment and practices commonly used on Midwest farms. Classes will consist of short lectures followed by demonstrations. All classes and demonstrations will be conducted at the University of Illinois Crop Sciences Research and Education Center. Includes field trips to local production and agribusiness facilities.

CPSC 112 Introduction to Crop Sciences credit: 4 Hours.

Introductory course covering the principles and practices of crop production and sustainable agroecosystem management. Topics include plant growth and development, environmental factors influencing plant productivity, soil management, fertility, and nutrient cycling, pest control principles, and sustainability challenges facing modern crop production. Concepts are discussed in lecture and reinforced in hands-on laboratory sections.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 113 Environment, Agric, & Society credit: 3 Hours.

Introduction to agriculture and the environment; examine the largest managed ecosystem and its influence on natural ecosystems; develop a working understanding of natural and agriculture ecosystems and their interaction; examine various agriculture management strategies that can be used to produce food for an increasing world population while maintaining or improving environmental quality.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

Cultural Studies - Western

CPSC 116 The Global Food Production Web credit: 3 Hours.

Introduces students to the global web involved in the production of food we consume on a daily basis. Selected ecosystems of plants, people, and cultures in Asia, Africa, and Latin America will be studied based on involvement with various crops. Presents the origin and biology of plants; their evolution with humankind in various cultures; the spread and economic importance of crops around the world; and considers current hunger and environmental issues resulting from the global food web. Interactive communications with selected scientists, producers, and traders around the world through the World Wide Web and email system of the INTERNET permit students to get personal exposure to information and activities.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

CPSC 117 Agriculture and Science of Coffee credit: 3 Hours.

The growth and production of coffee and its impact on society and culture. The botanical aspects of coffee, coffee varieties/cultivars, and technologies for coffee growth, harvesting, post-harvest processing, and roasting will be discussed. The wide variety of coffee beverages, coffee flavor evaluation, coffee chemistry, coffee economics, and the physiological effects of coffee will also be examined.

CPSC 131 Agriculture in Mythology credit: 3 Hours.

Compare and contrast the role agriculture and plant sciences played in the development of ancient cultures. Study agricultural references in ancient global mythology. Develop an appreciation of how agricultural diversity of various ancient cultures influenced mythology in the cultures in different regions.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

CPSC 180 Medicinal Plants and Herbiology credit: 3 Hours.

Same as HORT 180. See HORT 180.

CPSC 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Experimental course on a special topic in crop sciences. Topic may not be repeated except in accordance with the Code. Approved for Letter and S/U grading. May be repeated up to a maximum of 12 hours in separate terms if topics vary.

CPSC 213 Evolution in Action credit: 2 Hours.

Introduction to evolutionary theory. Examination of how domesticated species have evolved. Develops an appreciation of how agroecosystems have influences evolution of adjacent natural ecosystems. Elucidation of evolutionary mechanisms necessary for agricultural species to adapt to global climate change.

CPSC 215 The Prairie and Bioenergy credit: 3 Hours.

Designed for students who are interested in bioenergy and its production from prairie land. Instructors will provide information on the global trend of bioenergy production and consumption, importance of bioenergy, the role of Illinois prairie land in bioenergy production, potential U.S. bioenergy production, biofuels from plants, and socio-environmental benefits of bioenergy.

CPSC 226 Introduction to Weed Science credit: 3 Hours.

Fundamentals of weed biology, ecology, and management. Emphasis is placed on basic principles and specific management strategies that are relevant to both crop and non-crop ecosystems. Includes a laboratory/discussion. Same as HORT 226. Prerequisite: CPSC 112 or HORT 100 or IB 103.

CPSC 241 Intro to Applied Statistics credit: 3 Hours.

Introduces fundamental statistical procedures used to analyze and interpret data. General principles of descriptive and inferential statistics, measures of central tendency and dispersion, probability, correlation and regression, and tests of hypotheses are covered. An emphasis is placed on biological, environmental, and agricultural sciences, but numerous examples from other areas are discussed. Course content enhances students' ability to critically assess statistical information encountered in professional and every day activities. Credit is not given for both CPSC 241 and STAT 100 or ACE 261.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

CPSC 261 Biotechnology in Agriculture credit: 3 Hours.

Basic introduction to the techniques and application of biotechnology to a wide range of agricultural areas, and specific examples are given. May serve as either a terminal course explaining the techniques or as an introductory base for future studies. Same as HORT 261. Prerequisite: Any 100-level course in a biosciences discipline.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 265 Genetic Engineering Lab credit: 3 Hours.

Laboratory/discussion course that provides a hands-on introduction to the techniques and principles of genetic engineering, recombinant DNA and the impact of molecular genetics on society. Students will isolate DNA from plants and clone specific genes into bacterial plasmids, perform polymerase chain reactions, DNA restriction analysis and DNA blotting, and discuss the relevance of these techniques to both medicine and agriculture. Prerequisite: A general biology course.

CPSC 266 Data in Biology and Agriculture credit: 4 Hours.

This course focuses on the use of computing and data analysis to solve problems in biology and agriculture and includes an overview of computer methods and limitations of current computer, network and storage hardware for big data sets. The nature, use and future potential of different types of computer hardware and software in biology and agriculture (e.g. mobile applications, high performance computing, wireless networking) will be discussed. Examples of computing-related and computing-limited problems in biology and agriculture, such as image analysis, remote sensing and genetic analysis will be used as case studies. The potential of computing to improve the food system, medicine and other applications will be presented.

CPSC 270 Applied Entomology credit: 3 Hours.

Lectures, laboratory, and field trips cover the biology of insects and the recognition and management of insect pests of agricultural, forest, and urban ecosystems. Covers insect structure and physiology, classification, life histories, behavior, and pest management. Same as IB 220 and NRES 270.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 293 Off-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in crop sciences. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, cumulative GPA of 2.0 or above at the time the internship is arranged, and consent of instructor.

CPSC 294 On-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, on-campus learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

CPSC 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

CPSC 336 Tomorrow's Environment credit: 3 Hours.

Introduction to interdisciplinary methods of analysis of environmental problems in a finite world; examination of the concept of the limits to growth; development of a working understanding of natural systems and environmental economics; and examination of various management strategies (technical, economic, and social) that can be used to improve environmental quality. Same as CHLH 336, and ENVS 336. Prerequisite: One course in the life sciences and one course in the social sciences, or consent of instructor.

CPSC 352 Plant Genetics credit: 4 Hours.

The principles of heredity in relation to plant improvement. Same as NRES 352. Prerequisite: IB 103 or IB 104.

CPSC 382 Organic Chem of Biol Processes credit: 4 Hours.

An overview of the structure, properties, and reactions of carbon-containing compounds relevant to biological processes and cellular structure. The chemistry of hydro carbon, aromatic, as well as oxygen-nitrogen-, phosphorus-, and sulfur-containing compounds will be examined. Macromolecular structures including biological membranes, carbohydrates, proteins and nucleic acids will also be discussed. Prerequisites: CHEM 102 and CHEM 104 or CHEM 202 and CHEM 204.

CPSC 396 Undergrad Honors Res or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

CPSC 407 Diseases of Field Crops credit: 3 Hours.

Same as PLPA 407. See PLPA 407.

CPSC 408 Integrated Pest Management credit: 3 Hours.

Examination of fundamental concepts of pest management including a historical review of pests and pest management; an overview of major pests (insects, weeds, plant diseases and vertebrate) in a variety of settings (agronomic, specialty crops, urban and structural); management options (area-wide, chemical, biological, cultural and physical); regulatory issues; and topics of current interest. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or CPSC 270 or equivalent, both are preferred but only 1 is required.

CPSC 412 Principles of Crop Advising credit: 3 Hours.

Fundamentals in crop development and management, soil structure, management, and fertility, and how crops and soils interact are examined. Students learn how to diagnose real-world problems in fields and field crops grown in the Midwestern US, and to develop practical solutions to such problems. Prepares students to be competitive in careers within commercial crop agriculture and to pass the Certified Crop Adviser examination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 and NRES 201, or equivalent, or consent of instructor.

CPSC 413 Agriculture, Food, and the Environment credit: 2 Hours.

Advanced course in the complex interactions of food production resulting from different agricultural systems and the environment. Develop an appreciation of the intricacies of producing food for a growing world population while minimizing the impact on the natural environment. Understand the implementation of new technology and strategies for future food production. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 112 or CPSC 113 or equivalent course or consent of instructor. For Online MS Program.

CPSC 414 Forage Crops and Pasture Eco credit: 3 Hours.

Forages, their plant characteristics, ecology, and production; grasslands of farm and range as related to animal production and soil conservation. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: An introductory class in biology.

CPSC 415 Bioenergy Crops credit: 3 Hours.

Provides an overview and understanding of biomass feedstock production systems for sustainable biofuels production. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 or consent of instructor.

CPSC 416 Native Plants and Agroecosystems credit: 4 Hours.

Introduction to native plants and to their conservation use and agronomic benefit. Topics include learning to identify native plants using a regional flora, knowing the different ecological niches in the state of Illinois and which plants inhabit them, and choosing appropriate native plants to enhance the interaction between agronomic crops and natives. 4 undergraduate hours. 4 graduate hours. Credit is not given for CPSC 416 if credit for NRES 415 has been earned. Prerequisite: HORT 100 or IB 103.

CPSC 418 Crop Growth and Management credit: 3 Hours.

Crop physiology and management as influenced by environment, plant species, and cropping system; relates plant growth processes to crop production practices based on current research. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or CPSC 112 or equivalent, or consent of instructor.

CPSC 419 Midwest Agricultural Practices credit: 1 Hour.

Introduces agronomic production practices in the Midwest and economics of the crop production value chain. Specifically designed for beginning graduate students in crop genetic improvement from non-agricultural backgrounds. 1 undergraduate hour. 1 graduate hour.

CPSC 426 Weed Mgt in Agronomic Crops credit: 3 Hours.

Principles of weed ecology and biology, and their application to weed management. Herbicides and their use in corn, soybeans and other agronomic crops. Specialized topics include weed management in reduced tillage, herbicide tolerant crops and management of problem weeds. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or consent of instructor.

CPSC 428 Weed Science Practicum credit: 2 Hours.

Intensive course on field diagnostic skills in weed science. Topics include weed and weed seed identification, sprayer calibration, herbicide application, herbicide injury symptomatology, and field diagnostics. Students who complete the course will be encouraged to enter the North Central Weed Science Society weeds contest, which occurs during the summer. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 226 or CPSC 426 or consent of instructor.

CPSC 431 Plants and Global Change credit: 3 Hours.

The science of global atmospheric and climate change in the 21st Century. Understanding of how plants, including crops, will respond and may be adapted to these changes. Using plants to ameliorate predicted climate change. Same as IB 440 and NRES 431. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 112 or IB 103.

CPSC 433 Basic Toxicology credit: 3 Hours.

Same as CB 449, ENVS 480 and FSHN 480. See FSHN 480.

CPSC 436 Conservation Biology credit: 4 Hours.

Same as ENVS 420 and IB 451. See IB 451.

CPSC 437 Principles of Agroecology credit: 3 Hours.

Examines the dynamics and function of agricultural ecosystems and reviews fundamental concepts of ecology. Agricultural systems will be compared on the basis of energy flow, nutrient cycling, diversity, stability and required inputs. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 100 or IB 103 or equivalent.

CPSC 438 Soil Nutrient Cycling credit: 3 Hours.

Same as NRES 438. See NRES 438.

CPSC 439 Env and Sustainable Dev credit: 3 Hours.

Same as NRES 439. See NRES 439.

CPSC 440 Applied Statistical Methods I credit: 4 Hours.

Statistical methods involving relationships between populations and samples; collection, organization, and analysis of data; and techniques in testing hypotheses with an introduction to regression, correlation, and analysis of variance limited to the completely randomized design and the randomized complete-block design. Same as ABE 440, ANSC 440, FSHN 440, and NRES 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 112 or equivalent.

CPSC 448 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, GEOG 468, and IB 491. See GEOG 468.

CPSC 452 Advanced Plant Genetics credit: 3 Hours.

Survey of selected contemporary topics in plant genetics and genomics. Topics include the nature of genes and genomes, crop domestication, selection, allelic diversity in populations, and genetics mapping. Serves as an introduction to functional genomics, population genetics, transmission genetics, quantitative genetics, and bioinformatics. Same as IB 478. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 352 or IB 204, or consent of instructor.

CPSC 453 Principles of Plant Breeding credit: 4 Hours.

Principles, concepts and tools used in plant breeding. Includes methods and breeding schemes used with different plant species. Same as HORT 453. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 103; CPSC 352 or equivalent.

CPSC 454 Plant Breeding Methods credit: 2 Hours.

Discussion of the application of current scientific tools and methods available to plant breeders for improving plants; emphasis on actual use of plant breeding methods and production of high quality seed. 2 undergraduate hours. 2 graduate hours. Offered summer only in alternate years. Prerequisite: CPSC 453.

CPSC 462 Plant Molecular Biology credit: 1 Hour.

Same as IB 472. See IB 472.

CPSC 466 Genomics for Plant Improvement credit: 2 Hours.

An overview of applying the methods of genomics to discover variation in genes and their expression, creating new genetic variation, and applying this information to the improvement of economically important plants. Emphasis is on recent advances in genomic science and activities where functional genomics information is used to efficiently create and manipulate desirable phenotypes. Same as IB 477. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 352 or a similar course, or consent of instructor.

CPSC 467 Plant Genomics credit: 1 Hour.

Same as IB 473. See IB 473.

CPSC 468 Plant Proteomics-Metabolomics credit: 2 Hours.

Same as IB 474. See IB 474.

CPSC 473 Mgmt of Field Crop Insects credit: 3 Hours.

Ecological principles of insect populations in agroecosystems including: sampling insect populations, threshold development, bioeconomics and decision-making, population regulation, designing management strategies for field crop insect pests, and deployment of transgenic crops for management of insect pests. Case studies describing various pest management programs in field-crop settings will be provided. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 270 or an equivalent course, or consent of instructor.

CPSC 475 Insect Pathology credit: 3 Hours.

Same as IB 483. See IB 483.

CPSC 479 Insect Pest Management credit: 3 Hours.

Same as IB 482. See IB 482.

CPSC 482 Plant Tissue Culture credit: 4 Hours.

Same as HORT 482. See HORT 482.

CPSC 483 Outreach Education Skills credit: 3 Hours.

Provides graduate and undergraduate students interested in outreach and extension education programs with opportunities to develop their skills and effectiveness in development and presentation of outreach and extension programs. Same as ANSC 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate student status.

CPSC 484 Plant Physiology credit: 3 Hours.

Same as IB 420. See IB 420.

CPSC 488 Soil Fertility and Fertilizers credit: 3 Hours.

Same as NRES 488. See NRES 488.

CPSC 489 Photosynthesis credit: 3 Hours.

Same as BIOP 432 and IB 421. See IB 421.

CPSC 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Same as INFO 491 and IS 483. See INFO 491.

CPSC 498 Crop Sci Professional Developmt credit: 1 Hour.

Topics related to professional development including resumes, interview skills, business etiquette, ethics, and presentations on opportunities in crop sciences and horticulture. 1 undergraduate hour. No graduate credit. Prerequisite: Junior standing in Crop Sciences or Horticulture.

CPSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in crop sciences. Approved for both letter and S/U grading. May be repeated to a maximum of 12 hours.

Agroecology Concentration

The Agroecology Concentration addresses ecologically based management of cropping systems, stewardship of the environment, and sustainable food production systems. The intersection between crop plants and their environment is emphasized in this concentration. Graduates of the Agroecology concentration are prepared for careers in integrated plant health management, government regulatory and environmental agencies or for entrance into graduate or professional school.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
CHEM 232 or CPSC 382	Elementary Organic Chemistry I Organic Chem of Biol Processes	3-4
IB 103	Introduction to Plant Biology	4
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
IB 203	Ecology	4
Select one of the following:		4-5
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
IB 104	Animal Biology	
Agroecology Concentration Required		
CPSC 112	Introduction to Crop Sciences	4
CPSC 226	Introduction to Weed Science	3
CPSC 270	Applied Entomology	3
CPSC 336	Tomorrow's Environment	3
CPSC 431	Plants and Global Change	3
CPSC 437	Principles of Agroecology	3
PLPA 204	Introductory Plant Pathology	3
CPSC 498	Crop Sci Professional Developmt	1
NRES 201	Introductory Soils	4
NRES 474 or NRES 488	Soil and Water Conservation Soil Fertility and Fertilizers	3
Select one course from three of the following groups:		9-12
ACE 210 or ACE 310	Environmental Economics Natural Resource Economics	
CPSC 412 or CPSC 414 or CPSC 415 or CPSC 418	Principles of Crop Advising Forage Crops and Pasture Eco Bioenergy Crops Crop Growth and Management	

CPSC 426	Weed Mgt in Agronomic Crops
CPSC 473	Mgmt of Field Crop Insects
NRES 401 or NRES 419 or NRES 439 or NRES 488	Watershed Hydrology Env and Plant Ecosystems Env and Sustainable Dev Soil Fertility and Fertilizers
PLPA 401 or PLPA 402 or PLPA 404 or PLPA 405 or PLPA 406 or PLPA 407	Plant Pathogenic Fungi Phytoparasitic Nematodes Plant Virology Plant Disease Diagnosis & Mgmt Phytobacteriology Diseases of Field Crops

Select one of the following: 3-4

ANSC 100	Intro to Animal Sciences
FSHN 101	Intro Food Science & Nutrition
HORT 100	Introduction to Horticulture
NRES 102	Introduction to NRES
TSM 100	Technical Systems in Agr

Total ACES prescribed and elective courses must total 35 hours, of which 20 hours must be completed in residence. 35

Biological Sciences Concentration

The biological sciences concentration is designed for students who plan to enter a graduate study program or who want professional positions that require more science than is included in the other concentrations. Students follow a first-year program of General Education courses similar to students in other Crop Sciences concentrations. Programs for the second, third, and fourth years are planned in consultation with the student's faculty advisor, in the area of biological sciences. Students and advisors are encouraged to consult individual graduate schools for the specific entrance requirements. Although flexibility in individual course selection is a characteristic of this concentration, graduation requirements are established by selection of elective courses.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
CHEM 232	Elementary Organic Chemistry I	3 or 4
IB 103	Introduction to Plant Biology	4
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
PHYS 101	College Physics: Mech & Heat	5
Biological Sciences Concentration Required		
CPSC 112	Introduction to Crop Sciences	4
CPSC 352	Plant Genetics	4
CPSC 498	Crop Sci Professional Developmt	1
CPSC 261 or CPSC 265	Biotechnology in Agriculture Genetic Engineering Lab	3
Select one of the following:		3
CPSC 226	Introduction to Weed Science	
CPSC 270	Applied Entomology	

PLPA 204	Introductory Plant Pathology	
Select three of the following:		9
CPSC 426	Weed Mgt in Agronomic Crops	
CPSC 431	Plants and Global Change	
CPSC 452	Advanced Plant Genetics	
CPSC 453	Principles of Plant Breeding	
CPSC 466	Genomics for Plant Improvement	
CPSC 473	Mgmt of Field Crop Insects	
CPSC 484	Plant Physiology	
or HORT 421	Horticultural Physiology	
PLPA 401	Plant Pathogenic Fungi	
PLPA 402	Phytoparasitic Nematodes	
PLPA 404	Plant Virology	
PLPA 405	Plant Disease Diagnosis & Mgmt	
PLPA 406	Phylobacteriology	
PLPA 407	Diseases of Field Crops	
Select one of the following:		3-4
ANSC 100	Intro to Animal Sciences	
FSHN 101	Intro Food Science & Nutrition	
HORT 100	Introduction to Horticulture	
NRES 102	Introduction to NRES	
NRES 201	Introductory Soils	
TSM 100	Technical Systems in Agr	
Select one of the following:		3-5
MCB 100	Introductory Microbiology	
& MCB 101	and Intro Microbiology Laboratory	
MCB 450	Introductory Biochemistry	
Natural Science Electives		6-9
Total ACES prescribed and elective courses must total 35 hours, of which 20 hours must be completed in residence.		35

Crop Agribusiness Concentration

The concentration in crop agribusiness is designed for students wanting to combine agronomic production and business management. This concentration prepares students for careers in production and marketing, cropping systems management, and a broad range of multi-functional agricultural enterprises, or for entrance into graduate school.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
IB 103	Introduction to Plant Biology	4
Select one of the following:		4-5
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
IB 104	Animal Biology	
Crop Agribusiness Concentration Required		
ACCY 200 or ACCY 201	Fundamentals of Accounting Accounting and Accountancy I	3
CPSC 112	Introduction to Crop Sciences	4
CPSC 226	Introduction to Weed Science	3

CPSC 270	Applied Entomology	3
CPSC 498	Crop Sci Professional Develpmt	1
NRES 201	Introductory Soils	4
PLPA 204	Introductory Plant Pathology	3
Select one of the following:		3-4
ANSC 100	Intro to Animal Sciences	
FSHN 101	Intro Food Science & Nutrition	
HORT 100	Introduction to Horticulture	
NRES 102	Introduction to NRES	
TSM 100	Technical Systems in Agr	
Select 12 hours from the following:		12
CPSC 352	Plant Genetics	
CPSC 412	Principles of Crop Advising	
CPSC 414	Forage Crops and Pasture Eco	
CPSC 415	Bioenergy Crops	
CPSC 418	Crop Growth and Management	
CPSC 426	Weed Mgt in Agronomic Crops	
CPSC 431	Plants and Global Change	
CPSC 437	Principles of Agroecology	
CPSC 453	Principles of Plant Breeding	
CPSC 473	Mgmt of Field Crop Insects	
HORT 341	Greenhouse Mgmt and Production	
HORT 360	Vegetable Crop Production	
HORT 361	Small Fruit Production	
HORT 362	Tree Fruit Production	
HORT 466	Growth and Dev of Hort Crops	
HORT 482	Plant Tissue Culture	
PLPA 405	Plant Disease Diagnosis & Mgmt	
PLPA 407	Diseases of Field Crops	
Select one of the following:		3
ACE 448	Rural Real Estate Appraisal	
NRES 474	Soil and Water Conservation	
NRES 488	Soil Fertility and Fertilizers	
Select one course from each of the following groups:		9
ACE 222 or ACE 428	Agricultural Marketing Commodity Futures and Options	
ACE 231 or ACE 232	Food and Agribusiness Mgt Management of Farm Enterprises	
ACE 345	Finan Decision Indiv Sm Bus	
Total ACES prescribed and elective courses must total 35 hours, of which 20 must be completed in residence.		35

Crops Concentration

The crops concentration is designed for students with an interest in agronomic crop plants. Students study the diversity of crop plants-how they grow and how they are grown This concentration prepares students for careers in crop production and marketing, cropping systems management, plant breeding, and seed merchandising, or for entrance into graduate school.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
CHEM 232 or CPSC 382	Elementary Organic Chemistry I Organic Chem of Biol Processes	4
IB 103	Introduction to Plant Biology	4
Crops Concentration Required		
CPSC 112	Introduction to Crop Sciences	4
CPSC 226	Introduction to Weed Science	3
CPSC 270	Applied Entomology	3
CPSC 498	Crop Sci Professional Developmt	1
Select one of the following:		4-5
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
IB 104	Animal Biology	
NRES 201	Introductory Soils	4
PLPA 204	Introductory Plant Pathology	3
Select one of the following:		3-4
ANSC 100	Intro to Animal Sciences	
FSHN 101	Intro Food Science & Nutrition	
HORT 100	Introduction to Horticulture	
NRES 102	Introduction to NRES	
TSM 100	Technical Systems in Agr	
Select 12 hours from the following:		12
CPSC 261	Biotechnology in Agriculture	
CPSC 265	Genetic Engineering Lab	
CPSC 352	Plant Genetics	
CPSC 412	Principles of Crop Advising	
CPSC 414	Forage Crops and Pasture Eco	
CPSC 415	Bioenergy Crops	
CPSC 418	Crop Growth and Management	
CPSC 426	Weed Mgt in Agronomic Crops	
CPSC 431	Plants and Global Change	
CPSC 437	Principles of Agroecology	
CPSC 452	Advanced Plant Genetics	
CPSC 453	Principles of Plant Breeding	
CPSC 454	Plant Breeding Methods	
CPSC 484 or HORT 421	Plant Physiology Horticultural Physiology	
NRES 419	Env and Plant Ecosystems	
PLPA 401	Plant Pathogenic Fungi	
PLPA 402	Phytoparasitic Nematodes	
PLPA 404	Plant Virology	
PLPA 405	Plant Disease Diagnosis & Mgmt	
PLPA 406	Phylobacteriology	
PLPA 407	Diseases of Field Crops	
Select six hours from the following:		6
NRES 471	Pedology	
NRES 474	Soil and Water Conservation	
NRES 475	Environmental Microbiology	

NRES 488	Soil Fertility and Fertilizers	
Total ACES prescribed and elective courses must total 35 hours, of which 20 hours must be completed in residence.		35
Total Hours		126

Horticultural Food Systems Concentration

This concentration provides students with a strong foundation in plant sciences along with specialized knowledge in horticultural fruit and vegetable crop systems at urban, local, and commercial scales. Graduates from this program are prepared for careers as crop consultants, crop protection and production specialists; entrepreneurs in urban and local food systems; greenhouse or farm managers; and as community gardening and horticultural educators. This concentration will also prepare students for graduate studies leading to careers in research, extension, and education. A minimum of 126 total hours is required.

Code	Title	Hours
Natural Science and Technology Required		
15-16		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
CHEM 232 or CPSC 382	Elementary Organic Chemistry I Organic Chem of Biol Processes	
IB 103	Introduction to Plant Biology	
Horticultural Food Systems Concentration Required		
63		
ACE 231	Food and Agribusiness Mgt	
CPSC 226	Introduction to Weed Science	
CPSC 261	Biotechnology in Agriculture	
CPSC 270	Applied Entomology	
CPSC 352	Plant Genetics	
CPSC 498	Crop Sci Professional Developmt	
HORT 100	Introduction to Horticulture	
HORT 240	Plant Propagation	
HORT 341	Greenhouse Mgmt and Production	
HORT 360	Vegetable Crop Production	
HORT 361	Small Fruit Production	
HORT 362	Tree Fruit Production	
HORT 421	Horticultural Physiology	
NRES 201	Introductory Soils	
NRES 438 or NRES 474 or NRES 488	Soil Nutrient Cycling Soil and Water Conservation Soil Fertility and Fertilizers	
PLPA 204	Introductory Plant Pathology	
Select 15 hours from the following:		
CPSC 431	Plants and Global Change	
CPSC 437	Principles of Agroecology	
HORT 180	Medicinal Plants and Herbology	
HORT 205	Local Food Networks	
HORT 298	Undergraduate Seminar	
HORT 301	Woody Landscape Plants I	
HORT 343	Herbaceous Plants I	

HORT 344	Planting for Biodiversity and Aesthetics
HORT 363	Postharvest Handling Hort Crop
HORT 434	Designing Urban Agriculture
HORT 435	Urban Food Production
HORT 442	Plant Nutrition
HORT 447	Horticultural Plant Breeding
HORT 464	International Hort Products
HORT 475	Permaculture & Agroforestry
HORT 482	Plant Tissue Culture

Total ACES prescribed and elective hours must total 35 hours, of which 20 must be completed in residence.

Plant Protection Concentration

The plant protection concentration provides a broad selection of courses in crops, soils, plant diseases, insects and weeds, and the physical sciences. Students learn how to protect plants from the effects of diseases, insects, and weeds. This concentration is designed to prepare students for careers in crop consulting, integrated pest management, and agribusiness management and merchandising, or for entrance into a graduate program.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
CHEM 232 or CPSC 382	Elementary Organic Chemistry I Organic Chem of Biol Processes	3-4
IB 103	Introduction to Plant Biology	4
Select one of the following:		4-5
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
IB 104	Animal Biology	
Plant Protection Concentration Required		
CPSC 112	Introduction to Crop Sciences	4
CPSC 226	Introduction to Weed Science	3
CPSC 270	Applied Entomology	3
CPSC 352 or CPSC 484	Plant Genetics Plant Physiology	3-4
CPSC 498	Crop Sci Professional Developmt	1
NRES 201	Introductory Soils	4
NRES 488	Soil Fertility and Fertilizers	3
PLPA 204	Introductory Plant Pathology	3
Select one of the following:		3-4
ANSC 100	Intro to Animal Sciences	
HORT 100	Introduction to Horticulture	
FSHN 101	Intro Food Science & Nutrition	
NRES 102	Introduction to NRES	
TSM 100	Technical Systems in Agr	
Select one of the following:		3
CPSC 418	Crop Growth and Management	
HORT 361	Small Fruit Production	
HORT 362	Tree Fruit Production	

Select 12 hours from the following:		12
CPSC 426	Weed Mgt in Agronomic Crops	
CPSC 431	Plants and Global Change	
CPSC 473	Mgmt of Field Crop Insects	
CPSC 475	Insect Pathology	
IB 444	Insect Ecology	
IB 468	Insect Classification and Evol	
IB 482	Insect Pest Management	
PLPA 401	Plant Pathogenic Fungi	
PLPA 402	Phytoparasitic Nematodes	
PLPA 404	Plant Virology	
PLPA 406	Phylobacteriology	
PLPA 407	Diseases of Field Crops	
TSM 465	Chemical Applications Systems	

Total ACES prescribed and elective courses must total 35 hours, of which 20 must be completed in residence.

Plant Biotechnology and Molecular Biology Concentration

The plant biotechnology and molecular biology concentration provides a curriculum that prepares students for careers in biotechnology or for entrance into graduate or professional school. The basic sciences are emphasized, including a strong foundation in biology and genetics. Students are encouraged to participate in undergraduate independent study in a molecular biology laboratory. For those who wish to pursue graduate work later, adequate preparation may be obtained by suitable choices of electives within the framework of this concentration.

Code	Title	Hours
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
IB 150	Organismal & Evolutionary Biol	4
Plant Biotechnology and Molecular Biology Concentration Required		
CHEM 232	Elementary Organic Chemistry I	3 or 4
CHEM 233	Elementary Organic Chem Lab I	2
CPSC 112	Introduction to Crop Sciences	4
CPSC 261	Biotechnology in Agriculture	3
CPSC 265	Genetic Engineering Lab	3
CPSC 352	Plant Genetics	4
CPSC 484	Plant Physiology	3
CPSC 498	Crop Sci Professional Developmt	1
MCB 450	Introductory Biochemistry	3
Select two of the following:		6
CPSC 226	Introduction to Weed Science	
CPSC 270	Applied Entomology	
PLPA 204	Introductory Plant Pathology	
Select two of the following:		6-8
CPSC 418	Crop Growth and Management	
CPSC 452	Advanced Plant Genetics	

CPSC 453	Principles of Plant Breeding	
CPSC 466	Genomics for Plant Improvement	
HORT 421	Horticultural Physiology	
HORT 442	Plant Nutrition	
HORT 466	Growth and Dev of Hort Crops	
HORT 482	Plant Tissue Culture	
Select one of the following:		3-4
ANSC 100	Intro to Animal Sciences	
FSHN 101	Intro Food Science & Nutrition	
HORT 100	Introduction to Horticulture	
NRES 102	Introduction to NRES	
TSM 100	Technical Systems in Agr	
Three courses/groups selected from:		10-15
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
MCB 150 & MCB 151	Molec & Cellular Basis of Life and Molec & Cellular Laboratory	
MCB 300 & MCB 301	Microbiology and Experimental Microbiology	
Total ACES prescribed and elective courses must total 35 hours, of which 20 must be completed in residence.		35

Bachelor of Science in Computer Science and Crop Sciences

Email: academic@cs.illinois.edu or cropsci@illinois.edu

Minimum required major and supporting coursework equates to 74-77 hours. All Campus General Education and College of ACES foreign language requirements must be met. The minimum hours required for graduate is 126. At least twenty-one hours of 300- and 400-level coursework must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the Department of Computer Science Office of Undergraduate Affairs and to the Undergraduate Teaching Office in Crop Sciences by the beginning of the fifth semester (60-75 hours). Please see the Computer Science advisor in 1210 Siebel Center, as well as the Crop Sciences Teaching Coordinator in Turner Hall AE-120.

To graduate from the Computer Science and Crop Sciences curriculum, a student must complete the following courses, all of which must be taken for a traditional letter grade.

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105 & CMN 101	Writing and Research and Public Speaking	6-7
Advanced Composition		
Select from campus-approved list.		3-4
Cultural Studies		
Select one course from Western Cultures and one from Non-Western/U.S. Minority Cultures from campus-approved lists.		6

Foreign Language

Coursework at or above the third level is required for graduation. 0-15

Quantitative Reasoning I

See Mathematical Foundations for specific requirement. 3

Quantitative Reasoning II

See Mathematical Foundations for specific requirement. 3

Natural Sciences and Technology

See Crop Sciences Core for specific requirement. 6

Humanities and the Arts

Select from campus-approved list. 6

Social and Behavioral Sciences

Select from campus-approved list. 6

ACES Required

ACES 101 Contemporary Issues in ACES 2

Computer Science Core 22

CS 100 Freshman Orientation 1

CS 125 Intro to Computer Science 4

CS 126 Software Design Studio 3

CS 173 Discrete Structures 3

CS 225 Data Structures 4

CS 374 Introduction to Algorithms & Models of Computation 4

CS 421 Progrmg Languages & Compilers 3

Computer Science Technical Track 9-11

To include either CS 240, or CS 233 and CS 241, plus up to two CS 400-level classes per approved list and constraints maintained on Computer Science department website.

Mathematical Foundations (fulfills Quantitative Reasoning I and II) 12-13

CS 361 Probability & Statistics for Computer Science 3

MATH 220 Calculus 4-5
or MATH 221 Calculus I

MATH 225 Introductory Matrix Theory 2

MATH 231 Calculus II 3

Crop Sciences Core 34-36

CPSC 112 Introduction to Crop Sciences 4

Select two of the following: 6

CPSC 226 Introduction to Weed Science

CPSC 270 Applied Entomology

PLPA 204 Introductory Plant Pathology

CPSC 261 Biotechnology in Agriculture 3

CPSC 265 Genetic Engineering Lab 3

CPSC 266 Data in Biology and Agriculture 4

CPSC 352 Plant Genetics 4

CPSC 440 Applied Statistical Methods I 4

Select two of the following: 5-7

CPSC 418 Crop Growth and Management

CPSC 452 Advanced Plant Genetics

CPSC 453 Principles of Plant Breeding

CPSC 466 Genomics for Plant Improvement

CPSC 498	Crop Sci Professional Developmt	1
Total Hours		126

CPSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CPSC>)

Crop Sciences Courses

CPSC 111 Farming Systems credit: 2 Hours.

General introduction to the equipment and practices commonly used on Midwest farms. Classes will consist of short lectures followed by demonstrations. All classes and demonstrations will be conducted at the University of Illinois Crop Sciences Research and Education Center. Includes field trips to local production and agribusiness facilities.

CPSC 112 Introduction to Crop Sciences credit: 4 Hours.

Introductory course covering the principles and practices of crop production and sustainable agroecosystem management. Topics include plant growth and development, environmental factors influencing plant productivity, soil management, fertility, and nutrient cycling, pest control principles, and sustainability challenges facing modern crop production. Concepts are discussed in lecture and reinforced in hands-on laboratory sections.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 113 Environment, Agric, & Society credit: 3 Hours.

Introduction to agriculture and the environment; examine the largest managed ecosystem and its influence on natural ecosystems; develop a working understanding of natural and agriculture ecosystems and their interaction; examine various agriculture management strategies that can be used to produce food for an increasing world population while maintaining or improving environmental quality.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences
Cultural Studies - Western

CPSC 116 The Global Food Production Web credit: 3 Hours.

Introduces students to the global web involved in the production of food we consume on a daily basis. Selected ecosystems of plants, people, and cultures in Asia, Africa, and Latin America will be studied based on involvement with various crops. Presents the origin and biology of plants; their evolution with humankind in various cultures; the spread and economic importance of crops around the world; and considers current hunger and environmental issues resulting from the global food web. Interactive communications with selected scientists, producers, and traders around the world through the World Wide Web and email system of the INTERNET permit students to get personal exposure to information and activities.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

CPSC 117 Agriculture and Science of Coffee credit: 3 Hours.

The growth and production of coffee and its impact on society and culture. The botanical aspects of coffee, coffee varieties/cultivars, and technologies for coffee growth, harvesting, post-harvest processing, and roasting will be discussed. The wide variety of coffee beverages, coffee flavor evaluation, coffee chemistry, coffee economics, and the physiological effects of coffee will also be examined.

CPSC 131 Agriculture in Mythology credit: 3 Hours.

Compare and contrast the role agriculture and plant sciences played in the development of ancient cultures. Study agricultural references in ancient global mythology. Develop an appreciation of how agricultural diversity of various ancient cultures influenced mythology in the cultures in different regions.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

CPSC 180 Medicinal Plants and Herbiology credit: 3 Hours.

Same as HORT 180. See HORT 180.

CPSC 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Experimental course on a special topic in crop sciences. Topic may not be repeated except in accordance with the Code. Approved for Letter and S/U grading. May be repeated up to a maximum of 12 hours in separate terms if topics vary.

CPSC 213 Evolution in Action credit: 2 Hours.

Introduction to evolutionary theory. Examination of how domesticated species have evolved. Develops an appreciation of how agroecosystems have influenced evolution of adjacent natural ecosystems. Elucidation of evolutionary mechanisms necessary for agricultural species to adapt to global climate change.

CPSC 215 The Prairie and Bioenergy credit: 3 Hours.

Designed for students who are interested in bioenergy and its production from prairie land. Instructors will provide information on the global trend of bioenergy production and consumption, importance of bioenergy, the role of Illinois prairie land in bioenergy production, potential U.S. bioenergy production, biofuels from plants, and socio-environmental benefits of bioenergy.

CPSC 226 Introduction to Weed Science credit: 3 Hours.

Fundamentals of weed biology, ecology, and management. Emphasis is placed on basic principles and specific management strategies that are relevant to both crop and non-crop ecosystems. Includes a laboratory/discussion. Same as HORT 226. Prerequisite: CPSC 112 or HORT 100 or IB 103.

CPSC 241 Intro to Applied Statistics credit: 3 Hours.

Introduces fundamental statistical procedures used to analyze and interpret data. General principles of descriptive and inferential statistics, measures of central tendency and dispersion, probability, correlation and regression, and tests of hypotheses are covered. An emphasis is placed on biological, environmental, and agricultural sciences, but numerous examples from other areas are discussed. Course content enhances students' ability to critically assess statistical information encountered in professional and every day activities. Credit is not given for both CPSC 241 and STAT 100 or ACE 261.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CPSC 261 Biotechnology in Agriculture credit: 3 Hours.

Basic introduction to the techniques and application of biotechnology to a wide range of agricultural areas, and specific examples are given. May serve as either a terminal course explaining the techniques or as an introductory base for future studies. Same as HORT 261. Prerequisite: Any 100-level course in a biosciences discipline.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 265 Genetic Engineering Lab credit: 3 Hours.

Laboratory/discussion course that provides a hands-on introduction to the techniques and principles of genetic engineering, recombinant DNA and the impact of molecular genetics on society. Students will isolate DNA from plants and clone specific genes into bacterial plasmids, perform polymerase chain reactions, DNA restriction analysis and DNA blotting, and discuss the relevance of these techniques to both medicine and agriculture. Prerequisite: A general biology course.

CPSC 266 Data in Biology and Agriculture credit: 4 Hours.

This course focuses on the use of computing and data analysis to solve problems in biology and agriculture and includes an overview of computer methods and limitations of current computer, network and storage hardware for big data sets. The nature, use and future potential of different types of computer hardware and software in biology and agriculture (e.g. mobile applications, high performance computing, wireless networking) will be discussed. Examples of computing-related and computing-limited problems in biology and agriculture, such as image analysis, remote sensing and genetic analysis will be used as case studies. The potential of computing to improve the food system, medicine and other applications will be presented.

CPSC 270 Applied Entomology credit: 3 Hours.

Lectures, laboratory, and field trips cover the biology of insects and the recognition and management of insect pests of agricultural, forest, and urban ecosystems. Covers insect structure and physiology, classification, life histories, behavior, and pest management. Same as IB 220 and NRES 270.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 293 Off-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in crop sciences. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, cumulative GPA of 2.0 or above at the time the internship is arranged, and consent of instructor.

CPSC 294 On-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, on-campus learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

CPSC 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

CPSC 336 Tomorrow's Environment credit: 3 Hours.

Introduction to interdisciplinary methods of analysis of environmental problems in a finite world; examination of the concept of the limits to growth; development of a working understanding of natural systems and environmental economics; and examination of various management strategies (technical, economic, and social) that can be used to improve environmental quality. Same as CHLH 336, and ENVS 336. Prerequisite: One course in the life sciences and one course in the social sciences, or consent of instructor.

CPSC 352 Plant Genetics credit: 4 Hours.

The principles of heredity in relation to plant improvement. Same as NRES 352. Prerequisite: IB 103 or IB 104.

CPSC 382 Organic Chem of Biol Processes credit: 4 Hours.

An overview of the structure, properties, and reactions of carbon-containing compounds relevant to biological processes and cellular structure. The chemistry of hydro carbon, aromatic, as well as oxygen-, nitrogen-, phosphorus-, and sulfur-containing compounds will be examined. Macromolecular structures including biological membranes, carbohydrates, proteins and nucleic acids will also be discussed. Prerequisites: CHEM 102 and CHEM 104 or CHEM 202 and CHEM 204.

CPSC 396 Undergrad Honors Res or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

CPSC 407 Diseases of Field Crops credit: 3 Hours.

Same as PLPA 407. See PLPA 407.

CPSC 408 Integrated Pest Management credit: 3 Hours.

Examination of fundamental concepts of pest management including a historical review of pests and pest management; an overview of major pests (insects, weeds, plant diseases and vertebrate) in a variety of settings (agronomic, specialty crops, urban and structural); management options (area-wide, chemical, biological, cultural and physical); regulatory issues; and topics of current interest. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or CPSC 270 or equivalent, both are preferred but only 1 is required.

CPSC 412 Principles of Crop Advising credit: 3 Hours.

Fundamentals in crop development and management, soil structure, management, and fertility, and how crops and soils interact are examined. Students learn how to diagnose real-world problems in fields and field crops grown in the Midwestern US, and to develop practical solutions to such problems. Prepares students to be competitive in careers within commercial crop agriculture and to pass the Certified Crop Adviser examination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 and NRES 201, or equivalent, or consent of instructor.

CPSC 413 Agriculture, Food, and the Environment credit: 2 Hours.

Advanced course in the complex interactions of food production resulting from different agricultural systems and the environment. Develop an appreciation of the intricacies of producing food for a growing world population while minimizing the impact on the natural environment. Understand the implementation of new technology and strategies for future food production. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 112 or CPSC 113 or equivalent course or consent of instructor. For Online MS Program.

CPSC 414 Forage Crops and Pasture Eco credit: 3 Hours.

Forages, their plant characteristics, ecology, and production; grasslands of farm and range as related to animal production and soil conservation. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: An introductory class in biology.

CPSC 415 Bioenergy Crops credit: 3 Hours.

Provides an overview and understanding of biomass feedstock production systems for sustainable biofuels production. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 or consent of instructor.

CPSC 416 Native Plants and Agroecosystems credit: 4 Hours.

Introduction to native plants and to their conservation use and agronomic benefit. Topics include learning to identify native plants using a regional flora, knowing the different ecological niches in the state of Illinois and which plants inhabit them, and choosing appropriate native plants to enhance the interaction between agronomic crops and natives. 4 undergraduate hours. 4 graduate hours. Credit is not given for CPSC 416 if credit for NRES 415 has been earned. Prerequisite: HORT 100 or IB 103.

CPSC 418 Crop Growth and Management credit: 3 Hours.

Crop physiology and management as influenced by environment, plant species, and cropping system; relates plant growth processes to crop production practices based on current research. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or CPSC 112 or equivalent, or consent of instructor.

CPSC 419 Midwest Agricultural Practices credit: 1 Hour.

Introduces agronomic production practices in the Midwest and economics of the crop production value chain. Specifically designed for beginning graduate students in crop genetic improvement from non-agricultural backgrounds. 1 undergraduate hour. 1 graduate hour.

CPSC 426 Weed Mgt in Agronomic Crops credit: 3 Hours.

Principles of weed ecology and biology, and their application to weed management. Herbicides and their use in corn, soybeans and other agronomic crops. Specialized topics include weed management in reduced tillage, herbicide tolerant crops and management of problem weeds. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or consent of instructor.

CPSC 428 Weed Science Practicum credit: 2 Hours.

Intensive course on field diagnostic skills in weed science. Topics include weed and weed seed identification, sprayer calibration, herbicide application, herbicide injury symptomatology, and field diagnostics. Students who complete the course will be encouraged to enter the North Central Weed Science Society weeds contest, which occurs during the summer. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 226 or CPSC 426 or consent of instructor.

CPSC 431 Plants and Global Change credit: 3 Hours.

The science of global atmospheric and climate change in the 21st Century. Understanding of how plants, including crops, will respond and may be adapted to these changes. Using plants to ameliorate predicted climate change. Same as IB 440 and NRES 431. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 112 or IB 103.

CPSC 433 Basic Toxicology credit: 3 Hours.

Same as CB 449, ENVS 480 and FSHN 480. See FSHN 480.

CPSC 436 Conservation Biology credit: 4 Hours.

Same as ENVS 420 and IB 451. See IB 451.

CPSC 437 Principles of Agroecology credit: 3 Hours.

Examines the dynamics and function of agricultural ecosystems and reviews fundamental concepts of ecology. Agricultural systems will be compared on the basis of energy flow, nutrient cycling, diversity, stability and required inputs. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 100 or IB 103 or equivalent.

CPSC 438 Soil Nutrient Cycling credit: 3 Hours.

Same as NRES 438. See NRES 438.

CPSC 439 Env and Sustainable Dev credit: 3 Hours.

Same as NRES 439. See NRES 439.

CPSC 440 Applied Statistical Methods I credit: 4 Hours.

Statistical methods involving relationships between populations and samples; collection, organization, and analysis of data; and techniques in testing hypotheses with an introduction to regression, correlation, and analysis of variance limited to the completely randomized design and the randomized complete-block design. Same as ABE 440, ANSC 440, FSHN 440, and NRES 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 112 or equivalent.

CPSC 448 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, GEOG 468, and IB 491. See GEOG 468.

CPSC 452 Advanced Plant Genetics credit: 3 Hours.

Survey of selected contemporary topics in plant genetics and genomics. Topics include the nature of genes and genomes, crop domestication, selection, allelic diversity in populations, and genetics mapping. Serves as an introduction to functional genomics, population genetics, transmission genetics, quantitative genetics, and bioinformatics. Same as IB 478. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 352 or IB 204, or consent of instructor.

CPSC 453 Principles of Plant Breeding credit: 4 Hours.

Principles, concepts and tools used in plant breeding. Includes methods and breeding schemes used with different plant species. Same as HORT 453. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 103; CPSC 352 or equivalent.

CPSC 454 Plant Breeding Methods credit: 2 Hours.

Discussion of the application of current scientific tools and methods available to plant breeders for improving plants; emphasis on actual use of plant breeding methods and production of high quality seed. 2 undergraduate hours. 2 graduate hours. Offered summer only in alternate years. Prerequisite: CPSC 453.

CPSC 462 Plant Molecular Biology credit: 1 Hour.

Same as IB 472. See IB 472.

CPSC 466 Genomics for Plant Improvement credit: 2 Hours.

An overview of applying the methods of genomics to discover variation in genes and their expression, creating new genetic variation, and applying this information to the improvement of economically important plants. Emphasis is on recent advances in genomic science and activities where functional genomics information is used to efficiently create and manipulate desirable phenotypes. Same as IB 477. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 352 or a similar course, or consent of instructor.

CPSC 467 Plant Genomics credit: 1 Hour.

Same as IB 473. See IB 473.

CPSC 468 Plant Proteomics-Metabolomics credit: 2 Hours.

Same as IB 474. See IB 474.

CPSC 473 Mgmt of Field Crop Insects credit: 3 Hours.

Ecological principles of insect populations in agroecosystems including: sampling insect populations, threshold development, bioeconomics and decision-making, population regulation, designing management strategies for field crop insect pests, and deployment of transgenic crops for management of insect pests. Case studies describing various pest management programs in field-crop settings will be provided. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 270 or an equivalent course, or consent of instructor.

CPSC 475 Insect Pathology credit: 3 Hours.

Same as IB 483. See IB 483.

CPSC 479 Insect Pest Management credit: 3 Hours.

Same as IB 482. See IB 482.

CPSC 482 Plant Tissue Culture credit: 4 Hours.

Same as HORT 482. See HORT 482.

CPSC 483 Outreach Education Skills credit: 3 Hours.

Provides graduate and undergraduate students interested in outreach and extension education programs with opportunities to develop their skills and effectiveness in development and presentation of outreach and extension programs. Same as ANSC 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate student status.

CPSC 484 Plant Physiology credit: 3 Hours.

Same as IB 420. See IB 420.

CPSC 488 Soil Fertility and Fertilizers credit: 3 Hours.

Same as NRES 488. See NRES 488.

CPSC 489 Photosynthesis credit: 3 Hours.

Same as BIOP 432 and IB 421. See IB 421.

CPSC 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Same as INFO 491 and IS 483. See INFO 491.

CPSC 498 Crop Sci Professional Developmt credit: 1 Hour.

Topics related to professional development including resumes, interview skills, business etiquette, ethics, and presentations on opportunities in crop sciences and horticulture. 1 undergraduate hour. No graduate credit. Prerequisite: Junior standing in Crop Sciences or Horticulture.

CPSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in crop sciences. Approved for both letter and S/U grading. May be repeated to a maximum of 12 hours.

CS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CS>)

Computer Science Courses**CS 100 Freshman Orientation credit: 1 Hour.**

Introduction to Computer Science as a field and career for computer science majors. Overview of the field and specific examples of problem areas and methods of solution.

CS 101 Intro Computing: Engrg & Sci credit: 3 Hours.

Fundamental principles, concepts, and methods of computing, with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; fundamental algorithms and data structures; use of computers in solving engineering and scientific problems. Intended for engineering and science majors. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 102 Little Bits to Big Ideas credit: 4 Hours.

Same as INFO 102. See INFO 102.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 105 Intro Computing: Non-Tech credit: 3 Hours.

Computing as an essential tool of academic and professional activities. Functions and interrelationships of computer system components: hardware, systems and applications software, and networks. Widely used application packages such as spreadsheets and databases. Concepts and practice of programming for the solution of simple problems in different application areas. Intended for non-science and non-engineering majors. Prerequisite: MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 125 Intro to Computer Science credit: 4 Hours.

Basic concepts in computing and fundamental techniques for solving computational problems. Intended as a first course for computer science majors and others with a deep interest in computing. Prerequisite: Three years of high school mathematics or MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 126 Software Design Studio credit: 3 Hours.

Fundamental principles and techniques of software development. Design, documentation, testing, and debugging software, with a significant emphasis on code review. Credit is not given for both CS 242 and CS 126. Prerequisite: CS 125. For majors only.

CS 173 Discrete Structures credit: 3 Hours.

Discrete mathematical structures frequently encountered in the study of Computer Science. Sets, propositions, Boolean algebra, induction, recursion, relations, functions, and graphs. Credit is not given for both CS 173 and MATH 213. Prerequisite: One of CS 125, ECE 220; one of MATH 220, MATH 221.

CS 196 Freshman Honors credit: 1 Hour.

Offered for honors credit in conjunction with other 100-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 100-level computer science course (see Schedule).

CS 199 Undergraduate Open Seminar in Computer Science credit: 0 to 5 Hours.

Topics vary. Approved for Letter and S/U grading. May be repeated.

CS 210 Ethical & Professional Issues credit: 2 Hours.

Ethics for the computing profession. Ethical decision-making; licensing; intellectual property, freedom of information, and privacy. Credit is not given for both CS 210 and ECE 316. Prerequisite: CS 225. Junior standing required.

CS 225 Data Structures credit: 4 Hours.

Data abstractions: elementary data structures (lists, stacks, queues, and trees) and their implementation using an object-oriented programming language. Solutions to a variety of computational problems such as search on graphs and trees. Elementary analysis of algorithms. Prerequisite: CS 125 or ECE 220; CS 173 or MATH 213.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 233 Computer Architecture credit: 4 Hours.

Fundamentals of computer architecture: digital logic design, working up from the logic gate level to understand the function of a simple computer; machine-level programming to understand implementation of high-level languages; performance models of modern computer architectures to enable performance optimization of software; hardware primitives for parallelism and security. Prerequisite: CS 125 and CS 173; credit or concurrent enrollment in CS 225.

CS 241 System Programming credit: 4 Hours.

Basics of system programming, including POSIX processes, process control, inter-process communication, synchronization, signals, simple memory management, file I/O and directories, shell programming, socket network programming, RPC programming in distributed systems, basic security mechanisms, and standard tools for systems programming such as debugging tools. Credit is not given for both CS 241 and ECE 391. Prerequisite: CS 225; credit or concurrent registration in CS 233.

CS 242 Programming Studio credit: 3 Hours.

Intensive programming lab intended to strengthen skills in programming. Prerequisite: CS 241.

CS 296 Honors Course credit: 1 Hour.

Group projects for honors credit in computer science. Sections of this course are offered in conjunction with other 200-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 200-level computer science course (see Schedule).

CS 357 Numerical Methods I credit: 3 Hours.

Fundamentals of numerical methods for students in science and engineering; floating-point computation, systems of linear equations, approximation of functions and integrals, the single nonlinear equation, and the numerical solution of ordinary differential equations; various applications in science and engineering; programming exercises and use of high quality mathematical library routines. Same as MATH 357. Credit is not given for CS 357 if credit for CS 450 has been earned. (Counts for advanced hours in LAS). Prerequisite: A 100-level computer science course; MATH 225 or MATH 415; MATH 241.

CS 361 Probability & Statistics for Computer Science credit: 3 Hours.

Introduction to probability theory and statistics with applications to computer science. Topics include: visualizing datasets, summarizing data, basic descriptive statistics, conditional probability, independence, Bayes theorem, random variables, joint and conditional distributions, expectation, variance and covariance, central limit theorem. Markov inequality, Chebyshev inequality, law of large numbers, Markov chains, simulation, the PageRank algorithm, populations and sampling, sample mean, standard error, maximum likelihood estimation, Bayes estimation, hypothesis testing, confidence intervals, linear regression, principal component analysis, classification, and decision trees. Same as STAT 361. Credit is not given for both CS 361 and ECE 313. Prerequisite: MATH 220 or 221; credit or concurrent registration in MATH 225. For majors only.

CS 374 Introduction to Algorithms & Models of Computation credit: 4 Hours.

Analysis of algorithms, major paradigms of algorithm design including recursive algorithms, divide-and-conquer algorithms, dynamic programming, greedy algorithms, and graph algorithms. Formal models of computation including finite automata and Turing machines. Limitations of computation arising from fundamental notions of algorithm and from complexity-theoretic constraints. Reductions, undecidability and NP-completeness. Same as ECE 374. Prerequisite: CS 225; MATH 225 or MATH 415.

CS 397 Individual Study credit: 1 to 3 Hours.

May be repeated. Prerequisite: Consent of instructor.

CS 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

CS 410 Text Information Systems credit: 3 or 4 Hours.

Theory, design, and implementation of text-based information systems. Text analysis, retrieval models (e.g., Boolean, vector space, probabilistic), text categorization, text filtering, clustering, retrieval system design and implementation, and applications to web information management. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 411 Database Systems credit: 3 or 4 Hours.

Examination of the logical organization of databases: the entity-relationship model; the hierarchical, network, and relational data models and their languages. Functional dependencies and normal forms. Design, implementation, and optimization of query languages; security and integrity; concurrency control, and distributed database systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 412 Introduction to Data Mining credit: 3 or 4 Hours.

Concepts, techniques, and systems of data warehousing and data mining. Design and implementation of data warehouse and on-line analytical processing (OLAP) systems; data mining concepts, methods, systems, implementations, and applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 413 Intro to Combinatorics credit: 3 or 4 Hours.

Same as MATH 413. See MATH 413.

CS 414 Multimedia Systems credit: 3 or 4 Hours.

Organization and structure of modern multimedia systems; audio and video encoding; quality of service concepts; scheduling algorithms for multimedia within OS and networks multimedia protocols over high-speed networks; synchronization schemes, user-interface design; multimedia teleservices. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 418 Interactive Computer Graphics credit: 3 Hours.

Basic mathematical tools and computational techniques for modeling, rendering, and animating 3-D scenes. Same as CSE 427. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; MATH 225 or MATH 415; MATH 241.

CS 419 Production Computer Graphics credit: 3 or 4 Hours.

Advanced methods for representing, displaying, and rendering two-, three-, and four-dimensional scenes. General algebraic curves and surfaces, splines, Gaussian and bump-function representation, fractals, particle systems, constructive solid geometry methods, lighting models, radiosity, advanced ray-tracing methods, surface texturing animation techniques, data visualization methods. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 418.

CS 420 Parallel Progrmg: Sci & Engrg credit: 3 or 4 Hours.

Fundamental issues in design and development of parallel programs for various types of parallel computers. Various programming models according to both machine type and application area. Cost models, debugging, and performance evaluation of parallel programs with actual application examples. Same as CSE 402 and ECE 492. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 421 Progrmg Languages & Compilers credit: 3 or 4 Hours.

Structure of programming languages and their implementation. Basic language design principles; abstract data types; functional languages; type systems; object-oriented languages. Basics of lexing, parsing, syntax-directed translation, semantic analysis, and code generation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233 and CS 373.

CS 422 Programming Language Design credit: 3 or 4 Hours.

Exploration of major language design paradigms using imperative and functional programming as unifying themes. Tools include both practical language processor construction and theoretical models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 423 Operating Systems Design credit: 3 or 4 Hours.

Organization and structure of modern operating systems and concurrent programming concepts. Deadlock, virtual memory, processor scheduling, and disk systems. Performance, security, and protection. Same as CSE 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 424 Real-Time Systems credit: 3 or 4 Hours.

Supervisory control aspects of Cyber Physical Systems (CPS): fundamentals of reliability analysis, real-time scheduling, simple feedback control, software fault tolerance architecture, wireless networking and energy saving, principles of safety critical system engineering. Student groups design and demonstrate supervisory control architecture for a robot. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 425 Distributed Systems credit: 3 or 4 Hours.

Protocols, specification techniques, global states and their determination, reliable broadcast, transactions and commitment, security, and real-time systems. Same as ECE 428. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 426 Compiler Construction credit: 3 or 4 Hours.

Compiler structure, syntax analysis, syntax-directed translation, automatically constructed recognizers, semantic analysis, code generation, intermediate language, optimization techniques. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 427 Software Engineering I credit: 3 or 4 Hours.

Software process, analysis and design. Software development paradigms, system engineering, function-based analysis and design, and object-oriented analysis and design. Course will use team-projects for hands-on exercises. Same as CSE 426. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 and CS 373.

CS 428 Software Engineering II credit: 3 or 4 Hours.

Continuation of CS 427. Software development, management, and maintenance. Project and configuration management, collaborative development models, software quality assurance, interoperability domain engineering and software reuse, and software re-engineering. Same as CSE 429. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 427.

CS 429 Software Engineering II, ACP credit: 3 Hours.

Continuation of CS 427. Identical to CS 428 except for the additional writing component. See CS 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: CS 427.

This course satisfies the General Education Criteria for: Advanced Composition

CS 431 Embedded Systems credit: 3 Hours.

A survey of sampled data systems and embedded architecture; key concepts in common embedded system applications; signal processing and control; embedded microprocessor and device interface; time-critical I/O handling; data communications; real-time operating systems and techniques for the development and analysis of embedded real-time software; hands-on laboratory projects. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 433 Computer System Organization credit: 3 or 4 Hours.

Computer system analysis and design. Organizational dependence on computations to be performed; speed and cost of parts and overall machines; instruction set design; pipeline and vector machines; memory hierarchy design. Same as CSE 422. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233.

CS 436 Computer Networking Laboratory credit: 3 or 4 Hours.

Same as ECE 435. See ECE 435.

CS 438 Communication Networks credit: 3 or 4 Hours.

Layered architectures and the OSI Reference Model; design issues and protocols in the transport, network, and data link layers; architectures and control algorithms of local-area, point-to-point, and satellite networks; standards in networks access protocols; models of network interconnection; overview of networking and communication software. Same as ECE 438. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391; one of ECE 313, MATH 461, MATH 463.

CS 439 Wireless Networks credit: 3 or 4 Hours.

Same as ECE 439. See ECE 439.

CS 440 Artificial Intelligence credit: 3 or 4 Hours.

Major topics in and directions of research in artificial intelligence: AI languages (LISP and PROLOG), basic problem solving techniques, knowledge representation and computer inference, machine learning, natural language understanding, computer vision, robotics, and societal impacts. Same as ECE 448. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or ECE 391.

CS 445 Computational Photography credit: 3 or 4 Hours.

Computer vision techniques to enhance, manipulate, and create media from photo collections, such as panoramic stitching, face morphing, texture synthesis, blending, and 3D reconstruction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225, MATH 225, and MATH 231.

CS 446 Machine Learning credit: 3 or 4 Hours.

Theory and basic techniques in machine learning. Major theoretical paradigms and key concepts developed in machine learning in the context of applications such as natural language and text processing, computer vision, data mining, adaptive computer systems and others. Review of several supervised and unsupervised learning approaches: methods for learning linear representations; on-line learning, Bayesian methods; decision-trees; features and kernels; clustering and dimensionality reduction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373 and CS 440.

CS 447 Natural Language Processing credit: 3 or 4 Hours.

Part-of-speech tagging, parsing, semantic analysis and machine translation. Relevant linguistics concepts from morphology (word formation) and lexical semantics (the meaning of words) to syntax (sentence structure) and compositional semantics (the meaning of sentences). 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 447 and LING 406. Prerequisite: CS 374.

CS 450 Numerical Analysis credit: 3 Hours.

Linear system solvers, optimization techniques, interpolation and approximation of functions, solving systems of nonlinear equations, eigenvalue problems, least squares, and quadrature; numerical handling of ordinary and partial differential equations. Same as CSE 401, ECE 491, and MATH 450. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 450 and CS 457. Prerequisite: CS 101 or CS 125; CS 357 or MATH 415; MATH 285.

CS 457 Numerical Methods II credit: 3 Hours.

Continuation of CS 357. Orthogonalization methods for least squares, Krylov subspace methods, non-linear equations and optimization in multiple dimensions, initial and boundary value problems for ordinary and partial differential equations. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 457 and CS 450. Prerequisite: CS 357.

CS 460 Security Laboratory credit: 3 Hours.

Operating systems security: access control, least privilege mechanism and malware techniques. Network security: firewalls, sniffing, tunnels, intrusion detection, AAA and worm structure. System security: forensics security architectures, and attack/defend exercises. Complements CS 461 via hands-on project. Same as ECE 419. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461.

CS 461 Computer Security I credit: 4 Hours.

Fundamental principles of computer and communications security and information assurance: ethics, privacy, notions of threat, vulnerabilities, and risk in systems, information warfare, malicious software, data secrecy and integrity issues, network security, trusted computing, mandatory and discretionary access controls, certification and accreditation of systems against security standards. Security mechanisms: authentication, auditing, intrusion detection, access control, cryptography, security protocols, key distribution. Same as ECE 422. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 463 Computer Security II credit: 3 or 4 Hours.

Program security, trusted base, privacy, anonymity, non-interference, information flow, confinement, advanced auditing, forensics, intrusion detection, key management and distribution, policy composition and analysis, formal approaches to specification and verification of secure systems and protocols, and topics in applied cryptography. Same as ECE 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461. Recommended: CS 475.

CS 465 User Interface Design credit: 3 Hours.

A project-focused course covering fundamental principles of user interface design, implementation, and evaluation. Small teams work on a term-long project that involves: analysis of the problem domain, user skills, and tasks; iterative prototyping of interfaces to address user needs; conducting several forms of evaluation such as cognitive walkthroughs and usability tests; implementation of the final prototype. Non-technical majors may enroll as non-programmers who participate in all aspects of the projects with the possible exception of implementation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 466 Introduction to Bioinformatics credit: 3 or 4 Hours.

Algorithmic approaches in bioinformatics: (i) biological problems that can be solved computationally (e.g., discovering genes, and interactions among different genes and proteins); (ii) algorithmic techniques with wide applicability in solving these problems (e.g., dynamic programming and probabilistic methods); (iii) practical issues in translating the basic algorithmic ideas into accurate and efficient tools that biologists may use. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 467 Social Visualization credit: 3 or 4 Hours.

Visualizing social interaction in networked spaces: investigation of patterns in networked communications systems such as messaging (email, instant messaging), social networking sites and collaborative sites; social network theory and visualizations; exploration of how to move beyond existing visualization techniques; visualizing the network identity over compilations of online data. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 468 Tech and Advertising Campaigns credit: 3 Hours.

Same as ADV 492. See ADV 492.

CS 473 Algorithms credit: 4 Hours.

Design and analysis techniques, approximation algorithms, randomized algorithms and amortized analysis, and advanced topics such as network flow, linear programming, and dynamic data structures, among others. Same as CSE 414 and MATH 473. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 374, and one of CS 361, MATH 461, or STAT 400.

CS 475 Formal Models of Computation credit: 3 or 4 Hours.

Finite automata and regular languages; pushdown automata and context-free languages; Turing machines and recursively enumerable sets; linear-bounded automata and context-sensitive languages; computability and the halting problem; undecidable problems; recursive functions; Chomsky hierarchy; computational complexity. Same as MATH 475. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373.

CS 476 Program Verification credit: 3 or 4 Hours.

Formal methods for demonstrating correctness and other properties of programs. Invariant assertions; Hoare axiomatics; well-founded orderings for proving termination; structural induction; computational induction; data structures; parallel programs; overview of predicate calculus. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 374 or MATH 414.

CS 477 Formal Software Devel Methods credit: 3 or 4 Hours.

Mathematical models, languages, and methods for software specification, development, and verification. Same as ECE 478. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 373 or MATH 414.

CS 481 Stochastic Processes & Applic credit: 3 or 4 Hours.

Same as IE 410. See IE 410.

CS 482 Simulation credit: 3 Hours.

Same as IE 413. See IE 413.

CS 483 Applied Parallel Programming credit: 4 Hours.

Same as CSE 408 and ECE 408. See ECE 408.

CS 484 Parallel Programming credit: 3 or 4 Hours.

Techniques for the programming of all classes of parallel computers and devices including shared memory and distributed memory multiprocessors, SIMD processors and co-processors, and special purpose devices. Key concepts in parallel programming such as reactive and transformational programming, speculation, speedup, isoefficiency, and load balancing. Synchronization primitives, libraries and languages for parallel programming such as OpenMP and MPI, performance monitoring, program tuning, analysis and programming of numerical and symbolic parallel algorithms. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 491 Seminar credit: 0 to 4 Hours.

Seminar on topics of current interest as announced in the Class Schedule. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for S/U grading only. May be repeated in the same or separate terms if topics vary to a maximum of 4 hours. Prerequisite: As specified for each topic offering, see Class Schedule or departmental course description.

CS 492 Senior Project I credit: 3 Hours.

First part of a project course in computer science. Students work in teams to solve typical commercial or industrial problems. Work involves planning, design, and implementation. Extensive oral and written work is required both on-campus and possibly off-campus at sponsors' locations. CS 492 must be taken as a sequence with either CS 493 or CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 492 and a project course in another engineering department for the same project. Prerequisite: For Computer Science majors with senior standing.

CS 493 Senior Project II, ACP credit: 3 Hours.

Continuation of CS 492. Identical to CS 494 except for an additional writing component. See CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 493 and a project course in another engineering department for the same project. Prerequisite: CS 492. This course satisfies the General Education Criteria for: Advanced Composition

CS 494 Senior Project II credit: 3 Hours.

Continuation of CS 492. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 494 and a project course in another engineering department for the same project. Prerequisite: CS 492.

CS 497 CS Team Project credit: 1 to 3 Hours.

Student teams work with CS faculty to complete a significant project requiring advanced knowledge of CS principles. Project topics vary. 1 to 3 undergraduate hours. No graduate credit. May be repeated in the same term up to 6 hours, if topics vary; may be repeated in separate terms. Prerequisite: For majors only; junior or senior standing required.

CS 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

CS 499 Senior Thesis credit: 3 Hours.

Research and thesis development experience in computer science under guidance of a faculty member. Literature search, oral presentation, analysis and implementation, paper preparation, and completion of a written thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

Minor in Crop and Soil Management

The Crop and Soil Management minor is designed for students who desire a significant background in crop and soil systems to support study and practice of their major field. Selection of additional courses beyond the core will depend on the student's major and interests. Enrollment in the Crop and Soil Management minor is not available to students enrolled in the Crop Sciences major. Courses in the minor cannot be taken Credit/No Credit.

Code	Title	Hours
Crop and Soil Management Minor Required Courses		
CPSC 112	Introduction to Crop Sciences	4
CPSC 418	Crop Growth and Management	3
NRES 201	Introductory Soils	4
NRES 488	Soil Fertility and Fertilizers	3
Select one of the following:		3-4
CPSC 116	The Global Food Production Web	
CPSC 226	Introduction to Weed Science	
CPSC 261	Biotechnology in Agriculture	
CPSC 270	Applied Entomology	
CPSC 352	Plant Genetics	
CPSC 412	Principles of Crop Advising	
CPSC 414	Forage Crops and Pasture Eco	
CPSC 415	Bioenergy Crops	
CPSC 437	Principles of Agroecology	

CPSC 453	Principles of Plant Breeding	
PLPA 200	Plants, Pathogens, and People	
PLPA 204	Introductory Plant Pathology	
Select one of the following:		3-4
CPSC 116	The Global Food Production Web	
CPSC 226	Introduction to Weed Science	
CPSC 261	Biotechnology in Agriculture	
CPSC 270	Applied Entomology	
CPSC 352	Plant Genetics	
CPSC 412	Principles of Crop Advising	
CPSC 414	Forage Crops and Pasture Eco	
CPSC 415	Bioenergy Crops	
CPSC 437	Principles of Agroecology	
CPSC 453	Principles of Plant Breeding	
PLPA 200	Plants, Pathogens, and People	
PLPA 204	Introductory Plant Pathology	
NRES 438	Soil Nutrient Cycling	
NRES 471	Pedology	
NRES 474	Soil and Water Conservation	
NRES 475	Environmental Microbiology	

Total Hours

20-22

Minor in Horticulture

The Horticulture minor is designed for students who desire a significant background in horticulture to support study and practice of their major field. Selection of additional courses beyond the core will depend on the student's major and interests. Courses in the minor cannot be taken Credit/No Credit. At least 6 hours of the minor must be advanced (300 or 400) level courses that are distinct from classes meeting requirements in the student's major.

Code	Title	Hours
Horticulture Minor Required Courses		
Select one of the following:		3
HORT 100	Introduction to Horticulture	
HORT 105	Vegetable Gardening	
HORT 106	The Sustainable Home Garden	
HORT 240	Plant Propagation	3-4
or HORT 341	Greenhouse Mgmt and Production	
Select at least 12 hours from the following:		12-15
HORT 240	Plant Propagation ^{If not used above}	
HORT 261	Biotechnology in Agriculture	
HORT 301	Woody Landscape Plants I	
HORT 341	Greenhouse Mgmt and Production ^{If not used above}	
HORT 343	Herbaceous Plants I	
HORT 344	Planting for Biodiversity and Aesthetics	
HORT 360	Vegetable Crop Production	
HORT 361	Small Fruit Production	
HORT 362	Tree Fruit Production	
HORT 363	Postharvest Handling Hort Crop	
HORT 421	Horticultural Physiology	
HORT 434	Designing Urban Agriculture	

HORT 435	Urban Food Production
HORT 442	Plant Nutrition
HORT 475	Permaculture & Agroforestry
HORT 482	Plant Tissue Culture
<hr/>	
Total Hours	18-22

Food Science and Human Nutrition

Sharon Nickols-Richardson

260 Bevier Hall, 905 South Goodwin, Urbana

PH: (217) 244-4498

<http://fshn.illinois.edu>

The Department of Food Science and Human Nutrition (FSHN) at the University of Illinois at Urbana-Champaign is dedicated to implementing education, research, and outreach programs designed to promote a safe, nutritious, and affordable food supply that enhances human health. To this end, students and faculty work collectively toward learning, discovering, and disseminating new knowledge and in applying novel technologies to achieve the departmental mission. The basic human need for high quality food for optimal health and wellness drives the core of student training within the FSHN Department.

Undergraduate concentrations leading to the B.S. degree include Dietetics, Food Science, Hospitality Management, and Human Nutrition. Career opportunities for graduates of our program are excellent and include position titles including nutritionist, dietitian, food technologist, product developer, food scientist, senior scientist, entrepreneur, restaurateur, and food systems manager. Graduate students may pursue M.S. and Ph.D. degrees, focusing on original research in the general concentrations of Food Science or Human Nutrition. The FSHN Department also offers a non-thesis Professional Science Master's degree that includes foundational courses within the department along with business and marketing courses. The University of Illinois Online Food Science Master's Degree Program is a popular option for individuals working full-time and who desire a non-thesis M.S. degree in Food Science. Advanced degrees lead to accelerated careers in industry, government, and academia.

Departmental faculty expertise includes:

*Integrated food, nutrition and health

*Food materials science and engineering

*Biochemical and molecular nutrition

*Food safety and security

*Food service management

The FSHN Department values diversity in people, cultures, learning, and science. Collaboration with experts in engineering, biomedical sciences, cellular and molecular biology, and multiple disciplines within the field of agricultural, consumer, and environmental sciences (ACES) is important and routine for students and faculty to promote health, wellness, and sustainable human and economic development.

For the Degree of Bachelor of Science in Food Science and Human Nutrition

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent) (see college Composition I requirement)	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select one course from campus approved list of Advanced Composition courses.		3-4
Cultural Studies		
Select one course from Western culture and one from non-Western/U.S. minority culture from campus approved list.		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following: ¹		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I (This course does not count for students in the Food Science Concentration; choose from the other two options.)	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
STAT 100	Statistics	
Natural Sciences and Technology		
Chemistry ²		3 or 8
CHEM 101	Introductory Chemistry	
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
MCB 100	Introductory Microbiology	3
MCB 101	Intro Microbiology Laboratory	2
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
Select from campus approved list and/or see individual concentration. ³		9
ACES Prescribed Course		
ACES 101	Contemporary Issues in ACES	2
Required Concentration		
Concentration prescribed courses. See specific requirements for each concentration listed below.		

Total Hours ⁴	126 or 130
---------------------------------	---------------

Approved concentrations:

- Food Science Concentration (p. 63)
- Dietetics Concentration (p. 62)
- Human Nutrition Concentration (p. 63)
- Hospitality Management Concentration (p. 63)

¹ *Students in the Food Science Concentration must select from MATH 220 or MATH 221.*

² *Students in the Hospitality Management Concentration must take CHEM 101. All other concentrations take CHEM 102 + 103 & CHEM 104 + 105, which are **not** required for the Hospitality Management Concentration.*

³ *Six hours for Food Science Concentration.*

⁴ *The Food Science Concentration requires a minimum of 130 hours; the Dietetics, Human Nutrition, and Hospitality Management Concentrations each require a minimum of 126 hours.*

- Minor in Food Science (p. 64)
- Minor in Nutrition (p. 64)

FSHN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FSHN>)

Courses

FSHN 101 Intro Food Science & Nutrition credit: 3 Hours.

Discusses the evolution of the food system to meet the needs and desires of a complex, heterogeneous society. Provides an overview of food in relation to nutrition and health, composition and chemistry, microbiology, safety, processing, preservation, laws and regulations, quality, and the consumer.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

FSHN 120 Contemporary Nutrition credit: 3 Hours.

Fundamental principles of human nutrition and their application to the selection of an adequate diet for health and wellness; current nutrition topics of importance. Credit is not given for FSHN 120 if credit has been given for FSHN 220. Prerequisite: CHEM 101 or equivalent.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

FSHN 125 Intro to Human Nutrition credit: 1 Hour.

Introductory course for students in Human Nutrition. Explore department, college and campus resources. Learn about current issues, opportunities, and careers in the nutrition field. Prerequisite: FSHN major with a concentration in Human Nutrition only.

FSHN 130 Introduction to Food Science credit: 1 Hour.

Introductory course for students in Food Science (FS) focused on student learning and success, current issues, and opportunities and careers in the field of food science. In addition, students will learn about how to enhance their learning strategies. Approved for S/U grading only. Prerequisite: For freshman majoring in FSHN with a concentration in Food Science only.

FSHN 140 Introduction to Hospitality credit: 3 Hours.

Overview of the hospitality industry with emphasis on organizational and operational structures of the major segments of the industry and career opportunities within each. Field trips required.

FSHN 145 Intro Hospitality Management credit: 3 Hours.

Explore the foodservice aspect of the hospitality industry by assisting Hospitality Management seniors taking FSHN 443 in the operation of the Spice Box. Course covers the planning, production, and service of meals in specialized settings. Additional fees may apply. See Class Schedule.

FSHN 150 Introduction to Dietetics credit: 1 Hour.

Introductory course for students in dietetics. Addresses current issues, opportunities and careers in the dietetics profession. Freshmen or transfer student into dietetics given priority.

FSHN 195 Intro to Undergrad Research credit: 1 Hour.

Learn about research opportunities available to undergraduate students in the FSHN department, and find a laboratory that fits a student's interests and education goals. Guest faculty members present research opportunities in their laboratory, and then give a laboratory tour for students to learn more about the research activities there. Approved for S/U grading only. Prerequisite: For FSHN majors only.

FSHN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in food science and human nutrition. Topic may not be repeated except in accordance with the Code. Approved for letter and S/U grading. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

FSHN 220 Principles of Nutrition credit: 4 Hours.

Course focuses on the nutritive value of foods and metabolism of essential nutrients, as well as the application of principles of nutrition to the requirements of normal individuals throughout the life cycle. Prerequisite: CHEM 102; MCB 244 and 246.

FSHN 230 Food Sci Professional Issues credit: 1 Hour.

Discussion of current topics in food science and professional issues, including ethics, undergraduate research, study abroad, graduate school options and internships. Approved for S/U grading only. Prerequisite: Sophomore and Junior transfer students with a Food Science concentration only.

FSHN 232 Science of Food Preparation credit: 3 Hours.

Application of food preparation principles and techniques in the preparation of standard food products; principles of food management and their application in the planning and preparation of meals. Additional course fees may apply. See Class Schedule. Prerequisite: FSHN 101 or concurrent registration.

FSHN 260 Raw Materials for Processing credit: 4 Hours.

Problems involved with procurement, harvesting, handling, and storage of fruits, vegetables, cereal grains, dairy products, red meat, poultry, fish, and eggs for the food-processing industry. Field trips to specialized operations. Additional fees may apply. See Class Schedule. Prerequisite: One high school course in biological science and FSHN 101.

FSHN 274 NonMajors Food Microbiology credit: 1 Hour.

Introduction to food microbiology and the role of microorganisms in foodborne illness and food manufacture. Credit is not given for both FSHN 274 and FSHN 101. Prerequisite: Sophomore standing or higher.

FSHN 293 Off Campus Internship credit: 2 to 4 Hours.

Supervised, off-campus experience in a field directly pertaining to the subject matter. Approved for letter and S/U grading. May be repeated to a maximum of 10 hours.

FSHN 294 On Campus Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 10 hours. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

FSHN 295 UG Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. Approved for letter and S/U grading. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisites: Cumulative GPA of 2.5 or above at the time the activity is arranged and consent of instructor.

FSHN 302 Sensory Evaluation of Foods credit: 3 Hours.

This course is devoted to learning the 1) physiological and psychological basis of human subjects, 2) chemistry of aroma and taste, 3) basic sensory methodologies in food evaluation, and 4) analysis and interpretation of sensory data. Additional fees may apply. See Class Schedule. Prerequisite: Recommended to students in junior and senior levels. Recommended to have taken foundational statistics course, i.e., STAT 100, STAT 200 or FSHN 440.

FSHN 312 Applied Microbiology Methods credit: 2 Hours.

Consideration, through experimentation, of properties of bacteria, yeasts, molds, and actinomycetes important to industrial processes; exploration of methods of control of microbial processes in industry and sanitation. Prerequisite: MCB 100 and MCB 101 or consent of instructor.

FSHN 322 Nutrition and the Life Cycle credit: 3 Hours.

Examines physiological changes that occur during gestation, postnatal growth, and aging and the influence of these changes on nutritional requirements. Prerequisite: FSHN 220 or consent of instructor.

FSHN 329 Communication in Nutrition credit: 3 Hours.

Application and integration of the principles of nutrition and their transmission to groups and individuals. Students will learn individual counseling techniques as well as how to present nutrition information to groups. Open to Dietetics and Human Nutrition juniors and seniors only. Prerequisite: RHET 105, CMN 101, and FSHN 220 or equivalents.

FSHN 340 Food Production and Service credit: 4 Hours.

Introduction to the management of commercial and noncommercial foodservice systems through the operation of Bevier Cafe. Students experience managing the procurement, production and service of food, as well as the sanitation and maintenance of equipment and facilities. Prerequisite: FSHN 332, credit or concurrent registration in FSHN 349 and FSHN 345.

FSHN 343 Foundations in Beverage Management: Introduction to Wine, Beer and Spirits credit: 2 Hours.

The course will focus on the application of principles and practices related to preparation and service of alcohol and specialty beverages in the hospitality industry. The course includes a study of management principles, study of bar operations, human resources and liability protection. Intrinsic to excellent service is having an understanding of proper tasting skills and knowledge to be able to verbalize nuances within the wine or spirit. Structured tastings will be utilized to discover, identify and describe attributes of the beverage. Successful completion of alcohol handler training required to maintain course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: All registrants must be 21 years of age or older.

FSHN 344 Business Etiquette credit: 1 Hour.

The fundamentals of business etiquette as they are applied to the modern multicultural and global business environments. Content includes the importance of the first impression, polite conversation, personal appearance, office politics, diplomacy, telephone and cell phone etiquette, high-tech etiquette, proper oral and written communication, and the protocol of meetings both in the United States and abroad. Students will also participate in a formal dining experience. Offered every other year. Prerequisite: Junior standing.

FSHN 345 Strategic Operations Management credit: 3 Hours.

This course is intended to promote an understanding of the managerial aspects of strategic operations. Strategic operations management examines facilities, capacity, process/work-force planning, organization, people, systems integration, and coordination between operations. An introduction to the principles and procedures for the purchasing, selection and procurement of food and non-food items in the hospitality industry is also included. This course provides students with the management information needed to make operational decisions based on sound criteria. Prerequisite: FSHN 232.

FSHN 349 Food Service Sanitation credit: 1 Hour.

Examines the dangers, costs and prevention of foodborne illness as well as the training and motivation of food service employees in sanitary food handling and quality assurance practices. Upon completion of this course, student will be eligible to apply for the food service sanitation certificate issued by the State of Illinois. Prerequisite: FSHN 101 and FSHN 232, or consent of instructor; MCB 100 and MCB 101 recommended. Course should be taken concurrently with or prior to FSHN 340.

FSHN 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

FSHN 398 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in food science and human nutrition. Approved for Letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 12 hours. Prerequisite: Sophomore standing.

FSHN 414 Food Chemistry credit: 3 Hours.

Examines the chemical aspects of major food components; water, carbohydrates, proteins, and lipids; properties of pigments, salts, and food dispersions. Undergraduate Food Science majors must enroll concurrently in FSHN 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 232 and CHEM 233.

FSHN 416 Food Chemistry Laboratory credit: 2 Hours.

Chemical and physical properties of water, proteins, lipids, carbohydrates, and other food components/additives are discovered in the context of their interactions and functional roles in foods. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 232 and CHEM 233 and concurrent enrollment in FSHN 414.

FSHN 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Same as NEUR 417 and PSYC 417. PSYC 417.

FSHN 418 Food Analysis credit: 4 Hours.

Principles and application of the chemical, physical, and instrumental methods used to determine the constituents of foods; special considerations applicable to the analysis of certain foods. Lecture and lab. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 232; FSHN 414; FSHN 416 or consent of instructor.

FSHN 419 Food Ingredient Technology credit: 2 Hours.

Explores the research, science and technology of the production of safe, high quality food ingredients through the application of food chemistry, food microbiology, and food processing principles. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 414 or consent of the instructor. FSHN majors only, junior standing required.

FSHN 420 Nutritional Aspects of Disease credit: 3 Hours.

Examines nutritional, biochemical, and physiological aspects of disease processes and studies the role of nutrition in prevention, management, and treatment of disease. Same as NUTR 420. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220 or comparable course with a physiology prerequisite; MCB 450 or equivalent.

FSHN 421 Pediatric Clinical Nutrition credit: 3 Hours.

Examines physiological, biochemical and nutritional aspects of disease processes relevant to infants, children and adolescents. Topics covered include prematurity, developmental disabilities, inborn errors of metabolism, food allergy, obesity and eating disorders. The role of nutrition in prevention, management and treatment of disease is also covered. Offered every other year. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 420; FSHN 322 is highly recommended.

FSHN 423 Advances in Foods & Nutrition credit: 2 Hours.

New developments in foods and nutrition; readings, lectures, and discussions. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 220 and FSHN 332, or equivalent.

FSHN 425 Food Marketing credit: 3 Hours.

Same as ACE 430. See ACE 430.

FSHN 426 Biochemical Nutrition I credit: 3 Hours.

The dietary and hormonal regulation of carbohydrate, lipid and amino acid metabolism. Emphasizes the regulation of enzyme activity and the different roles the major organs have in whole animal energy balance. Same as NUTR 426. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220, or FSHN 120 and FSHN 414, and MCB 450 or concurrent enrollment.

FSHN 427 Biochemical Nutrition II credit: 3 Hours.

Biochemistry and metabolism of the water and fat soluble vitamins and minerals. Emphasizes the digestion, transport, metabolism and intercellular functions of these nutrients and how diet/food intake and physiological states affect these processes. Same as NUTR 427. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220, or FSHN 120 and FSHN 414, and MCB 450 or concurrent enrollment.

FSHN 428 Community Nutrition credit: 3 Hours.

Application of nutrition principles to needs assessments, program planning, delivery and evaluation in local, national, and international settings using behavioral theory frameworks. Same as NUTR 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220 or equivalent, one introductory statistics course, and one course in the social or behavioral sciences.

FSHN 429 Nutrition Assessment & Therapy credit: 3 Hours.

Problem-based learning application (via cases) of the nutrition care process with emphasis on nutrition assessment, diagnosis, intervention, monitoring and evaluation, as related to the management and treatment of disease states. This course is the clinical capstone course for the dietetics curriculum. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 420, or concurrent enrollment required.

FSHN 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, ANSC 440, CPSC 440, and NRES 440. See CPSC 440.

FSHN 442 Hospitality Management & Leadership Skills credit: 3 Hours.

Application of behavioral science and management techniques, methods and strategies to the hospitality industry. Applied management techniques will focus on those managerial behaviors needed to develop and maintain positive and productive relationships with subordinates, peers, supervisors and individuals external to the hospitality organization. 3 undergraduate hours. No graduate credit. Prerequisite: FSHN 340 or consent of instructor.

FSHN 443 Management of Fine Dining credit: 4 Hours.

Advanced application of food production and management principles to specific food service demands; emphasis on artistry in preparation, serving, and merchandising high quality food in quantity. 4 undergraduate hours. No graduate credit. Prerequisite: FSHN 340 and credit or concurrent registration in FSHN 442.

FSHN 450 Dietetics: Professional Issues credit: 2 Hours.

Discussion of current topics in dietetics, professional issues (ethics, outcomes research, marketing, legislation, registered dietitian exam) and preparing for dietetic internships. Required of all dietetics students. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior standing in dietetics.

FSHN 453 Nutrition for Performance credit: 3 or 4 Hours.

Same as KIN 453. See KIN 453.

FSHN 460 Food Processing Engineering credit: 3 Hours.

Examines application of process engineering principles to the conversion of raw agricultural materials into finished food products. Topics include basics of engineering analysis, units and dimensions, materials balances, energy balances, thermodynamics, heat transfer, psychrometry, refrigeration and mechanical separations. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 101 and MATH 220; or consent of instructor.

FSHN 461 Food Processing I credit: 4 Hours.

Principles, unit operations, and applications of food preservation and processing by high temperature, refrigeration, and freezing processes; includes heat transfer, kinetics, chemical and microbial changes in food as a result of processing. Also, principles and applications of food processing unit operations based upon the combination of heat and/or mass transfer, including such unit operations as evaporation, freeze-concentration, membrane separation, dehydration, centrifugation, extrusion, as well as water activity control. Lecture-based course. 4 undergraduate hours. 4 graduate hours. Prerequisite: FSHN 414 or equivalent; FSHN 460 or equivalent, and FSHN 418. FSHN 260 is recommended.

FSHN 462 Food Processing II credit: 2 Hours.

Laboratory course for FSHN 461. Includes labs on blanching, pasteurization, sterilization, freezing, freeze drying, dehydration (tray drying, drum drying and spray drying), evaporation, and extrusion; discussion and labs. Additional fees may apply. See Class Schedule. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 461.

FSHN 464 Beverage Science & Technology credit: 2 Hours.

Explores the research, science and technology of the production of safe, high quality beverages through the application of food chemistry, food microbiology, and food processing principles. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 414 or FSHN 332 or consent of instructor. FSHN majors only, junior or senior standing required.

FSHN 465 Principles of Food Technology credit: 3 Hours.

Overview of processing techniques in the food industry, including thermal/non-thermal processing, refrigeration, freezing, moisture removal, and separation. Presentations cover basic principles of each technology with examples of processing equipment. The changes of food components and nutrients caused by processing is also discussed. Lecture and field trips. 3 undergraduate hours. 3 graduate hours. Credit is not given for both FSHN 465 and the FSHN 461 - FSHN 462 sequence. Undergraduate food science majors or graduate students specializing in food processing/engineering may not enroll in FSHN 465. Recommended: FSHN 332 or food chemistry equivalent.

FSHN 466 Food Product Development credit: 3 Hours.

Principles of food product development: target market evaluation, concept development and presentation, formulation, manufacturing, packaging, product costs, pricing, safety, and marketing. May include a product in accordance with Institute of Food Technologists national competition guidelines. Products will be unveiled and presented for faculty evaluation. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours in separate terms if topics vary. Prerequisite: FSHN 332 or FSHN 414; FSHN 471 or FSHN 472; concurrent registration or completion of FSHN 461 and FSHN 462, or FSHN 465. This capstone course is limited to seniors in the Food Science or Foods Industry and Business options in FSHN. Graduate students will be allowed to register pending sufficient space in the class.

FSHN 469 Package Engineering credit: 3 Hours.

Cross-disciplinary study of the materials, machinery, research, design, techniques, environmental considerations, ethics and economics used in the global packaging industry with emphasis on the implementation of improved technologies for the problems unique to food packaging. An emphasis on the broad, systems-based nature of packaging will be maintained throughout the course. Same as ABE 482. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 220; one each of 100-level Chemistry and Physics courses or their equivalent; junior-senior standing or higher, or consent of instructor.

FSHN 471 Food & Industrial Microbiology credit: 3 Hours.

Relationship of microorganisms to food manufacture and preservation, to food and industrial fermentation and processing, and to food-borne illness. Same as MCB 434. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 101 or MCB 301 or equivalent.

FSHN 480 Basic Toxicology credit: 3 Hours.

Emphasizes basic toxicology principles and the pharmacokinetics, absorption, distribution, metabolism and excretion of drugs, non-nutrient dietary supplements and other compounds foreign to the body. Toxic effects on major target organ systems are discussed, including an introduction to how foreign compounds can initiate, enhance or prevent the carcinogenic process. Briefly surveys diverse areas of toxicology such as eco-, nano-, forensic, genetic, nutritional, clinical and reproductive toxicology; review the federal regulatory aspects of safety assessment and consumer protection. Same as CB 449, CPSC 433, and ENVS 480. 3 undergraduate hours. 3 graduate hours. Prerequisite: Biochemistry - MCB 450 or equivalent, or consent of instructor.

FSHN 499 Cur Topics in FS & Human Nutr credit: 1 to 3 Hours.

Group discussion or an experimental course on a special topic in food science and human nutrition. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary.

Dietetics Concentration

The Dietetics Concentration meets the requirements set by the Accreditation Council on Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics (AND) and qualifies students for competitive dietetic internships. Upon completion of a postgraduate internship, students selecting this concentration may take the examination to become Registered Dietitians. Students choosing this concentration who do not complete an internship will be prepared for entry-level supervisory positions in food service facilities and in the food and pharmaceutical industries. A minimum of 126 hours of credit is required for graduation.

Code	Title	Hours
Other Natural Sciences and Technology Required		
CHEM 232	Elementary Organic Chemistry I	4
CHEM 233	Elementary Organic Chem Lab I	2
MCB 244	Human Anatomy & Physiology I	3
MCB 246	Human Anatomy & Physiology II	3
Social and Behavioral Sciences		
PSYC 100	Intro Psych	4
ACE 100	Agr Cons and Resource Econ	4
or ECON 102	Microeconomic Principles	
or ECON 103	Macroeconomic Principles	
HDFS 105	Intro to Human Development	3
Dietetics Concentration Requirements		
CHLH 250	Health Care Systems	3
FSHN 101	Intro Food Science & Nutrition	3
FSHN 150	Introduction to Dietetics	1
FSHN 220	Principles of Nutrition	4
FSHN 232	Science of Food Preparation	3
FSHN 322	Nutrition and the Life Cycle	3
FSHN 329	Communication in Nutrition	3
FSHN 340	Food Production and Service	4
FSHN 345	Strategic Operations Management	3
FSHN 349	Food Service Sanitation	1
FSHN 420	Nutritional Aspects of Disease	3
FSHN 426	Biochemical Nutrition I	3
FSHN 427	Biochemical Nutrition II	3
FSHN 428	Community Nutrition	3
FSHN 429	Nutrition Assessment & Therapy	3
FSHN 450	Dietetics: Professional Issues	2
PSYC 245	Industrial Org Psych	3
Dietetics Concentration Electives - select one of the following:		2-4
BIOC 455	Technqs Biochem & Biotech	
CHLH 210	Community Health Organizations	
Any course in CHLH numbered 300-499 ¹		
Any course in FSHN numbered 300-499 ¹		

HDFS 301	Infancy & Early Childhood
HDFS 305	Middle Childhood
HDFS 310	Adult Development
HDFS 322	US Latina and Latino Families
HDFS 405	Adolescent Development
Any course in KIN numbered 300-499 ¹	

¹ Cannot be used to fulfill more than one requirement.

Food Science Concentration

The Food Science concentration exposes students to all components of food production: harvesting and raw-product handling, food-processing procedures and techniques, packaging, and food storage. Students selecting this concentration are prepared for careers in many areas of the food industry. A minimum of 130 hours of credit is required for graduation.

Code	Title	Hours
Other Natural Sciences and Technology Required Courses		
CHEM 232	Elementary Organic Chemistry I	4
CHEM 233	Elementary Organic Chem Lab I	2
FSHN 312	Applied Microbiology Methods	2
PHYS 101	College Physics: Mech & Heat	5
PHYS 102	College Physics: E&M & Modern	5
Select one of the following:		4-5
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
MCB 150 & MCB 151	Molec & Cellular Basis of Life and Molec & Cellular Laboratory	
MCB 244	Human Anatomy & Physiology I	
Food Science Concentration Required		
FSHN 101	Intro Food Science & Nutrition	3
FSHN 120	Contemporary Nutrition	3
FSHN 230	Food Sci Professional Issues	1
FSHN 232	Science of Food Preparation	3
FSHN 260	Raw Materials for Processing	4
FSHN 302	Sensory Evaluation of Foods	3
FSHN 414	Food Chemistry	3
FSHN 416	Food Chemistry Laboratory	2
FSHN 418	Food Analysis	4
FSHN 460	Food Processing Engineering	3
FSHN 461	Food Processing I	4
FSHN 462	Food Processing II	2
FSHN 466	Food Product Development	3
FSHN 471	Food & Industrial Microbiology	3
ANSC 350 or MCB 450	Cellular Metabolism in Animals Introductory Biochemistry	3

Hospitality Management Concentration

The Hospitality Management concentration prescribes courses that meet the professional needs of the hospitality industry and career goals of students entering the major. The concentration is designed for students

interested in integrating the basic principles of business and hospitality management with the goal of pursuing professional and management careers in hospitality-related industries. The program comprises 35 hours of hospitality-related course work, including food science; food management; nutrition; sanitation; purchasing; and the management of institutional, commercial, and fine dining facilities. Through the integration of food-focused theory, practice, and experience, it is the mission of the program to prepare leaders in the hospitality industry with a foundation in science, business, and management. The total number of hours required for graduation is 126.

Code	Title	Hours
Social and Behavioral Sciences		
PSYC 100	Intro Psych	4
ACE 100 or ECON 102	Agr Cons and Resource Econ Microeconomic Principles	3-4
SOC 100	Introduction to Sociology	4
Hospitality Management Concentration Required		
ACCY 200	Fundamentals of Accounting	3
ACE 161	Microcomputer Applications	3
AGED 280	Training Needs Assessment	2
AGED 300	Training and Development	4
ANSC 309	Meat Production and Marketing	2
BADM 300	The Legal Environment of Bus	3
BADM 310	Mgmt and Organizational Beh	3
BADM 320	Principles of Marketing	3
FSHN 101	Intro Food Science & Nutrition	3
FSHN 120	Contemporary Nutrition	3
FSHN 140	Introduction to Hospitality	3
FSHN 145	Intro Hospitality Management	3
FSHN 232	Science of Food Preparation	3
FSHN 340	Food Production and Service	4
FSHN 345	Strategic Operations Management	3
FSHN 349	Food Service Sanitation	1
FSHN 293	Off Campus Internship	2-4
FSHN 442	Hospitality Management & Leadership Skills	3
FSHN 443	Management of Fine Dining	4
PSYC 245	Industrial Org Psych	3

Human Nutrition Concentration

This program of study provides the background for students who plan to pursue careers in nutrition and related health sciences. This concentration focuses on the field of human nutrition and reflects the growing need to prepare individuals for careers in health and nutrition. For students who expect to pursue advanced degrees in nutritional sciences or professional degrees in medicine, dentistry or law, the human nutrition concentration may be chosen. The concentration emphasizes a strong science background and allows students to obtain a strong human nutrition preparation that is not available elsewhere on campus. For those interested in practicing nutrition or nutrition counseling, please see Dietetics. The total number of hours required for graduation is 126.

Code	Title	Hours
Other Natural Science and Technology Required		
CHEM 232	Elementary Organic Chemistry I	4

CHEM 233	Elementary Organic Chem Lab I	2
MCB 244 & MCB 245	Human Anatomy & Physiology I and Human Anat & Physiol Lab I	5
MCB 246 & MCB 247	Human Anatomy & Physiology II and Human Anat & Physiol Lab II	5
MCB 450	Introductory Biochemistry	3
Human Nutrition Required		
ACE 161	Microcomputer Applications	3
FSHN 101	Intro Food Science & Nutrition	3
FSHN 220	Principles of Nutrition	4
FSHN 420	Nutritional Aspects of Disease	3
FSHN 426	Biochemical Nutrition I	3
FSHN 427	Biochemical Nutrition II	3
Select a minimum of two courses from the following list of Restricted Electives:		6
FSHN 302	Sensory Evaluation of Foods	
FSHN 322	Nutrition and the Life Cycle	
FSHN 329	Communication in Nutrition	
FSHN 344	Business Etiquette	
FSHN 345	Strategic Operations Management	
FSHN 349	Food Service Sanitation	
FSHN 398	Undergraduate Seminar	
FSHN 414	Food Chemistry	
FSHN 418	Food Analysis	
FSHN 421	Pediatric Clinical Nutrition	
FSHN 425	Food Marketing	
FSHN 428	Community Nutrition	
FSHN 429	Nutrition Assessment & Therapy	
FSHN 440	Applied Statistical Methods I	
FSHN 460	Food Processing Engineering	
FSHN 461	Food Processing I	
FSHN 465	Principles of Food Technology	
FSHN 471	Food & Industrial Microbiology	
FSHN 480	Basic Toxicology	
Science electives: A minimum of two science courses, approved by the advisor. Courses cannot be used to fulfill other requirements.		6

Minor in Food Science

The minor in Food Science is designed to broaden the student's knowledge of science and in particular food chemistry, food microbiology, and food engineering. The Food Science minor is also suitable for students who intend to pursue careers in engineering, microbiology, chemistry, scientific journalism, hospitality management, or science secondary education.

Code	Title	Hours
Courses required for minor in food science		
FSHN 101	Intro Food Science & Nutrition	3
FSHN 414	Food Chemistry	3
FSHN 471	Food & Industrial Microbiology	3
Select one of the following:		3-6
FSHN 465	Principles of Food Technology	

FSHN 461 & FSHN 462	Food Processing I and Food Processing II ¹	
Select one of the following:		6-9
FSHN 232	Science of Food Preparation	
FSHN 260	Raw Materials for Processing	
FSHN 302	Sensory Evaluation of Foods	
FSHN 416	Food Chemistry Laboratory	
FSHN 418	Food Analysis	
FSHN 460	Food Processing Engineering	
FSHN 466	Food Product Development	
ANSC 350	Cellular Metabolism in Animals	
MCB 450	Introductory Biochemistry	
ABE 483	Engrg Properties of Food Matls	
Total Hours Required		18

¹ For a FS minor with an emphasis in food processing it is recommended that students select the FSHN 461 and FSHN 462 option. However, FSHN 461 and FSHN 462 have prerequisites that not every student seeking a minor may choose to meet. Note: Students cannot take both FSHN 461 and FSHN 462 and FSHN 465.

Minor in Nutrition

The minor in Nutrition is designed to broaden the student's knowledge of the biological sciences, with a particular emphasis on the interdisciplinary nature of nutrition. A minor in nutrition would benefit those who intend to pursue careers in the food, health, and fitness industries, or those planning to enter medicine, dentistry, nursing, and other health professions such as physician's assistant, physical or occupational therapy, nutrition research, and nutrition communication.

Code	Title	Hours
Required Courses for Minor in Nutrition		
FSHN 220	Principles of Nutrition	4
FSHN 420	Nutritional Aspects of Disease	3
FSHN 426	Biochemical Nutrition I	3
FSHN 427	Biochemical Nutrition II	3
Select two of the following:		6
FSHN 322	Nutrition and the Life Cycle	
FSHN 332		
FSHN 421	Pediatric Clinical Nutrition	
FSHN 428	Community Nutrition	
FSHN 429	Nutrition Assessment & Therapy	
ANSC 420	Ruminant Nutrition	
Total Hours		19

Human Development and Family Studies

Susan Koerner
222 Bevier Hall
905 South Goodwin Ave.
Urbana IL 61801
PH: (217) 333-3790
<http://hdfs.illinois.edu/>

The Department of Human Development and Family Studies (HDFS) at the University of Illinois at Urbana-Champaign engages in teaching, research, and outreach to improve the lives of children, youth, and adults in the contexts of families, communities, and societies. The department creates an environment where these efforts are enriched by a multicultural perspective. HDFS faculty recognize the diversity of cultures and classes in American society, and this perspective prepares students to address contemporary social issues.

Teaching: Our faculty regularly earn campus and national awards for outstanding teaching. Our teaching assistants who provide support to students outside of the classroom and in small discussion sections routinely are rated as among the best TAs on campus. In recent years, Drs. Jennifer Hardesty (http://hcd.illinois.edu/people/faculty/hardesty_jennifer/profile.html) and Ramona Oswald (http://hcd.illinois.edu/people/faculty/oswald_ramona_f/profile.html) earned national awards for teaching excellence. Lyndal Khaw (http://hcd.illinois.edu/people/graduates/khaw_lyndal/profile.html), a graduate student, earned a campus award for teaching.

Study Abroad: There are many opportunities (http://hcd.illinois.edu/student_information/studyabroad.html) for our students to study abroad. We sponsor two short programs in South Africa and Brazil where our students get experience with learning the culture and understanding the needs of children and families in poverty. Currently, about 30% of our students have participated in study abroad sometime during their four years, and more are participating every year.

Undergraduate Research Experience: About 50% of our undergraduate students go on to graduate school. During their undergraduate program, they have many opportunities to work with graduate students and faculty on important scientific questions about children and families. Close to 50% of our undergraduate students participate in at least one research opportunity.

Undergraduate Program: Our program in Human Development and Family Studies prepares students for careers working with children, adolescents, and families. Students have the opportunity to work with children, families, and professionals in the Child Development Laboratory (<http://cdl.illinois.edu>), the Child Care Resource Service (<http://ccrs.illinois.edu>), the Family Resiliency Center (<http://familyresiliency.illinois.edu>), The Autism Program (<http://go.illinois.edu/tap>), and numerous social service, child assistance, and family social service agencies. This hands-on experience complements classroom instruction.

Graduate Program: This program (http://hcd.illinois.edu/student_information/current_programs.html) prepares students for careers in higher education, social service administration, and public policy settings. Our students are involved in significant research activities and have the opportunity to participate in outreach work that translates research to practice. We have advanced research facilities for studying children in our Child Development Laboratory. We have a unique family observation research facility at the Family Resiliency Center that allows for intricate study of family interactions in a home-like atmosphere. There is support for students in terms of teaching assistantships, research assistantships, and fellowships. Our students complete their programs with many awards, publications, and other important achievements.

Research: Our faculty are among the top scientists studying children and families in the world. They focus on significant societal issues. (<http://hcd.illinois.edu/research>) Our work could be described as "science with a social conscience." Faculty are interested in the most challenging basic

scientific issues, but they are always asking how this information can be applied or how they can make a difference.

Preparation of Advanced Methods in Unique Laboratory

Facilities: Faculty and students are engaged in developing and mastering the most sophisticated quantitative and qualitative methods available to social and behavioral scientists and to practicing these skills in state-of-the-art laboratories.

Collaborative and Collegial Interactions: Professor Isabel Bevier, a pioneering scientist in 1900, noted that the wide-open Illinois prairie provided "no boundaries," and this characterized the faculty's intellectual orientation as well. Our faculty work across disciplines, programs, and methodologies, and they work with colleagues across settings, departments, and institutions.

Faculty with Major Scientific Leadership Roles: Our faculty are not only excellent researchers and scholars, but they are also leaders in the scientific community. They are recognized by their peers for awards and hold elective office. They are invited to give lectures at major national meetings and at universities across the world. They serve as editors of the major journals in the field.

Outreach and Extension: Our faculty are not content just to find out more about children and families; they want to improve their lives. We have a long tradition of creating unique educational resources and programs for helping families. For the past fifteen years, our faculty have been especially interested in creating web-based educational resources. Dr. Aaron Ebata has been at the forefront of educating parents online with the latest version being Parenting 24/7 (<http://parenting247.org>). Parents who are interested in managing work and life issues more effectively can gain information from Intentional Harmony (<http://worklife.illinois.edu>).

In addition to these online educational programs, our Department was one of the pioneers in providing information and resources to parents about child care. From the humble beginnings of a telephone and desk in the hallway staffed by a part-time person, the Child Care Resource Service (<http://ccrs.illinois.edu>) today is one of the national leaders in innovative methods of providing resource and referral services to families.

Similarly, The Autism Program (<http://go.illinois.edu/tap>) provides information, consultation, and training for families who have children with autism, as well as for professionals who serve these families.

Another long-time feature of the department is working with Family Life Extension Educators (http://hcd.illinois.edu/outreach/family_life_extension.html) across Illinois who are adept at providing community-based educational programs to fit the specialized needs of family members. These educators have developed unique skills for reaching underserved rural and urban families who often would not have the opportunity to learn about children and families.

The Human Development and Family Studies program prepares students for graduate/professional education or employment in areas such as pediatric services in hospitals, medicine and allied health fields, marriage and family therapy, family law, human resources, child care services, family life education, social work, counseling, human services, and business activities related to children and families. Students select course work according to their interests in human development, such as infancy, early childhood or adolescence, or family studies, such as the marital relationship, parent-child interaction, family change or conflict and conflict management in the family. Basic courses in these areas are linked to practical experiences in educational and community settings,

and most courses emphasize issues related to cultural diversity and gender. Students select one of two concentrations within this major: Child and Adolescent Development or Family Studies. Completion of the Family Studies option may qualify some graduates for provisional certification as a Family Life Educator by the National Council on Family Relations. Additional information is available at the NCFR website.

For the Degree of Bachelor of Science with a Major in Human Development and Family Studies

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent) (see college Composition I requirement)	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list.		3-4
Language Other Than English		
Coursework at or above the third level is required for graduation.		
Cultural Studies		
Select one course from Western/Comparative culture(s) and one from non-Western/U.S. minority culture(s) from campus approved list.		6
Quantitative Reasoning I		
Select one of the following:		3-4
STAT 100	Statistics	3
ACE 261	Applied Statistical Methods	4
CPSC 241	Intro to Applied Statistics	3
ECON 202	Economic Statistics I	3
PSYC 235	Intro to Statistics	3
SOC 280	Intro to Social Statistics	4
Quantitative Reasoning II		
Select one of the following:		3-5
STAT 200	Statistical Analysis	3
CHLH 244	Health Statistics	3
MATH 220	Calculus	5
MATH 221	Calculus I	4
MATH 234	Calculus for Business I	4
PHIL 103	Logic and Reasoning QR II	3
Natural Sciences and Technology		
ANTH 143	Biology of Human Behavior	3
Life or Physical Science course. Select from campus approved list.		3-5
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
PSYC 100	Intro Psych	4

SOC 100	Introduction to Sociology	4
Select one of the following:		3-4
ACE 100	Agr Cons and Resource Econ	
ECON 102	Microeconomic Principles	
ECON 103	Macroeconomic Principles	
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Human Development and Family Studies Required		
HDFS 101	Issues & Careers in HDFS	1
HDFS 105	Intro to Human Development	3
HDFS 120	Intro to Family Studies	3
HDFS 220	Families in Global Perspective	3
HDFS 290	Intro to Research Methods	4
ACE 161	Microcomputer Applications	3
ACE 240	Personal Financial Planning	3
FSHN 120	Contemporary Nutrition	3
or CHLH 100	Contemporary Health	
Select one of the following:		3
HDFS 208	Child Fam with Special Needs	
HDFS 221	Asian Families in America	
HDFS 340	Gender, Relationships & Society	
HDFS 341	Asian American Youth	
HDFS 379	HDFS Study Abroad Experience	
HDFS 322	US Latina and Latino Families	
HDFS 444	LGBT Indiv, Fam & Community	
Select one of the following:		3-6
HDFS 206	Early Childhood Curriculum Dev	
HDFS 261	Self-Help Group Dev & Process	
HDFS 294	Research Internship	
HDFS 450	Practicum in HDFS	
HDFS 494	Applied Research Methods	
Required Concentration		16-18
See specific requirements for each concentration listed below.		
Additional courses must be completed to yield a total of 126 hours for graduation.		
Total Hours		126

Approved Concentrations:

- Child and Adolescent Development Concentration (p. 69)
- Family Studies Concentration (p. 70)

Minor in Adult Development

The Adult Development minor combines theoretical and practical approaches to understanding issues faced by adults as individuals, partners, family members, learners, caregivers, and clients of social agencies. Course work examines adults from age 25 to 90+ in the contexts of evolving family roles, health issues, and social service needs. Students anticipating careers in social or health-related services will find an understanding of adult development and its attendant issues a valuable complement to other professional skills.

The minor requires a minimum of 18 hours. At least six hours of advanced course work must be distinct from credit earned for the

student's major or another minor. Courses in the minor cannot be taken Credit/No Credit. Students may count three hours earned in a community-based practicum or research project related to adult development toward the minor.

Code	Title	Hours
Foundation courses		
HDFS 105	Intro to Human Development	9
HDFS 310	Adult Development ¹	
One course selected from:		
HDFS/CHLH 404	Gerontology	3-4
EPSY 407	Adult Learning and Development	
PSYC 361	The Psychology of Aging	
Adult roles in the family context		
HDFS 225	Close Relationships	3-4
HDFS 425	Critical Family Transitions	
HDFS 426	Family Conflict Management	
Adult choices/challenges		
HDFS 294	Research Internship ²	6
HDFS 450	Practicum in HDFS ²	
HDFS 494	Applied Research Methods ²	
KIN 459	Physical Activity & Aging	
RST 316	Leisure and Human Development	
SOCW 240	Death & Dying	
SOCW 315	Social Work Services for Older Adults	
Total Hours		18-19

¹ HDFS majors pursuing the minor may not use this course to meet a major requirement.

² No more than three combined hours of HDFS 294, 450, 494 or equivalent field/research experience may be counted toward minor requirements. Field/research experience must focus on adults.

HDFS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HDFS>)

Courses

HDFS 101 Issues & Careers in HDFS credit: 1 Hour.

Introduction to career opportunities related to human development and family studies, academic and other preparation for different fields, and emerging issues for practitioners and researchers.

HDFS 105 Intro to Human Development credit: 3 Hours.

Systematic overview of the psychological, biological, familial, and cultural factors related to human growth and development across the life span. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

HDFS 120 Intro to Family Studies credit: 3 Hours.

Overview of current concepts, theories, and substantive issues in family studies from an interdisciplinary perspective. Gives attention to variation in family form and function across different social/cultural contexts and how family experience is structured by gender. Examines issues of family development (marriage, parenting, divorce, remarriage, aging family) and explores the links between families and other social institutions. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

HDFS 140 Intro Gender & Women's Studies credit: 3 Hours.

Same as GWS 100 and SOC 130. See GWS 100. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

HDFS 143 Biology of Human Behavior credit: 3 Hours.

Same as ANTH 143. See ANTH 143. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

HDFS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in human development and family studies. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms as topics vary.

HDFS 206 Early Childhood Curriculum Dev credit: 4 Hours.

Introduces development of curriculum for children from birth to age five; integrates child development theory and principles with programming for young children in preschool and childcare setting. Prerequisite: HDFS 105.

HDFS 208 Child Fam with Special Needs credit: 3 Hours.

Multi-disciplinary approach to the study of issues related to exceptional children and their families. Explores social, emotional, and economic aspects of exceptionality for both children and families; examines processes of identification, intervention, and integration of children who deviate significantly from developmental norms. Designed for students studying child development, early childhood education, special education, social work, nursing and other disciplines involved with children who have special needs and their families. Recommended for students preparing for internships and careers as Child Life Specialists. Prerequisite: HDFS 105.

HDFS 220 Families in Global Perspective credit: 3 Hours.

Explores economic, political, cultural and social factors affecting families in different countries; examines variations among families in developed and developing nations and their historical, political and cultural contexts. Same as ANTH 210.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West
Social Beh Sci - Soc Sci

HDFS 221 Asian Families in America credit: 3 Hours.

Same as AAS 297 and SOCW 297. See SOCW 297. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci
Cultural Studies - US Minority

HDFS 225 Close Relationships credit: 3 Hours.

Initiation, development, and dissolution of committed relationships with same- or opposite-sex partners within familial, cultural, and societal contexts. Prerequisite: Sophomore standing. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

HDFS 259 Motor Development and Control credit: 3 Hours.

Same as KIN 259. See KIN 259. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

HDFS 261 Self-Help Group Dev & Process credit: 3 Hours.

Defines nature and use of self-help groups in different contexts. Includes role of professionals in group formation and maintenance and develops group planning and management skills. Includes practice in group formation and visits to working groups in the community.

HDFS 262 Motor Develop, Growth & Form credit: 3 Hours.

Same as KIN 262. See KIN 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

HDFS 263 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.

Same as KIN 230 and RST 230. See RST 230.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

HDFS 290 Intro to Research Methods credit: 4 Hours.

Introduction to quantitative and qualitative research methods used to study human development and families. Provides experience conducting observations and survey interviews, evaluating research results, and writing research reports. Prerequisite: HDFS 105.

This course satisfies the General Education Criteria for:
Advanced Composition

HDFS 291 HDFS Career Planning & Preparation credit: 1 Hour.

Overview of job opportunities, graduate, and professional school programs that prepare students for careers in health care, counseling, social work, higher education, policymaking and other fields related to Human Development and Family Studies. Examines types of jobs, graduate and professional opportunities and the preparation they require. Students develop personal job, graduate/professional school preparation plans. Approved for S/U grading only.

HDFS 293 Off-Campus Internship credit: 1 or 2 Hours.

Supervised, off-campus experience in a field directly pertaining to subject matter in Human Development and Family Studies. Intended primarily for students seeking supervised internship experience needed for certification as a Child Life Specialist. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: Prior or concurrent enrollment in HDFS 408 and consent of instructor.

HDFS 294 Research Internship credit: 1 to 4 Hours.

Students work one-on-one or in a small group with a faculty member engaged in research. Students must arrange this research experience with a professor prior to registering for the course. A list of possible research projects can be found at: <http://hdfs.illinois.edu/undergraduate/research-opportunities>. Once you have found a project that interests you, email the professor and ask to participate in his or her research opportunity. Approved for Letter and S/U grading. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Consent of instructor; not open to students on probation.

HDFS 295 Independent Study or Research credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms.

HDFS 301 Infancy & Early Childhood credit: 4 Hours.

Reviews development during the first five years of life, including cognitive, social, and biological aspects of early development; includes first-hand observation of young children to supplement and extend lecture material. Prerequisite: HDFS 105 or PSYC 216.

HDFS 305 Middle Childhood credit: 3 Hours.

Systematic overview of the normative changes that occur in the physical, cognitive, social, emotional, and moral domains during the middle childhood period as well as current social issues that confront many of today's children (such as school violence or poverty). Prerequisite: HDFS 105.

HDFS 310 Adult Development credit: 3 Hours.

Focuses on adult development as a means for understanding the quality of family relationships and community functioning. Uses current theoretical approaches to understand adult development and evaluate each approach's usefulness for adults in the contexts of family, health, work, leisure and challenges over the life course. Prerequisite: HDFS 105 or equivalent.

HDFS 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, RST 314, PSYC 314, and REHB 314. See CHLH 314.

HDFS 322 US Latina and Latino Families credit: 3 Hours.

Explores a variety of topics and provides a basic overview of issues relevant to the understanding of Latina/Latino families and children in the United States. Examines recent demographic changes in the U.S. population and their implications for the socialization and education of Latina/Latino children and their families. Course content looks at such areas as who are Latina/Latino families; how are those families different from others; what are the similarities and differences within Latinas/Latinos; how does acculturation and language fit into our understanding of these families; and what are the implications for the education success of current and future Latina/Latino children. Same as LLS 322.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

HDFS 324 African Amer Families in Film credit: 3 Hours.

Same as AFRO 382. See AFRO 382.

HDFS 340 Gender, Relationships & Society credit: 3 Hours.

Explores the production of gender through social interaction within families and other specific interpersonal and institutional relationships that change over time. Gender is also linked to race, class, ability, and sexuality. Same as GWS 340 and SOC 322. Prerequisite: HDFS 105 or SOC 100.

HDFS 341 Asian American Youth credit: 3 Hours.

Same as AAS 346. See AAS 346.

HDFS 361 Creative Dance for Children credit: 3 Hours.

Same as ARTE 350 and DANC 350. See DANC 350.

HDFS 379 HDFS Study Abroad Experience credit: 1 to 4 Hours.

International experience in areas related to human development and family studies involving foreign travel and study without enrollment in another institution. Experience must be planned and approved in advance via consultation with an HDFS faculty member. May be repeated in the same or separate terms to a maximum of 8 hours as topics vary.

HDFS 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

HDFS 398 Undergraduate Seminar credit: 1 to 3 Hours.

Special topics in a field of study directly pertaining to subject matter in human development and family studies. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary. Prerequisite: Junior standing.

HDFS 401 Socialization and Development credit: 4 Hours.

Presents and uses theories of socialization to evaluate and analyze current issues and socialization practices; delineates historical and philosophical trends in socialization, and discusses the implications of these trends for generating social policy affecting the developing individual. 4 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 301 and HDFS 290.

HDFS 404 Gerontology credit: 3 or 4 Hours.

Same as CHLH 404. See CHLH 404.

HDFS 405 Adolescent Development credit: 3 Hours.

Examines paths of experience and individual development within the family, the peer group, and other domains through this socially-defined stage of life. 3 undergraduate hours. 3 graduate hours. Prerequisite: HDFS 105 and PSYC 100.

HDFS 406 Child Dev Class Supervision credit: 5 Hours.

Examines the relationships between child development theories and developmentally appropriate and individualized instruction techniques, discipline and guidance strategies, and the role of the family in child development programs. Emphasizes program supervision. Includes direct experience with children and families in a laboratory setting. 5 undergraduate hours. 5 graduate hours. Prerequisite: HDFS 206, HDFS 220, and junior standing.

HDFS 408 Hospitalized Children credit: 3 or 4 Hours.

Examines the developmental needs and stress reactions of children and families in a hospital/medical setting; examines responses of family and staff facing terminal illness and the death of a family member; familiarizes students with general hospital procedures, medical terms, and illnesses; introduces the role of Child Life programs and the Child Life Specialist. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 105 or consent of instructor.

HDFS 420 Inequality, Public Policy, and U.S. Families credit: 3 or 4 Hours.

Examines influence of economic, demographic and social changes on families in the U.S. and on the opportunities of individual family members. Explores interactions of social class, poverty, race and gender and their effects on family life and on child and adolescent development. Includes critical analysis of health care, employment, immigration, family leave, welfare and other social policy options that affect family life and well-being. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120.

HDFS 424 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as AFRO 421, EPS 421, and SOC 421. See EPS 421.

HDFS 425 Critical Family Transitions credit: 4 Hours.

Life-span development approach to the study of normative changes and non-normative events and their impact on marriage and family relationships; attention to variations in the socio-economic contexts of family transitions, and to methods for reducing the negative effects of such transitions. 4 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120 and HDFS 290.

HDFS 426 Family Conflict Management credit: 3 or 4 Hours.

Examines processes of conflict management in family and community disputes; emphasizes negotiation and mediation as modes of dispute settlement. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120.

HDFS 427 Family Adaptation & Resilience credit: 3 Hours.

Examines complex factors, including culture, economy, and values conflicts, that challenge families and the range of adaptive strategies that families deploy amid various challenges and stressors. Activities include developing a research or action proposal related to developing family resiliency. 3 undergraduate hours. 3 graduate hours. Credit is not given for both HDFS 427 and HDFS 527. Prerequisite: HDFS 425 or consent of instructor.

HDFS 444 LGBT Indiv, Fam & Community credit: 3 or 4 Hours.

Examines contemporary sexual and gender minority experiences in the context of societal inequality. Of particular interest to students pursuing educational, human service, legal, and/or health profession careers. Same as CHLH 444. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 100 or an introductory course on gender issues.

HDFS 450 Practicum in HDFS credit: 1 to 12 Hours.

Supervised on- or off-campus learning experience related to human development or family studies, supervised in cooperation with an appropriate agency or institution. Not available to students on probation. 1 to 12 undergraduate hours. 1 to 12 graduate hours. Only 6 hours of the course may be applied to the total required for a graduate degree in Human and Community Development or a bachelor's degree in Human Development and Family Studies. Prerequisite: Human Development and Family Studies major; junior standing.

HDFS 459 Physical Activity & Aging credit: 3 or 4 Hours.

Same as KIN 459. See KIN 459.

HDFS 461 Family Life Education credit: 3 Hours.

Examines the theory and practice of designing family life education programs for children, youth, and/or families. Introduces strategies for translating science-based information into learning experiences. Family life education topics such as parenting (including managing difficult children and children with special needs), relationships (dating, marriage), family transitions (becoming new parents, divorce, & stepfamilies), and health and well-being (obesity, stress) will be reviewed. Principles of effective program design will be explored along with online program delivery skills. 3 undergraduate hours. No graduate credit. Credit is not given for both HDFS 461 and HDFS 561. Prerequisite: HDFS 120 or consent of instructor.

HDFS 494 Applied Research Methods credit: 1 to 4 Hours.

Participation in faculty-supervised research as a member of a transdisciplinary team investigating questions related to the health and well-being of children and families. Students propose their own research questions and present findings developed from data gathered by the team. 1 to 4 undergraduate hours. No graduate credit. May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

HDFS 499 Seminar credit: 1 to 4 Hours.

Special topics in human development, family studies, or community development. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary.

Child and Adolescent Development Concentration

The Child and Adolescent Development concentration emphasizes the influence of families, peer groups, schools and communities on the well-being of children and adolescents. Graduates with this concentration are qualified to provide a wide range of services and lead programs for children and their families. Career opportunities include early childhood education, parent education, developmental therapy, Child Life specialty, adoption case work and day-care administration. Graduates also may choose to pursue graduate education in a variety of fields, including human development research, education, psychology, social work, law, medicine, and business.

Code	Title	Hours
Child and Adolescent Development Concentration Required		
HDFS 401	Socialization and Development	4
Three courses selected from:		9-10
HDFS 301	Infancy & Early Childhood	
HDFS 305	Middle Childhood	
HDFS 310	Adult Development	
HDFS 405	Adolescent Development	
One course selected from:		3-4
HDFS 420	Inequality, Public Policy, and U.S. Families	
HDFS 425	Critical Family Transitions	
HDFS 426	Family Conflict Management	
HDFS 427	Family Adaptation & Resilience	
Total Hours		16-18

Family Studies Concentration

Students in the Family Studies concentration focus on how families operate, develop and change in response to the challenges of modern life. Students learn to appreciate the diversity of family life by studying different cultures and how families learn to manage conflict. Graduates with this concentration are qualified to provide many services to couples and families. Career opportunities include family life educator, human resource specialist, caseworker or family service coordinator. Graduates also may choose to pursue graduate education in a variety of fields, including family studies, marriage and family therapy, social work, education, sociology, psychology, law, medicine, or business.

The Family Studies concentration is approved by the National Council of Family Relations (NCFR) for the provisional Certified Family Life Educator credential. Family life education focuses on healthy family functioning within a family systems perspective and provides a primarily preventive approach. The goal of family life education is to teach and foster skills and knowledge to enable individuals and families to function optimally. Within two years after receiving their degree, graduates who have completed the Family Studies curriculum and four elective courses (HDFS 427: Family Adaptation and Resilience, CHLH 206: Human Sexuality, HDFS 401: Socialization and Development, and HDFS 461: Family Life Education) can apply for the Provisional level of the CFLE credential through an abbreviated application process (details available on the NCFR website).

Code	Title	Hours
Family Studies Concentration Required		
HDFS 425	Critical Family Transitions	4
Three courses selected from:		9
HDFS 225	Close Relationships	
HDFS 420	Inequality, Public Policy, and U.S. Families	
HDFS 426	Family Conflict Management	
HDFS 427	Family Adaptation & Resilience	
One course selected from:		3-4
HDFS 301	Infancy & Early Childhood	
HDFS 305	Middle Childhood	
HDFS 310	Adult Development	

HDFS 405	Adolescent Development	
Total Hours		16-17

Natural Resources and Environmental Sciences

Jeff Brawn

Student Services Address: N-509 Turner Hall, 1102 South Goodwin Avenue, Urbana
 PH: (217) 333-5824
<http://nres.illinois.edu>

nres-ssc@illinois.edu

NRES provides outstanding undergraduate and graduate educational opportunities. Many alumni of our B.S. program have gone on to complete graduate and professional degrees. Our graduates work in environmental science and natural resource management positions in government, corporations, consulting firms, and non-governmental organizations. NRES also offers traditional Master of Science, online Master of Science, and Doctor of Philosophy degrees. Our graduate students gain employment with research universities, government agencies, national and international non-governmental organizations, and business enterprises.

All NRES educational and research programs center on science, applied ecology, and conservation in a variety of aquatic, terrestrial and human dominated ecosystems. Within that framework, our faculty, staff, and students study a wide variety of ecological systems with emphases on soil, water, people and social systems, forests, plants, animals, and microbes. Much of our research focuses on natural and social processes, such as habitat fragmentation, regulation, dispersal, disturbance, invasion, bioactivity, and decision-making. We research and work in locations locally, across the United States, and around the world.

Designed for students interested in careers leading the conservation, protection, and management of natural and environmental resources or in pursuing advanced education in one of its many disciplinary areas, the NRES baccalaureate provides a science-based, application-oriented education. The NRES major is unique in its integration of a comprehensive physical, life, and social sciences background with coursework providing the management, decision-making, and analytical knowledge and skills required to solve the world's most pressing problems.

Students in the NRES major begin their studies by taking a set of core courses that provides the background for more focused substantive study at the upper level. The NRES core introduces students to the range of physical, life, and social science content most relevant to their future professions and equips them with tools essential for the discovery, analysis, and application of knowledge important for successful environmental management. NRES students then build upon the core by completing one of four upper-level concentrations. Courses in the concentrations involve focused attention to the theories, data, and analytical tools of a particular set of natural resource and environmental science areas, helping students develop the necessary understanding of the complexities underlying resources management. All students in the major are required to complete a combination of field courses and at least one project-oriented capstone course.

All the concentrations prepare students for graduate study as well as for multiple career paths throughout the public and private sectors. Because

of its unique orientation toward integrative application of disciplinary knowledge, the NRES major prepares students for a wide range of careers involving the conservation, protection, and management of natural resources. Many occur within business or government agencies that provide services related to environmental and natural resource management. Other careers are found within social, professional, and advocacy institutions that focus on human impacts and environmental sustainability. The major also prepares students for teaching, research, or other professional activities.

Graduates from the NRES major go on to pursue careers in the direction of environmental education centers; ecological management and restoration; enforcement of laws and regulations; environmental advocacy; environmental consulting; forest and environmental economics; land use analysis and management; law; local, state, and federal government; management of parks, forests and rangelands; plant physiology; policy development and implementation; resource planning and policy analysis; social and environmental impact analysis; soil conservation, science, and testing; technical sales; watershed management; and wildlife conservation and management.

For the Degree of Bachelor of Science in Natural Resources and Environmental Sciences

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent) (see College Composition I requirement)	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list		3-4
Cultural Studies		
Select one course from Western culture and one from non-Western/U.S. minority culture from campus approved list.		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	

STAT 100	Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
IB 103	Introduction to Plant Biology	4
IB 104	Animal Biology	4
Select one of the following:		3-5
GEOG 103	Earth's Physical Systems	
GEOL 107	Physical Geology	
PHYS 101	College Physics: Mech & Heat	
MCB 100	Introductory Microbiology	
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
ACE 100 or ECON 102	Agr Cons and Resource Econ Microeconomic Principles	3-4
Select from campus approved list.		3-4
Natural Resources and Environmental Sciences Required		
NRES 102	Introduction to NRES	3
NRES 201	Introductory Soils	4
NRES 219	Principles of Ecosystem Mgmt	3
NRES 287	Environment and Society	3
NRES 348	Fish and Wildlife Ecology	3
NRES 454	GIS in Natural Resource Mgmt	4
NRES 456	Integrative Ecosystem Mgmt	3
Two Repeatable Field Methods Courses selected from:		2-4
NRES 276	Introduction to Field Pedology	
NRES 285	Field Experience	
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Required Concentration		
Concentration prescribed courses. See specific requirements for each concentration listed below.		22-32
Total Hours		126

Approved Concentrations:

- Fish and Wildlife Conservation Concentration (p. 77)
- Global Change and Landscape Dynamics (p. 77) Concentration (p. 77)
- Human Dimensions of the Environment Concentration (p. 77)
- Resource Conservation and Restoration Ecology Concentration (p. 79)
- Minor in Natural Resource Conservation (p. 78)
- Minor in Spatial and Quantitative Methods in Natural Resources and Environmental Sciences (p. 79)

HDES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HDES>)

Human Dimensions of Env Sys Courses

HDES 410 Neighborhoods and Politics credit: 3 or 4 Hours.

Same as PS 410. See PS 410.

NRES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NRES>)

Natural Resources Environ Sc Courses

NRES 100 Fundamentals of Env Sci credit: 3 Hours.

Introduction to environmental sciences and current environment issues.

Topics include population growth, world food supplies, agriculture and the environment, biodiversity, fossil fuels and "green" energy issues, endangered and threatened species, water use, conservation and pollution, global warming, acid rain, ozone depletion, waste management and reduction, recycling, toxins and health, mineral resources, and environmental policies and regulations. Course addresses the complex relationships between the human race and the natural systems that contain our air, water, energy, and biotic and food resources. Credit is not given for both NRES 100 and NRES 102.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

NRES 101 Wildlife Conserv 21st Century credit: 3 Hours.

This course is an introduction to the conservation, diversity and ecology of animals. The diversity of fish, reptiles, amphibians, mammals, and birds both around the world and in Illinois will be explored. The course will have a strong conservation component where students are introduced to a variety of threats facing animals. The students will be introduced to how to manage sustainable wildlife populations. The students will be exposed to current issues in Illinois to illustrate how people and animals can co-occur and a broad overview of the management, restoration, and conservation techniques.

NRES 102 Introduction to NRES credit: 3 Hours.

Introduction to natural resources (forests, fisheries, soils, aquatic systems) and environmental science. Emphasizes renewable natural resources, ecological concepts, energy use, biodiversity of species, biogeochemical cycles, and air, water, and soil pollution. Provides natural science basis for understanding contemporary environmental issues and natural resource management. Credit is not given for both NRES 100 and NRES 102.

NRES 103 The Great Lakes - Freshwater Wonder at Risk credit: 3 Hours.

Introduction to the ecology of freshwater systems, viewed through the lens of the Great Lakes and associated tributaries. The Great Lakes hold 20% of the world's freshwater and 95% of the freshwater in North America. They have sustained human and wildlife populations for at least 10,000 years. Now, the integrity of this unique and priceless resource is threatened as never before. This eight-week online course will enhance student understanding of the ecology of this imperiled system, as well as the historical events and policies that have led to the present crisis, and the men and women who have played key roles in this unfolding story.

NRES 108 Env Sc & Nat Resource Careers credit: 1 Hour.

Explores career options in the fields of Natural Resource Management and Environmental Sciences. Students will improve understanding of their career goals, expand their knowledge of careers available in these fields, improve their job searching skills, and develop a plan for pursuing a career. Approved for S/U grading only.

NRES 109 Global Environmental Issues credit: 3 Hours.

Discussion course that focuses on analyzing opposing points of view on contemporary environmental issues. Students engage in role-playing activities, debates, and other participatory activities to explore the ecological and social dimensions of the issues.

NRES 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in natural resources and environmental sciences. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

NRES 201 Introductory Soils credit: 4 Hours.

The nature and properties of soil including origin, formation, and biological, chemical, and physical aspects. Prerequisite: Successful completion of MATH 234, or equivalent and CHEM 102 is required. CHEM 104 is recommended.

NRES 202 American Environmental History credit: 3 Hours.

Same as ESE 202 and HIST 202. See HIST 202.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

NRES 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ECON 210, ENVS 210, and UP 210. See ACE 210.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

NRES 219 Principles of Ecosystem Mgmt credit: 3 Hours.

The principles of ecosystem management are based in ecology, which is the branch of science that explores how organisms interact with their environment. In this course, students will learn about ecological principles that are the foundation for understanding biological systems on many different levels of organization. Topics include abiotic influences on organisms, energy acquisition, population ecology, species interactions, biological communities, and ecosystem ecology. Particular attention is given to integrating these basic principles into a better understanding of ecology in a world that is increasingly dominated by human activities. Completion of a prior course in biology, zoology, or botany is recommended.

NRES 220 Communicating Agriculture credit: 3 Hours.

Same as AGCM 220 and ENVS 220. See AGCM 220.

This course satisfies the General Education Criteria for:

Advanced Composition

NRES 223 Watching the Environment credit: 3 Hours.

Same as MDIA 223. See MDIA 223.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

NRES 242 Nature and American Culture credit: 3 Hours.

Same as HIST 282, LA 242, and RST 242. See RST 242.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

NRES 270 Applied Entomology credit: 3 Hours.

Same as CPSC 270 and IB 220. See CPSC 270.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

NRES 276 Introduction to Field Pedology credit: 2 Hours.

Laboratory and field course involving description, interpretation, and classification of soil profiles. Several day, overnight field trip required; fee required. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 4 hours. Prerequisite: NRES 201.

NRES 285 Field Experience credit: 1 or 2 Hours.

Field based course that exposes students to procedures and methods used in various resource settings in a hands-on manner. Includes weekly field trips to visit representative natural resource and environmental science settings with supporting laboratory exercises. Content of offerings vary by section, but all focus on resource management, environmental quality and assessment, and effects of consumption and use on the environment. Field trips required. Additional fees may apply. See Class Schedule. May be repeated in the same or subsequent semesters to a maximum of 6 hours. Prerequisite: NRES 201 and NRES 219.

NRES 287 Environment and Society credit: 3 Hours.

Examination of the relationship between environment and society and implications for ecological and human well-being. Social science perspective covered on topics such as environmental change, environmental decision-making, natural resource management, agricultural systems, and environmental risks, hazards, and disasters. Students will build critical thinking skills focused on contemporary problems in the interface between people and the physical environment. Same as ESE 287, GEOG 287, and PS 273. Prerequisite: NRES 102 and sophomore or higher standing. Introductory social science course recommended.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

NRES 293 Professional Internship credit: 1 to 4 Hours.

Off-campus experience in a field directly pertaining to a subject matter in natural resources and environmental sciences. Approved for Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Consent of academic advisor or Department Internship Coordinator.

NRES 294 Resident Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of academic advisor or Department Internship Coordinator.

NRES 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

NRES 298 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in natural resources and environment sciences. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing.

NRES 302 Dendrology credit: 4 Hours.

Emphasizes nomenclature, classification, and the distinguishing morphological characteristics of the native and naturalized tree species of North America. Introduces disciplines related to the systematics of tree species, including: morphology, physiology, phenology, ecology, soil-site relationships, silviculture, geographic range and natural distribution, wood characteristics, economic uses, and natural history (including major diseases and insect pests). Incorporates tree and forest habitats that provide cover, breeding sites, and food for a variety of wildlife species. Serves as a basis for studies in natural resources management, environmental science, and for advanced studies of botany, genetics, and tree physiology. Field trips required. Additional fees may apply. See Class Schedule. Prerequisite: IB 103.

NRES 310 Natural Resource Economics credit: 3 Hours.

Same as ACE 310 and ENVS 310. See ACE 310.

NRES 325 Natural Resource Policy Mgmt credit: 3 Hours.

Explores policy processes and institutions relating to allocation, utilization, and preservation of natural resources. Considers conceptual models of policy processes, and examines both historical examples and current issues. Prerequisite: ECON 102 or ACE 100.

NRES 330 Environmental Communications credit: 3 Hours.

Same as AGCM 330 and ENVS 330. See AGCM 330.

NRES 340 Environ Social Sci Res Meth credit: 3 Hours.

Introduction to social science research methods for addressing environmental issues. It provides basic information about social science concepts and methods (especially observation, surveys, focus groups, and interviews), helps students become informed users of social science research, and guides selection of appropriate social science tools to meet environmental challenges. A group focus on a local environmental issue offers a practical experience in which course content is applied within a specific community context. Field trips within the local community may be required. Additional fees may apply. See Class Schedule. Prerequisite: STAT 100 or equivalent.

NRES 348 Fish and Wildlife Ecology credit: 3 Hours.

Application of ecological principles and modeling to management of fish and wildlife populations; significance of abiotic and biotic factors, including life-history parameters in population growth and management; and techniques and procedures for the development of management strategies for animal populations, emphasizing vertebrates. A course in statistics is highly recommended. Same as IB 348. Prerequisite: IB 203 or NRES 219.

NRES 351 Introduction to Environmental Chemistry credit: 3 Hours.

Introduces major inorganic and organic chemical pollutants, their sources and their fates in the atmosphere, hydrosphere and pedosphere. In particular, the course covers 1) translocation/distribution of chemicals in the environment, and 2) abiotic and biotic transformation of chemicals (e.g., photochemical reactions, hydrolysis, redox, adsorption and volatilization). Geared towards students in agricultural, natural, environmental and life science majors. Prerequisite: Successful completion of MATH 234 (or equivalent) and CHEM 104 is required. One semester of organic chemistry (CHEM 232 or CHEM 236) is recommended.

NRES 352 Plant Genetics credit: 4 Hours.

Same as CPSC 352. See CPSC 352.

NRES 362 Ecology of Invasive Species credit: 3 Hours.

Focused on the ecology and management of biological invasions, with an emphasis on understanding the introduction, establishment, spread and impact stages of the invasion process. Students will identify the causes and impacts of biological invasions, as well as management strategies for preventing new invasions and mitigating impacts of established invaders in freshwater, marine, and terrestrial ecosystems. No special equipment will be required, and any optional, weekend field trips will occur on campus. Prerequisite: NRES 219 or similar introductory course in ecology.

NRES 368 Vertebrate Natural History credit: 4 Hours.

Same as IB 368. See IB 368.

NRES 370 Environmental Sustainability credit: 3 Hours.

Same as ENSU 300 and LA 370. See LA 370.

NRES 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

NRES 401 Watershed Hydrology credit: 3 Hours.

Precipitation, evapotranspiration, stream flow, and other aspects of the hydrologic cycle are studied in a watershed context. Measurement techniques, statistical analyses of hydrologic data, and simulation modeling are discussed. Case studies that quantify water movement in specific watersheds are used to integrate course topics. Same as GEOG 401. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102, completion of the Quantitative Reasoning I requirement, and completion of the statistics requirement.

NRES 403 Watersheds and Water Quality credit: 3 Hours.

Examines water quality in streams, rivers, lakes, and wetlands. The responses of watershed systems to pollution and other human impacts will be described in terms of their biological, geochemical, and physical processes. The technical analyses necessary to establish policies aimed at preserving or restoring these natural resources will be emphasized. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of CEE 330, CHEM 232, NRES 351; one of MATH 220, MATH 221, MATH 234.

NRES 406 Fluvial Geomorphology credit: 4 Hours.

Same as GEOG 406 and GEOL 406. See GEOG 406.

NRES 407 Wildlife Population Ecology credit: 4 Hours.

This course includes the application of principles of population biology to the analysis, management, and conservation of wildlife populations, models of population growth, spatio-temporal variation in abundances, estimation of demographic parameters and methods of decision-making. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 348. One semester of calculus or statistics is recommended.

NRES 409 Fishery Ecol and Conservation credit: 4 Hours.

Ecological and conservation concepts are applied to fisheries management practices. Will discuss current literature related to the interface between basic and applied aspects of fish populations, focusing on life history, conservation biology and genetics, growth and recruitment, competition, predation, trophic and community ecology, ecosystem management, and human dimensions. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 348.

NRES 415 Native Plant ID and Floristics credit: 4 Hours.

Focuses on gaining skills in identification of native vascular plants in the field and classroom. Methods of plot-based and plotless vegetation sampling methods will be introduced. Procedures and applications for botanical inventory and assessment will be covered. Field trips are required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for NRES 415 if credit for CPSC 416 has been earned.

NRES 416 Forest Biology credit: 3 Hours.

Interactions of biotic and abiotic components of forests as they relate to the health, structure and function of these ecosystems. The course is ecophysiological and organismic in approach, but includes biochemical concepts central to the understanding of forest biology. Lecture-discussion combined with assigned readings, field projects, and a paper. One Saturday field trip required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 419 and NRES 302 or HORT 301.

NRES 418 Wetland Ecology & Management credit: 3 Hours.

Wetlands are important ecosystems that support high biodiversity and provide numerous benefits to society. This course provides a comprehensive examination of wetland science, management, and governance. Lectures, readings and class discussions will focus on the structure and processes of wetland ecosystems, wetland biota, wetland conservation and management, and U.S. and international wetland policies. Special emphasis will be placed on the application of wetland science to policy and restoration. Offered in alternate years. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and NRES 219, or consent of instructor.

NRES 419 Env and Plant Ecosystems credit: 3 Hours.

Relationships among environmental factors and plant processes and functions; impact of human activities on the environment and the structure and function of plant ecosystems. Examples will be drawn from a variety of managed and unmanaged plant ecosystems. Field trip required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or LA 450 or IB 103 and CHEM 104 or NRES 201.

This course satisfies the General Education Criteria for:
Advanced Composition

NRES 420 Restoration Ecology credit: 4 Hours.

Historical development of ecological restoration, its philosophical foundation, multi-disciplinary borrowings from the natural, applied, and social sciences, and varied practical applications, with emphasis on the application of ecological principles. Case studies, field trips, and laboratory activities on restoration planning. Field trip required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 219 or LA 450.

NRES 421 Quantitative Methods in NRES credit: 3 Hours.

Explores the fundamental principles, procedures, and practices that underlie the most common statistical and sampling methods used in natural resources and environmental sciences. This course covers hypothesis testing, regression, and analysis of variance. There is also a strong focus on sampling theory and experimental design. Computer labs utilize the open source R statistical computing environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of MATH 220, MATH 221, MATH 234; completion of the statistics requirement.

NRES 422 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOG 421 and GEOL 481. See ATMS 421.

NRES 423 Politics of International Conservation and Development credit: 3 Hours.

Conserving the earth's rich biological heritage while enhancing the well-being of the poor stands as a critical global challenge. This course examines this complex issue using the lens of political science and allied fields. Readings, discussion, and written work will demonstrate how insights and approaches from these areas of scholarship can help understand and address the twin problems of biodiversity loss and human poverty in developing countries. Examples focus on forest and wildlife conservation and management. Same as GEOG 423. 3 undergraduate hours. 3 graduate hours. Prerequisite: One 200 or 300 level social science course or consent of instructor. Junior standing required.

NRES 424 US Environ, Justic & Policy credit: 4 Hours.

In the course students will: (a) write about the roles that race, class, and other social differences play in shaping human-environment relationships, (b) understand the role of the Environmental Protection Agency in considering environmental justice in policy, and (3) identify ways that policies for ecological sustainability can be configured to improve the equity of environmental and natural resource decision-making. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior class standing.

NRES 425 Natural Resources Law & Policy credit: 3 Hours.

Using the case study method and discussion problems, students in this course will study how laws in the U.S. regulate the use of natural resources, including public ownership and preservation of natural resources through other federal and state public lands. Also examines major federal environmental statutes designed to protect natural resources, including the Clean Water Act, the Endangered Species Act, the National Environmental Policy Act, and federal acts related to forest, national parks, and wilderness protection. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

NRES 426 Renewable Energy Policy credit: 3 Hours.

Considers how policies can be designed to optimize economic, environmental, and social solutions to transforming the world's unsustainable energy production, distribution, and consumption paradigm. Provides an up-front primer on climate change policy in the U.S., Europe, and internationally, which have become the primary driver of sustainability initiatives in the energy sector. Examines policies that define "renewability" within various energy sectors including fossil fuels (e.g., coal, natural gas, petroleum), biofuels, nuclear power, hydropower, wind, solar, geothermal, and wave energy. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

NRES 427 Modeling Natural Resources credit: 4 Hours.

Examines basic modeling concepts and methods. Modeling skills, model development, and natural resource issues and problems will be emphasized. Content areas include fisheries, forests, wildlife, economics, human dimensions, groundwater and surface water. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of MATH 220, MATH 221, MATH 234.

NRES 429 Aquatic Ecosystem Conservation credit: 3 Hours.

Application of the principles of aquatic ecology to a broad range of conservation issues. The structure and function of aquatic systems are discussed from an ecosystem perspective, including the major threats and disturbances to aquatic ecosystems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102 and PHYS 101 or PHYS 140, and MATH 220 or MATH 221 or MATH 234, and IB 203 or NRES 219.

NRES 430 Comm in Env Social Movements credit: 3 Hours.

Same as AGCM 430, ENVS 430, and SOC 464. See AGCM 430.

NRES 431 Plants and Global Change credit: 3 Hours.

Same as CPSC 431 and IB 440. See CPSC 431.

NRES 438 Soil Nutrient Cycling credit: 3 Hours.

The ecology of decomposition and plant nutrient acquisition in terrestrial soils will be addressed using applied ecology concepts. Discussion will focus on the scientific literature addressing biological, physical, and chemical controls over nutrient availability in soils. Writing assignments will teach students to summarize scientific literature. Students will learn about analytical and quantitative methods used in this field of study and gain the interpretive and communication skills needed to assess and/or carry out applied research in plant and soil science arenas. Same as CPSC 438. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 203 or NRES 219, and NRES 201.

NRES 439 Env and Sustainable Dev credit: 3 Hours.

Comprehensive overview and synthesis of global environmental problems and their relationships to human activities, with a focus on ecological and natural resource elements. Concerns include unsound ethics and concepts of development and modernization, the lack of motivation or funding to implement available technical solutions, the promotion of alternative development ethics, and a review of opportunities to maintain or improve the well-being of people, other organisms, and the environment. Same as CPSC 439. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or ACE 210.

NRES 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, ANSC 440, CPSC 440, and FSHN 440. See CPSC 440.

NRES 441 Biogeography credit: 3 Hours.

Same as ANTH 436, ESE 439, GEOG 436 and IB 439. See IB 439.

NRES 442 Mammalogy credit: 4 Hours.

Same as IB 462. See IB 462.

NRES 445 Statistical Methods credit: 4 Hours.

Same as ABE 445 and ANSC 445. See ANSC 445.

NRES 446 Sustainable Planning Seminar credit: 4 Hours.

Same as GEOG 446, LA 446, and UP 446. See LA 446.

NRES 452 Community Ecology credit: 3 Hours.

Same as IB 453. See IB 453.

NRES 454 GIS in Natural Resource Mgmt credit: 4 Hours.

Geographic Information Systems (GIS) and remote sensing for natural resource management. Personal computers and GIS software are used to demonstrate the utility of these techniques for data acquisition, image processing, and map modeling. Exercises include problems relevant to the management of natural resources such as land cover mapping, monitoring, suitability and productivity assessment, landscape pattern analysis, land use change analysis, spatial modeling, and decision making. 4 undergraduate hours. 4 graduate hours.

NRES 455 Adv GIS for Nat Res Planning credit: 2 Hours.

Examines the application of Geographic Information Systems (GIS) to natural resource planning and decision making. Integrates principles of decision making in various contexts: public and private, single and multiple criteria, and various forms of management constraints. Management alternatives are then incorporated into a GIS system for further review and analysis. Course combines GIS software with computer-based optimization and quantitative decision making models. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: GEOG 479 or NRES 454.

NRES 456 Integrative Ecosystem Mgmt credit: 3 Hours.

Examines ecological and human dimensions of ecosystem management through case studies in settings such as the Pacific Northwest, Southwest, Great Lakes, Gulf Coast, and Mississippi River Basin ecosystems. Capstone course for seniors in the NRES major. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior standing; NRES 219 and NRES 287.

NRES 460 Aerial Photo Analysis credit: 3 or 4 Hours.

Same as GEOG 460. See GEOG 460.

NRES 461 Ornithology credit: 4 Hours.

Same as IB 461. See IB 461.

NRES 462 Ecosystem Ecology credit: 3 Hours.

Same as ESE 452 and IB 452. See IB 452.

NRES 463 Ichthyology credit: 4 Hours.

Same as IB 463. See IB 463.

NRES 464 Herpetology credit: 4 Hours.

Same as IB 464. See IB 464.

NRES 465 Landscape Ecology credit: 3 Hours.

Introduction to the theory, methods, and application of landscape ecology, with an emphasis on characterizing heterogeneity and examining its consequences for ecological processes across a variety of spatial and temporal scales. Special attention will be given to the role of natural and human disturbances in shaping spatial patterns. Laboratory exercises are computer-based and focus on concepts and tools in landscape ecology. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or equivalent, NRES 454 or equivalent.

NRES 471 Pedology credit: 3 Hours.

The science of soil genesis, classification, and morphology. Includes factors of soil formation, properties and methods used in distinguishing soils, interpretation of soil profiles and soil stratigraphy, causes of soil variability, and the impact of soil properties upon soil management, land-use decisions, and the environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 472 Environmental Psychology credit: 4 Hours.

Theory and research in environmental psychology. Topics include environmental perception, cognition, experience, values and emotion, perceived environmental quality, environmental hazards and risk perception, and conservation attitudes and behavior. Same as PSYC 472. 4 undergraduate hours. 4 graduate hours. Prerequisite: Jr. standing; PSYC 100 or PSYC 103.

NRES 473 Soil Testing Practicum credit: 2 or 3 Hours.

Chemical procedures useful in assessing soil/plant relationships for field crops. Topics include agronomic principles, field sampling, performance of soil tests, interpretation of analytical results, and formulation of nutrient management programs. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Field trip required. Additional laboratory work and consent of instructor required for 3 hours. Prerequisite: NRES 201.

NRES 474 Soil and Water Conservation credit: 3 Hours.

Application of principles of soil conservation and management to the solution of land-use problems; influence of soil characteristics on erosion control, cropping intensity, water management, and land-use planning. Includes a field trip. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 475 Environmental Microbiology credit: 3 Hours.

Introduction to the diversity of microbial populations and their important role in environmental processes in air, water, soils, and sediments. Microbial community ecology and interactions with plants and animals will also be discussed. Students will learn how microbial activities sustain natural ecosystems and contribute to environmental quality, and also how these functions are harnessed to support managed and artificial systems. Molecular biology techniques for investigating microbial communities and their activities will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and CHEM 104.

NRES 477 Introduction to Remote Sensing credit: 3 Hours.

Same as GEOG 477. See GEOG 477.

NRES 478 Environmental Stable Isotopes credit: 3 Hours.

Same as ATMS 422, GEOL 488, and IB 488. See IB 488.

NRES 485 Stream Ecosystem Management credit: 4 Hours.

This course relates the structure and function of streams and rivers to challenges and opportunities in their conservation, management, and restoration using a combination of readings, discussions, and field trips to study sites. Students will develop an integrative understanding of stream and river ecosystem management from the site to watershed scale on issues spanning from nutrient pollution, to the natural flow regime, to the design and implementation of freshwater protected areas. No special equipment will be required. Three required field trips will occur on or near campus. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 219 or similar introductory course in ecology.

NRES 487 Soil Chemistry credit: 3 Hours.

Emphasizes inorganic reactions involved in soil development and plant nutrition in soils; topics include colloid systems, properties of water, ion exchange equilibria, plant nutrient forms, and methods of analyses. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and CHEM 104.

NRES 488 Soil Fertility and Fertilizers credit: 3 Hours.

Provides a broad-based understanding of the basic principles of soil fertility and their application. Coverage includes the occurrence, cycling, and plant availability of the essential mineral nutrients in soils; fertilizer sources, soil reactions, and efficiency; evaluating fertilizer and lime needs; methods of fertilizer application; and the economics of fertilization. Same as CPSC 488. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 489 Physics of Plant Environments credit: 4 Hours.

The physics of transport processes in the soil and aerial environment of plants; exchanges of energy and gases in crop canopies, and the retention and flow of water, gases, solutes, and heat in soils. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 101 or PHYS 140; one of MATH 220, MATH 221, MATH 234; NRES 201.

NRES 490 Surface Water System Chemistry credit: 4 Hours.

Examines the interaction of chemical and biological processes that govern the chemistry of streams, lakes, and wetlands, and the response of aquatic organisms to pollution. Chemical equilibrium and kinetic principles are used to analyze the behavior of surface water systems through the use of models. Topics include modeling of field studies in environmental inorganic chemistry and biogeochemistry. The laboratory section will be devoted to instruction in the use of computer models and to their practical application. 4 undergraduate hours. 4 graduate hours. Credit not given for both NRES 490 and CEE 443. Prerequisite: CHEM 104; one of MATH 220, MATH 221, MATH 234.

NRES 494 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, SOC 493, UP 493. See GEOG 493.

NRES 499 Special Topics credit: 1 to 4 Hours.

Experimental course on a special topic in natural resources and environmental sciences. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 hours as topics vary.

Fish and Wildlife Conservation Concentration

The Fish and Wildlife Conservation concentration is designed for the student interested in the fundamental properties of natural resource systems with emphasis on the ecology, biology, conservation, and management of fish and wildlife resources.

Code	Title	Hours
Fish and Wildlife Conservation Concentration Required		
NRES 407	Wildlife Population Ecology	4
NRES 409	Fishery Ecol and Conservation	4
NRES 421 or NRES 440	Quantitative Methods in NRES Applied Statistical Methods I	3-4
Organismal Biology		
Select one of the following:		4
NRES 368	Vertebrate Natural History	
NRES 461	Ornithology	
IB 462	Mammalogy	
IB 463	Ichthyology	
IB 464	Herpetology	
Specialization course		
Select one of the following:		3-4
NRES 419	Env and Plant Ecosystems	
NRES 420	Restoration Ecology	
NRES 429	Aquatic Ecosystem Conservation	
NRES 465	Landscape Ecology	
IB 329	Animal Behavior	
IB 451	Conservation Biology	
Plant Classification/Identification		
Select one of the following:		3-5
NRES 415	Native Plant ID and Floristics	
IB 335	Systematics of Plants	

Global Change & Landscape Dynamics

The Global Change and Landscape Dynamics Concentration explores the patterns and processes interlinking biological species with landscape components in order to promote the sustainability and ecological integrity of terrestrial ecosystems at local, regional, and sub-continental geographic scales. This concentration is especially relevant for students interested in invasion biology; biological rarity; wildlife disease epidemiology; energy, nutrient, and organism exchanges; the distribution of land cover and land use; and other elements affecting the earth's ecology.

Code	Title	Hours
Global Change & Landscape Dynamics Concentration Required		
NRES 419	Env and Plant Ecosystems	3
NRES 465	Landscape Ecology	3
NRES 421 or NRES 440	Quantitative Methods in NRES Applied Statistical Methods I	3-4
Ecology		
Select one of the following:		3-4
NRES 420	Restoration Ecology	
NRES 431	Plants and Global Change	
NRES 462	Ecosystem Ecology	
IB 361	Ecology and Human Health	
UP 405	Watershed Ecology and Planning	
UP 406	Urban Ecology	
Geospatial Techniques		
Select one of the following:		2-4
NRES 455	Adv GIS for Nat Res Planning	
NRES 460	Aerial Photo Analysis	
NRES 477	Introduction to Remote Sensing	
GEOG 412	Geospatial Tech & Society	
UP 316	Urban Informatics II	
Planning & Policy		
Select one of the following:		3-4
NRES 325	Natural Resource Policy Mgmt	
NRES 310	Natural Resource Economics	
NRES 424	US Environ, Justic & Policy	
NRES 425	Natural Resources Law & Policy	
NRES 426	Renewable Energy Policy	
NRES 439	Env and Sustainable Dev	
NRES 446	Sustainable Planning Seminar	
ACE 406	Environmental Law	
Environmental Quality		
Select one of the following:		3-4
NRES 351	Introduction to Environmental Chemistry	
NRES 403	Watersheds and Water Quality	
NRES 438	Soil Nutrient Cycling	
NRES 474	Soil and Water Conservation	
NRES 475	Environmental Microbiology	
ATMS 449	Biogeochemical Cycles	
ESE 320	Water Planet, Water Crisis	
GEOL 380	Environmental Geology	

Human Dimensions of the Environment Concentration

The Human Dimensions of the Environment Concentration emphasizes the social scientific interpretations of human-environment interactions at multiple levels as well as on applied policy and management implications. It is intended for students interested in the study of environmental sociology and psychology, land use planning, environmental management and policy, natural resource allocation, social impacts, resource economics, and environmental law. The Human

Dimensions of the Environment Concentration requires advanced coursework in natural resource economics, environmental psychology, communications, social impact assessment, environmental policy, and environmental law.

Code	Title	Hours
Human Dimension Concentration Required		
NRES 310 or ACE 210	Natural Resource Economics Environmental Economics	3
NRES 325 or NRES 425	Natural Resource Policy Mgmt Natural Resources Law & Policy	3
NRES 340	Environ Social Sci Res Meth	3
Analytical Methods		
Select one of the following:		3-4
NRES 421	Quantitative Methods in NRES	
NRES 440	Applied Statistical Methods I	
SOC 485	Intermediate Social Statistics	
Social Science Planning and Policy		
Select two of the following:		6-8
NRES 310	Natural Resource Economics (if not taken as one of the HDC required classes)	
NRES 325	Natural Resource Policy Mgmt (if not taken as one of the HDC required classes)	
NRES 424	US Environ, Justic & Policy	
NRES 425	Natural Resources Law & Policy (if not taken as one of the HDC required classes)	
NRES 426	Renewable Energy Policy	
NRES 430	Comm in Env Social Movements	
NRES 472	Environmental Psychology	
ACE 210	Environmental Economics (if not taken as one of the HDC required classes)	
ACE 406	Environmental Law	
SOC 447	Environmental Sociology	
Conservation/Environmental Science/Ecology		
Select one of the following:		3-4
NRES 401	Watershed Hydrology	
NRES 407	Wildlife Population Ecology	
NRES 409	Fishery Ecol and Conservation	
NRES 415	Native Plant ID and Floristics	
NRES 420	Restoration Ecology	
NRES 429	Aquatic Ecosystem Conservation	
NRES 439	Env and Sustainable Dev	
NRES 474	Soil and Water Conservation	

Minor in Natural Resource Conservation

The Natural Resource Conservation minor offers an integrated approach to managing natural resources from a sustainability perspective. This minor addresses the diverse biological, physical, social, economic, and political aspects of natural resources and stewardship. Ultimately, this curriculum offers students interested in the conservation of natural

resources a challenging and rewarding experience while simultaneously preparing them for future careers requiring a fundamental and strong background in the management and conservation of natural resources.

A minimum of 18 hours are required for this minor, of which at least 6 credit hours must be 400-level. Courses taken to fulfill the minor may not be counted toward the major in Natural Resources and Environmental Sciences.

Code	Title	Hours
Required Courses for a Minor in Natural Resource Conservation		
NRES 102 or NRES 100	Introduction to NRES Fundamentals of Env Sci	3
NRES 287	Environment and Society	3
General Electives		
Minimum of 12 credit hours, at least 6 of which must be 400-level, selected from:		12
NRES 108	Env Sc & Nat Resource Careers	
NRES 109	Global Environmental Issues	
NRES 201	Introductory Soils	
ACE/NRES 210	Environmental Economics	
NRES 219	Principles of Ecosystem Mgmt	
ACE/NRES 310	Natural Resource Economics	
NRES 325	Natural Resource Policy Mgmt	
NRES 340	Environ Social Sci Res Meth	
NRES 348	Fish and Wildlife Ecology	
NRES 351	Introduction to Environmental Chemistry	
NRES 407	Wildlife Population Ecology	
NRES 409	Fishery Ecol and Conservation	
NRES 415	Native Plant ID and Floristics	
NRES 419	Env and Plant Ecosystems	
NRES 420	Restoration Ecology	
NRES 421	Quantitative Methods in NRES	
NRES 424	US Environ, Justic & Policy	
NRES 425	Natural Resources Law & Policy	
NRES 426	Renewable Energy Policy	
NRES 427	Modeling Natural Resources	
NRES 429	Aquatic Ecosystem Conservation	
NRES 438	Soil Nutrient Cycling	
NRES 439	Env and Sustainable Dev	
NRES 454	GIS in Natural Resource Mgmt	
NRES 455	Adv GIS for Nat Res Planning	
NRES 471	Pedology	
NRES 472	Environmental Psychology	
NRES 474	Soil and Water Conservation	
NRES 475	Environmental Microbiology	
NRES 488	Soil Fertility and Fertilizers	

Total Hours

18

Minor in Spatial and Quantitative Methods in Natural Resources and Environmental Sciences

The Spatial and Quantitative Methods in Natural Resources and Environmental Sciences minor is ideal for students in NRES and allied fields seeking preparation for careers requiring skills in geographic information systems, statistics, research design, and/or mathematical modeling. This minor is open to students in all majors and is especially relevant for those pursuing a major related to natural resource and environmental issues who want to distinguish themselves with more advanced analytical skills.

In order to be eligible to declare this minor, a student must have successfully completed the Quantitative Reasoning I and Quantitative Reasoning II requirements. The minor requires the completion of an additional 18 hours of coursework selected from the following list. Students must earn credit for at least three hours in each of the three categories. Courses taken to fulfill the minor may not be counted towards the NRES major, but may count towards majors in other fields.

Code	Title	Hours
Required Courses for a Minor in Spatial and Quantitative Methods in Natural Resources and Environmental Sciences		
Statistics & Research Design		
Select one of the following:		3-4
NRES 340	Environ Social Sci Res Meth	
NRES 421	Quantitative Methods in NRES	
CPSC 440	Applied Statistical Methods I	
NRES 445	Statistical Methods	
SOC 485	Intermediate Social Statistics	
STAT 200	Statistical Analysis	
Mathematical Modeling		
Select one of the following:		3-4
NRES 422	Earth Systems Modeling	
NRES 427	Modeling Natural Resources	
ANSC 448	Math Modeling in Life Sciences	
GEOG 468	Biological Modeling	
Spatial Analysis		
Select one of the following:		3-5
NRES 454	GIS in Natural Resource Mgmt	
NRES 455	Adv GIS for Nat Res Planning	
NRES 465	Landscape Ecology	
GEOG 478	Techniques of Remote Sensing	
GEOG 479	Advanced Topics in GIS	
GEOG 489	Programming for GIS	
Minimum hours required for the minor		18

Resource Conservation and Restoration Ecology

The Resource Conservation and Restoration Ecology Concentration emphasizes the ecology, biology, and management of aquatic, soil, forest, and wildlife resources. It is designed for students interested in the fundamental properties and practices underlying the restoration

and management of soil, watershed, wetland, forest, and grassland ecosystems. Through lectures, labs and field exercise, students study biosphere relationships in natural resource systems. The Resource Conservation and Restoration Ecology concentration includes coursework in the areas of restoration ecology, soil science, environmental biology, aquatic ecosystem management, tree and plant physiology, and advanced ecology.

Code	Title	Hours
Resource Conservation & Restoration Ecology Concentration Required		
NRES 419	Env and Plant Ecosystems	3
NRES 420	Restoration Ecology	4
NRES 421	Quantitative Methods in NRES	3-4
or NRES 440	Applied Statistical Methods I	
Watershed Science		
Select one of the following:		3-4
NRES 401	Watershed Hydrology	
NRES 403	Watersheds and Water Quality	
NRES 406	Fluvial Geomorphology	
NRES 429	Aquatic Ecosystem Conservation	
NRES 490	Surface Water System Chemistry	
Plant Classification/Identification		
NRES 415	Native Plant ID and Floristics	4
or IB 335	Systematics of Plants	
Soil and Environmental Science		
Select one of the following:		3
NRES 351	Introduction to Environmental Chemistry	
NRES 471	Pedology	
NRES 474	Soil and Water Conservation	
NRES 475	Environmental Microbiology	
NRES 487	Soil Chemistry	
NRES 488	Soil Fertility and Fertilizers	
NRES 489	Physics of Plant Environments	
Ecology		
Select one of the following:		3-4
NRES 438	Soil Nutrient Cycling	
NRES 452	Community Ecology	
NRES 462	Ecosystem Ecology	
NRES 465	Landscape Ecology	
CPSC 437	Principles of Agroecology	
IB 439	Biogeography	

Agricultural Communications

Dr. Lulu Rodriguez, Director
 274 Bevier Hall
 905 S. Goodwin Ave.
 PH: 217-300-1045
<http://agcomm.illinois.edu/>

For the Degree of Bachelor of Science with a Major in Agricultural Communications

The major in Agricultural Communications is for students wishing to pursue careers as professionals in writing, editing, and publishing; public relations; advertising; radio and television broadcasting; photography; and related activities with an emphasis on the fields of food, agriculture, the environment, energy and consumer behavior. Concentrations in journalism or advertising allow students to pursue these professional interests. Program requirements in each concentration include the completion of an interdisciplinary minor in Food and Environmental Systems. The College of Agricultural, Consumer and Environmental Sciences and the College of Media jointly offer this curriculum.

A minimum of 126 hours are required for graduation, including:
 General Education Requirements
 Agricultural Communications major requirements
 Minor in Food and Environmental Systems requirements
 College of Media concentration requirements

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (See College Composition I requirement)	
OR		
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list. (JOUR 200; AGCM 220).		3-4
Cultural Studies		
Select one course from Western/Comparative culture and one from non-Western/U.S. minority culture from campus approved list.		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
EPSY 280	Elements of Statistics	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
SOCW 225	Intro Stat for Social Work	
STAT 100	Statistics (or its equivalent)	
Quantitative Reasoning II		
Select one from campus approved list.		3-4
Natural Sciences and Technology		
Physical Science		
Select one from the following:		3-5

ATMS 100	Introduction to Meteorology	
ATMS 120	Severe and Hazardous Weather	
ATMS 140	Climate and Global Change	
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
ENVS 101	Introduction to Energy Sources	
ESE 117	The Oceans	
ESE 118	Natural Disasters	
GEOL 107	Physical Geology	
PHYS 101	College Physics: Mech & Heat	
Life Science		
Select one from the following:		3-4
ANSC 207	Companion Animal Biology & Care	
ANTH 249	Evolution and Human Disease	
CPSC 112	Introduction to Crop Sciences	
CPSC 113	Environment, Agric, & Society	
FSHN 120	Contemporary Nutrition	
IB 103	Introduction to Plant Biology	
IB 105	Environmental Biology	
IB 109	Insects and People	
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
PSYC 100	Intro Psych	4
Select one course from:		
ACE 100	Agr Cons and Resource Econ	
PS 101	Intro to US Gov & Pol	
Agricultural Communications Required		
ACES 101 or ACES 200	Contemporary Issues in ACES ACES Transfer Orientation	0-2
AGCM 110	Intro to Ag and Env Comm	3
AGCM 320	Public Information Campaigns	4
JOUR 200	Introduction to Journalism	3
Select two of the following:		6-7
AGCM 220	Communicating Agriculture	
AGCM 270	Ag Sales and Persuasive Communication	
AGCM 315	Emerging Media	
AGCM 330	Environmental Communications	
AGCM 398	Undergraduate Seminar	
AGCM 430	Comm in Env Social Movements	
Students must also complete the ACES Minor in Food and Environmental Systems (p. 85)		18
COLLEGE OF MEDIA CONCENTRATION		
Students must choose one of two concentrations:		21-23
ADVERTISING		
Required courses:		
ADV 150	Introduction to Advertising	3
ADV 281	Advertising Research Methods	3
ADV 283	Advertising and Brand Strategy	3
ADV 284	Consumer Insight	3

Choose three of the following:

ADV 390	Content Creation
ADV 409	Media Entrepreneurship
ADV 460	Innovation in Advertising
ADV 483	Audience Analysis

JOURNALISM 23

Required courses:

JOUR 210	Newsgathering Across Platforms	4
JOUR 215	Multimedia Reporting	4
JOUR 311	Media Law	3

Choose three of the following:

JOUR 315	Adv Public Affairs Reporting
JOUR 320	News Editing
JOUR 425	Multimedia Editing and Design
JOUR 335	Audio Journalism
JOUR 340	Video Reporting & Storytelling
JOUR 445	Video Storytelling 2-Producing

AGCM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AGCM>)

Courses

AGCM 110 Intro to Ag and Env Comm credit: 3 Hours.

Development and role of communication in relation to food, feed, fiber, energy, natural resources, international development and other dimensions of agriculture. Introduction to channels, methods, challenges and opportunities for improving communication within agriculture and communicating agriculture to the public.

AGCM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in agricultural communications. May be repeated in the same or separate terms as topics vary.

AGCM 220 Communicating Agriculture credit: 3 Hours.

Skills necessary to communicate complex information about the broad agriculture domain to different audiences. Application of communication theories. Emphasis on essential communication skills, including writing, conducting interviews, planning, and critical evaluation of information sources. Same as ENVS 220 and NRES 220. Prerequisite: Completion of a Composition I course.

This course satisfies the General Education Criteria for: Advanced Composition

AGCM 230 Agricultural and Environmental Photography credit: 3 Hours.

Application of photojournalism principles and techniques in the communication of topics related to food, agriculture, the environment, energy and community development for print, broadcast and computer-mediated applications. Emphasis on creative and technical aspects of digital photography.

AGCM 250 Visual Principles for Ag Comm credit: 2 Hours.

This course outlines fundamental design principles and techniques for effective visual communication on print. These principles will be applied in project—magazine pages, logos, brochures, newsletters, posters and signs—to achieve communication objectives. This course provides practical, hands on experience in developing visual presentations about topics related to agriculture, food, fiber, renewable fuel, the environment, and natural resources. Students are introduced to the use of industry-standard desktop publishing software (InDesign, Photoshop, Illustrator).

AGCM 270 Ag Sales and Persuasive Communication credit: 3 Hours.

Sales concepts and persuasive business communication techniques. Role, dynamics, and principles of sales communications related to food, agriculture, and the environment. Sales objectives, market segmentation, prospecting, handling obligations, relationship building, and the nuances of sales communications.

AGCM 293 Communications Internship credit: 1 to 3 Hours.

Supervised experience in a field directly pertaining to agricultural communications. Approved for S/U grading only. May be repeated. Prerequisite: Sophomore standing. AGCM Program approval required.

AGCM 294 Research Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 10 hours. Prerequisite: Sophomore standing.

AGCM 295 Independent Study or Research credit: 1 to 3 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated. Prerequisite: AGCM Program and instructor approval required.

AGCM 315 Emerging Media credit: 3 Hours.

Theories, principles and practices of applying emerging tools, technology, and norms to communicate agriculture to broad audiences. Focus on the strategies and tactics of using new media to communicate food, fuel, fiber, natural resources, health, human nutrition and related topics. Same as ADV 315. Prerequisite: AGCM 220 or ADV 150 or consent of instructor.

AGCM 320 Public Information Campaigns credit: 4 Hours.

Coordinated approach to planning, implementing and evaluating information campaigns in the broad domain of food and agriculture. Students work with groups, agencies and organizations in designing communication campaigns strategies and tactics. Prerequisite: Sophomore standing and Composition I course.

This course satisfies the General Education Criteria for: Advanced Composition

AGCM 330 Environmental Communications credit: 3 Hours.

Basics of communicating about environmental issues to various audiences, emphasizing communication to lay publics. Gathering information about a current environmental issue, analyzing interests of groups involved, and examining strategies for communicating clearly to different groups. Same as ENVS 330 and NRES 330. Prerequisite: Sophomore standing.

AGCM 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated for up to 6 hours in separate terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

AGCM 398 Undergraduate Seminar credit: 1 to 3 Hours.

Special topics in a field of study directly pertaining to subject matter in agricultural communications. May be repeated in the same or subsequent terms to a maximum of 12 hours.

AGCM 430 Comm in Env Social Movements credit: 3 Hours.

Examines the interests, values systems and communications strategies of key participants in the environmental movement. Students examine environmental issues and predict possible reactions from key participants in the environmental arena. Same as ENVS 430, NRES 430, and SOC 464. 3 undergraduate hours. 3 graduate hours. Prerequisite: Composition I course.

AGCM 499 Seminar credit: 1 to 4 Hours.

Special topics in agricultural communications. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 12 hours as topics vary.

Agricultural Education

Walt Hurley

174 Bevier Hall
905 South Goodwin Avenue
Urbana, IL 61801
PH: (217) 333-3165
<http://www.aged.illinois.edu>

Major in Agricultural Leadership and Science Education

For the Degree of Bachelor of Science with a Major in Agricultural Leadership and Science Education

This curriculum prepares students for positions requiring expertise in formal and non-formal education. Examples include teaching agriculture in the public schools; cooperative extension work; training and program development; and other education-related positions in agricultural and environmental agencies and businesses.

A minimum of 126 hours is required for graduation. Students pursuing this major select from two concentrations: agricultural leadership education or agricultural science education. Students completing the agricultural science education concentration will be eligible for Illinois teacher certification in agricultural education, and will have instruction in key pedagogical areas as well as agriculture. For teacher education requirements applicable to all curricula, see the Council on Teacher Education (www.cote.illinois.edu/ (<http://www.cote.illinois.edu/>)).

For the Degree of Bachelor of Science with a Major in Agricultural Leadership and Science Education

- Agricultural Leadership Education Concentration (p. 84)
- Agricultural Science Education Concentration (p. 85)

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (or equivalent (see college Composition I requirement))	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list. AGED 230 is recommended.		3-4
Cultural Studies		
Select one Western cultures course and one non-Western/ U.S. minority cultures course from campus approved lists.		6
Quantitative Reasoning I		

Select one of the following:		3-5
MATH 124	Finite Mathematics	
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	

Quantitative Reasoning II

Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	
STAT 100	Statistics	

Natural Sciences and Technology

CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
Physical science - select from campus approved list.		3-4
CPSC 112	Introduction to Crop Sciences	4

Humanities and the Arts

Select from campus approved list.		6
-----------------------------------	--	---

Social and Behavioral Sciences

ACE 100	Agr Cons and Resource Econ	4
PSYC 100	Intro Psych	4

ACES Required

ACES 101	Contemporary Issues in ACES	2
----------	-----------------------------	---

Agricultural Leadership and Science Education Required

AGED 100	Intro to Ag & Leadership Ed ¹	2
AGED 220	Prog Del in Ag & Leadership Ed	3
AGED 230	Leadership Communications	3
AGED 421	Teaching Strategies in AGED	3

¹ Not required for transfer students.

AGED Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AGED>)

Courses

AGED 100 Intro to Ag & Leadership Ed credit: 2 Hours.

Overview of agricultural and leadership education career pathways in school and non-school settings, including extension, corporate and government sectors, and international and industry organizations. Includes overview of certification requirements, professional development, and current issues for agricultural education professionals.

AGED 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

An experimental course on a special topic in agricultural education. May be repeated in the same or separate terms as topics vary to a maximum of 12 hours.

AGED 220 Prog Del in Ag & Leadership Ed credit: 3 Hours.

Introduces formal and non-formal methods used to deliver education and training in agricultural and leadership education programs. Focuses on types and purposes of agricultural education, program components, principles of teaching and learning, community relationships, and reflective teaching. Technology-supported lab component provides skills needed to develop teaching and training materials.

AGED 230 Leadership Communications credit: 3 Hours.

Application of communication skills used in the dissemination of information by public or organizational leaders in contemporary times. Founded on empirical leadership studies and through use of experiential learning activities, presentations, projects, and examinations, students will consider how identity and the setting impact what they write, say, and do when communicating a message.

This course satisfies the General Education Criteria for:

Advanced Composition

Social Beh Sci - Soc Sci

AGED 250 Observation and Program Analysis credit: 4 Hours.

Early field experience in agricultural education, including observation and analysis activities in public schools, extension programs, or other selected settings; participation in clinical field experience activities; examination of educational program development and operation, teaching and learning processes, contextual factors in learning, evaluation of student learning; and professionalism. Approximately 45 hours of early field experience will be acquired. Off-campus observation begins the first week of January. Agricultural education programs in both school and non-school settings are examined. Prerequisite: AGED 220; concurrent enrollment in EDPR 203.

AGED 260 Intro to Leadership Studies credit: 3 Hours.

Study of leadership theories and their application to the development of leadership skills. Students develop a personal philosophy of leadership, prepare a development plan for enhancing leadership skills, and begin a portfolio to record their leadership growth. Explores topics concerning diversity, ethics, and leadership/follower roles.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

AGED 280 Training Needs Assessment credit: 2 Hours.

Students in this course will be equipped to analyze an employee and/or organization's performance to determine the training needs for a business or organization. Helps learners determine whether or not training is the solution to a job performance problem.

AGED 293 Ag Leadership Internship credit: 1 to 6 Hours.

Supervised off-campus experience in a field directly pertaining to subject matter in agricultural leadership education. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 12 hours.

AGED 295 Independent Study or Research credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms.

AGED 300 Training and Development credit: 4 Hours.

Students will learn to assess, design, develop, implement, and evaluate a training program in agricultural and non-agricultural industries. Topics will emphasize the theory of training and development, methods of assessing training needs and learning styles, design of effective training, presentation skills, and program evaluation. Different types of training programs will be examined, including orientation, skills training, team building, management development, and diversity training. Students will create and present a training program for an actual client utilizing the training design process. Prerequisite: AGED 280.

AGED 310 Prof Dev in Leadership Ed credit: 2 Hours.

Provides agricultural leadership education students with non-formal professional experiences prior to enrollment in the student internship. A minimum of 32 hours of observation and participatory experiences with professionals in extension/outreach, business and industry, political and/or communications/human resources are required for satisfactory completion of this class.

AGED 340 Leadership Ethics & Pluralism credit: 3 Hours.

Theory and research in leadership ethics and multicultural competence in a leadership context. Students will examine the underpinning of multiculturalism and identity development, and how both affect leadership practice. Also explores issues of power, oppression, privilege and the responsibilities of leadership. Integrates both ethics and multiculturalism through the examination of cases that include topics such as globalization, immigration, etc. Prerequisite: AGED 260.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AGED 350 Early Field Experience credit: 3 Hours.

Supervised experience during the summer months and fall semester including: supervision of students' agricultural experience programs and projects; development of problem-solving and decision-making skills related to use of instructional technologies, management of FFA activities, and supervision of agricultural experiences; review of teacher certification requirements and application for teacher certification; development of online teacher certification portfolio meeting state, UIUC, and program requirements. A minimum of 50 hours or early field observation is required. Prerequisite: AGED 250.

AGED 360 Advanced Leadership Studies credit: 3 Hours.

Examines current and emerging leadership theories and their practical application in real-world settings. Continues exploration of advanced leadership theories begun in AGED 260, and includes opportunities for self-assessment and person leadership development. Prerequisite: AGED 260.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

AGED 380 Leadership in Groups and Teams credit: 3 Hours.

Theory and practice of group and team leadership, including leadership assessment, group dynamics, group process, goal-setting, conflict management and resolution, leadership skill development, and case study analyses. Students engage in group activities throughout the semester. Prerequisite: AGED 260 and completion of the General Education Composition I requirement.

AGED 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

AGED 400 Foundations of Ag & Extn Ed credit: 3 Hours.

Comparative examination of the mission, purpose, and historical foundations of agricultural and extension education. Topics include review of agricultural education programs and delivery systems, the nature of teaching in school and non-school settings, and trends and developments in agricultural education. Also examines teacher characteristics and approaches to teaching, education program components, community relationships, and reflective teaching. 3 undergraduate hours. 3 graduate hours.

AGED 410 Grad Early Field Experience credit: 2 Hours.

An introduction to the application of pedagogy through early field experiences in agricultural education. Students participate in eight weeks of instruction and 40 hours of participatory experiences in approved agricultural education programs. Off-campus observation begins the first week of January. Restricted to graduate students in the teacher education option. 2 undergraduate hours. 2 graduate hours. Prerequisite: Concurrent enrollment in EDPR 203.

AGED 420 Curr Design & Instruction credit: 3 Hours.

This instructional methodology course provides students the opportunity to analyze the principles of learning and teaching as they influence the academic motivation of learners in formal and non-formal environments within agricultural, food and environmental sciences. Topics include: the understanding and implementation of psychological aspects of learning, planning and development of agricultural courses and curricula, creating teaching plans, managing positive learning environments, evaluating student learning, and the utilization of effective self-reflective teaching behaviors. 3 undergraduate hours. 3 graduate hours. Prerequisite: AGED 220 for majors; consent of instructor for non-majors.

AGED 421 Teaching Strategies in AGED credit: 3 Hours.

Synthesis of principles of teaching and learning as they influence educational activities in formal and non-formal environments within agricultural and related sciences. Gives individuals an opportunity to apply the educational concepts covered in AGED 300 or AGED 420. Individuals will design, implement, and evaluate learner-centered approaches in a variety of simulated educational environments. 3 undergraduate hours. 3 graduate hours. Prerequisite: AGED 300 or AGED 420 or graduate standing.

AGED 430 Youth Development Programs credit: 3 or 4 Hours.

Instruction in the youth development process, including learning; philosophy and purposes of youth development policies, programs, and organizations; relationships to organizational missions; principles and procedures for developing, coordinating, and implementing youth development programs; and examining research and practice in youth-at-risk initiatives. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AGED 220, or HDFS 105, or PSYC 100.

AGED 450 Program Delivery and Eval credit: 4 Hours.

Students complete this course during their twelve-week practice teaching or internship experience. Written assignments will focus on development of teaching plans, program initiation and improvement plans, and actual evaluation studies of agricultural education programs. Instruction will be provided during on-site faculty visits and by cooperating personnel. 4 undergraduate hours. 4 graduate hours. Prerequisite: AGED 420.

AGED 451 Professional Dev in Ag Ed credit: 2 Hours.

Analysis of teaching and learning processes, program evaluation and improvement strategies, curriculum development and modification, professional development, facility development, using community resources, program management, and discussion of trends and issues in agricultural education. 2 undergraduate hour. 2 graduate hour. Prerequisite: Senior standing.

AGED 460 Advanced Leadership Studies credit: 1 or 4 Hours.

This course will focus on understanding and then applying the Adaptive Leadership Model in relevant executive and supervisory contexts in professional organizations (industry, non-profit, community development). Enrolled students will have the opportunity to examine current cases of both adaptive and technical challenges facing agriculturally-focused organizations, as well as research and examine cases they choose themselves. The overarching goal of this course is to provide students the opportunity to practice skills relevant for leading fast-paced complex organizations in agriculture using the Adaptive Leadership Model. No undergraduate credit. 1 or 4 graduate hours. Prerequisite: AGED 260 or graduate standing.

AGED 480 Collaborative Leadership credit: 3 or 4 Hours.

Leadership operates within the context of community. The course will teach the research, theory, and practice of building effective community collaborations to deal with complex societal issues. A collaborative framework will be delivered by which students apply their knowledge of person, organizational, and community leadership to real-world problems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AGED 260 or equivalent.

AGED 490 Adult Learning Principles credit: 3 or 4 Hours.

Theory and practice of adult learning including: overview of teaching and learning theory related to adults; core adult learning principles; individual and situational learning differences; goals and purposes for learning; and the future of adult learning. 3 undergraduate hours. 4 graduate hours.

AGED 499 Seminar credit: 1 to 4 Hours.

Special topics in agricultural education. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 undergraduate or graduate hours as topics vary.

Agricultural Leadership Education Concentration

The Agricultural Leadership Education concentration prepares students for educational leadership, training and outreach positions in agricultural, extension, community and governmental agencies. Coursework focuses on designing educational/training programs, making professional presentations, leadership development, teaching/training methods and interpersonal communications. A 4 to 12-week business/agency summer internship is required. The curriculum provides the flexibility for students to specialize in a chosen area of agriculture.

Code	Title	Hours
Agricultural Leadership Education Concentration Required		
ACE 231	Food and Agribusiness Mgt	3
ANSC 100	Intro to Animal Sciences	4
FSHN 101 or FSHN 120	Intro Food Science & Nutrition Contemporary Nutrition	3
HORT 100	Introduction to Horticulture	3
AGED 260	Intro to Leadership Studies	3
AGED 280	Training Needs Assessment	2
AGED 293	Ag Leadership Internship	1-6
AGED 300	Training and Development	4
AGED 310	Prof Dev in Leadership Ed	2
AGED 340	Leadership Ethics & Pluralism	3
AGED 380	Leadership in Groups and Teams	3
AGED 451	Professional Dev in Ag Ed	2

AGED 480	Collaborative Leadership	3-4
EPSY 201	Educational Psychology	3
Select one of the following:		3-4
AGED 360	Advanced Leadership Studies	
AGED 400	Foundations of Ag & Extn Ed	
AGED 430	Youth Development Programs	
AGED 490	Adult Learning Principles	
BADM 310	Mgmt and Organizational Beh	
PSYC 245	Industrial Org Psych	
Total Hours		126

Agricultural Science Education Concentration

The Agricultural Science Education concentration prepares students to teach agricultural science, agribusiness, agricultural mechanics and horticulture in Illinois high schools. State of Illinois certification requirements include a minimum of 2,000 hours of employment experience in agriculture. Teacher certification students must maintain a 2.5 GPA or above to remain in good standing. Review procedures are provided by the Council on Teacher Education.

Code	Title	Hours
Agricultural Science Education Concentration Required		
AGED 250	Observation and Program Analys ¹	4
AGED 350	Early Field Experience	3
AGED 420	Curr Design & Instruction	3
AGED 450	Program Delivery and Eval	4
CI 473	Disciplinary Literacy	3
EPS 201	Foundations of Education	3-4
or EPS 202	Foundations of Education-ACP	
EPSY 201	Educational Psychology	3
SPED 405	Gen Educator's Role in SPED	3
EDPR 442	Educational Practice in Secondary Education	8
Technical Subject Matter Required		
ANSC 100	Intro to Animal Sciences	4
ACE 232	Management of Farm Enterprises	3 or 4
HORT 100	Introduction to Horticulture	3
FSHN 101	Intro Food Science & Nutrition	3
TSM 100	Technical Systems in Agr	3
Select one of the following:		3
AGED 260	Intro to Leadership Studies	
AGED 280	Training Needs Assessment	
AGED 340	Leadership Ethics & Pluralism	
AGED 360	Advanced Leadership Studies	
AGED 380	Leadership in Groups and Teams	
AGED 400	Foundations of Ag & Extn Ed	
AGED 430	Youth Development Programs	
AGED 490	Adult Learning Principles	
Total Hours		126

¹ Via enrollment in AGED 250, students are concurrently enrolled in EDPR 203.

Food and Environmental Systems Minor

The Minor in Food and Environmental Systems is designed primarily for students who are enrolled in the Agricultural Communications Major which is jointly administered by the College of ACES and the College of Media. The eighteen hours of coursework in this minor provide a significant background in consumer sciences, agricultural management and production, and environmental and natural resources to support the study and practice of Agricultural Communications. Selection of additional courses beyond the core will depend on the student's major and interests.

Enrollment in ACES 102, FSHN 101, and NRES 100, four hours from selected 100- and 200-level courses, and six hours of 300- and 400-level courses as listed below is required for all students completing this minor. Courses in the minor cannot be taken Credit/No Credit.

This minor is administratively based in ACES Academic Programs. Student advising will take place in this unit.

Required Courses for the Food and Environmental Systems Minor

Code	Title	Hours
ACES 102	Intro Sustainable Food Systems	3
FSHN 101	Intro Food Science & Nutrition	3
NRES 100	Fundamentals of Env Sci	3
Select a minimum of three hours from the following introductory level courses:		3
ANSC 100	Intro to Animal Sciences	
ANSC 101	Contemporary Animal Issues	
ANSC 110	Life With Animals and Biotech	
ANSC 223	Animal Nutrition	
ANSC 224	Animal Reproduction and Growth	
ANSC 250	Companion Animals in Society	
ACE 100	Agr Cons and Resource Econ	
ACE 210	Environmental Economics	
ACE 222	Agricultural Marketing	
ACE 231	Food and Agribusiness Mgt	
ACE 232	Management of Farm Enterprises	
ACE 251	The World Food Economy	
CPSC 112	Introduction to Crop Sciences	
CPSC 116	The Global Food Production Web	
CPSC 226	Introduction to Weed Science	
FSHN 120	Contemporary Nutrition	
or FSHN 220	Principles of Nutrition	
FSHN 232	Science of Food Preparation	
FSHN 260	Raw Materials for Processing	
HORT 105	Vegetable Gardening	
HORT 106	The Sustainable Home Garden	
NRES 109	Global Environmental Issues	
NRES 201	Introductory Soils	
NRES 219	Principles of Ecosystem Mgmt	
NRES 287	Environment and Society	
PLPA 204	Introductory Plant Pathology	
TSM 100	Technical Systems in Agr	

Select a minimum of six hours from the following advanced level courses:

ACE 306	Food Law
ACE 310	Natural Resource Economics
ACE 346	Tax Policy and Finan Planning
ACE 403	Agricultural Law
ACE 406	Environmental Law
ACE 411	Environment and Development
ACE 430	Food Marketing
ACE 431	Agri-food Strategic Management
ACE 432	Farm Management
ACE 435	Global Agribusiness Management
ACE 436	Intl Business Immersion
ACE 451	Agriculture in Intl Dev
ACE 456	Agr and Food Policies
ANSC 305	Human Animal Interactions
ANSC 306	Equine Science
ANSC 309	Meat Production and Marketing
ANSC 322	Livestock Feeds and Feeding
ANSC 363	Behavior of Domestic Animals
ANSC 400	Dairy Herd Management
ANSC 401	Beef Production
ANSC 402	Sheep Production
ANSC 403	Pork Production
ANSC 404	Poultry Science
ANSC 405	Advanced Dairy Management
ANSC 406	Zoo Animal Conservation Sci
ANSC 407	Animal Shelter Management
ANSC 409	Meat Science
ANSC 422	Companion Animal Nutrition
ANSC 423	Advanced Dairy Nutrition
ANSC 431	Advanced Reproductive Biology
ANSC 438	Lactation Biology
ANSC 444	Applied Animal Genetics
ANSC 446	Population Genetics
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 467	Applied Animal Ecology
CPSC 407	Diseases of Field Crops
CPSC 418	Crop Growth and Management
CPSC 431	Plants and Global Change
FSHN 302	Sensory Evaluation of Foods
FSHN 322	Nutrition and the Life Cycle
FSHN 425	Food Marketing
FSHN 428	Community Nutrition
HORT 464	International Hort Products
NRES 325	Natural Resource Policy Mgmt
NRES 330	Environmental Communications ¹
NRES 348	Fish and Wildlife Ecology
NRES 370	Environmental Sustainability
NRES 409	Fishery Ecol and Conservation

6

NRES 419	Env and Plant Ecosystems
NRES 420	Restoration Ecology
NRES 430	Comm in Env Social Movements ¹
NRES 431	Plants and Global Change
NRES 474	Soil and Water Conservation
NRES 488	Soil Fertility and Fertilizers
PLPA 407	Diseases of Field Crops
TSM 311	Humanity in the Food Web
Total Hours	18

¹ Theses courses may only be used to satisfy the requirements of the major in Ag Communications or the Food and Environmental Systems minor, but not both.

International Minor in ACES

This minor will help students prepare for life and work in a global society and will provide the international skills employers expect of our graduates. While it is the intent of this minor to encourage students to spend time abroad and to develop proficiency in a foreign language, neither is required.

Students enrolled in this minor will be able to draw on resources outside the college as well as select from courses offered by the seven departments in the College of ACES. At least 12 of the total 21 credit hours required for this minor must be College of ACES courses. At least 6 credit hours (ACES or non-ACES) must come from 400-level courses. Courses in the minor cannot be completed Credit/No Credit.

This minor is administratively based in ACES Academic Programs. Student advising will take place in this unit.

Required Courses for the ACES International Minor

Code	Title	Hours
Global Study in the Social Science Disciplines		
Minimum of 3 hours, maximum of 9 hours selected from:		3-9
ACE 251	The World Food Economy	
ACE 411	Environment and Development	
ACE 435	Global Agribusiness Management	
ACE 451	Agriculture in Intl Dev	
ACE 455	Intl Trade in Food and Agr	
AGCM 320	Public Information Campaigns	
ANTH 262	Women's Lives	
BADM 380	International Business	
BADM 381	Multinational Management	
BADM 382	International Marketing	
ECON 420	International Economics	
ECON 450	Development Economics	
EPS 426	Comparative Education	
FIN 451	Intl Financial Markets	
GEOG 204	Cities of the World	
GEOG 210	Social & Environmental Issues	
GEOG 410	Green Development	
HDFS 220	Families in Global Perspective	
HIST 258	20thC World to Midcentury	
HIST 259	20thC World from Midcentury	

NRES 287	Environment and Society
PS 241	Comp Politics in Dev Nations
PS 280	Intro to Intl Relations
PS 382	Intl Political Economy
PS 389	International Communications
REL 110	World Religions
UP 423	Community Development in the Global South

Global Study in the Natural Science Disciplines

Minimum of 3 hours, maximum of 9 hours, selected from: 3-9

ANSC 205	World Animal Resources
ATMS 140	Climate and Global Change
CPSC 116	The Global Food Production Web
CPSC 431	Plants and Global Change
HORT 464	International Hort Products
NRES 109	Global Environmental Issues
PLPA 200	Plants, Pathogens, and People
TSM 311	Humanity in the Food Web

Regional Specialization

The following four approaches/options can be used (separately or in combinations) to complete this portion of the minor. 3-9

Academic credit earned through study or supervised activities outside the U.S. through:

ACES 293	International Internship
ACES 298	International Experience
ACES 299	ACES Study Abroad

Completion of one or more of the following courses offered by the Department of Agricultural and Consumer Economics

ACE 254	Economic Systems in Africa
ACE 452	The Latin American Economies
ACE 454	Econ Dev of Tropical Africa

Completion of courses that are approved by Area Studies Programs (see minor advisor)

Center for African Studies
Center for East Asian and Pacific Studies
Center for Latin American and Caribbean Studies
Program in South Asian and Middle Eastern Studies
European Union Center

Foreign language courses that exceed College of ACES graduation requirements.

Total Hours 21

Leadership Studies Minor

<http://leadership.illinois.edu/minor-leadership-studies/overview>

The Minor in Leadership Studies provides instruction in leadership theories and their applications and is open to all undergraduate students who have a minimum 2.0 GPA. The minor requires a total of seventeen or eighteen semester hours: nine hours of required foundational courses, five to six hours of elective context courses, and three hours in a capstone course.

Code	Title	Hours
Requirements		
AGED 260	Intro to Leadership Studies	3
AGED 380	Leadership in Groups and Teams	3
PSYC 245	Industrial Org Psych	3
Electives from a list of leadership context courses ¹		5-6
AGED 480	Collaborative Leadership	3

Students should bring the Statement of Intent to Pursue a Campus-Approved Minor form (<http://provost.illinois.edu/educational-innovation/advising-resources/pursuing-undergraduate-minor>) to ACES Academic Programs, 128 Mumford Hall.

¹ For more information about this minor and to view the elective course list visit www.leadership.illinois.edu/minor-leadership-studies/overview (<http://www.leadership.illinois.edu/minor-leadership-studies/overview>) or contact the Program Coordinator, Lisa Burgoon, at burgoon@illinois.edu.

Applied Health Sciences, College of

Cheryl Hanley-Maxwell, Dean

Reginald Alston, Associate Dean for Academic Affairs

112A Huff Hall

1206 S. Fourth Street

Champaign, IL 61820

PH: (217) 333-2131

FX: (217) 333-0404

<http://www.ahs.illinois.edu>

The programs in the College of Applied Health Sciences provide students with a holistic understanding of health and human behavior. Drawing on the expertise of our faculty and industry partners, we equip students to design, develop and implement initiatives that enhance health and well-being. **Students with an interest in health professions, administration, education and advocacy or public policy can find a program of study that will match their interest in the College of Applied Health Sciences.**

As America's approach to health and wellness changes, health care is no longer limited to the traditional practice of doctors and nurses. As a result, the growth market lies in areas related to prevention, quality of life, health planning, and therapeutic intervention. As society struggles with these issues, the College and its graduates will continue to play an important role in shaping the future. A degree from the College of Applied Health Studies allows graduates to pursue a wide array of scientific and professional careers.

Students in the College of Applied Health Sciences enjoy many advantages: high quality degree programs, small classes, an emphasis on student-faculty interaction, active research programs, the opportunity to participate in professional student organizations, the availability of internships, and the largest separate college library in our field.

Along with the relationships they establish with faculty, students work closely with an academic adviser. The College of Applied Health Sciences requires students to meet with advisers to develop a relationship that will guide their studies and experiences while on campus. A solid network of student services available at the University of Illinois enhances the advising experience.

Programs of Study

The bachelor of science degree is offered in five academic areas:

Community Health, Interdisciplinary Health Sciences, Kinesiology, Recreation, Sport and Tourism, and Speech and Hearing Science.

- Advising services are available to assist with career information and the development of appropriate courses of study.
- Honors programs are available for outstanding students at the college and campus level.
- Internship experiences are required with most departmental curricula. Quality placements are available throughout the United States and around the world in specific degree programs.
- Study abroad programs are available around the world.
- Students have access to the nation's third largest academic library, including an excellent college library, reference service, inter library loan system, and term-paper counseling system.

Community Health Program

Health care is among the most rapidly evolving industries in the United States today. People in all settings are concerned about maintaining access to effective health care and the costs of securing it. An aging population places greater demand upon health care providers. To address these issues, hospitals and clinics have reorganized, consolidated, and introduced educational components designed to teach patients how to manage their personal health concerns. At the same time, business and industry leaders have invested millions of dollars in new health programs for their employees. Federal and state governments are evaluating ways to make health care more effective and less costly.

Recognized as one of the leaders in the United States with its strong emphasis on research and excellence in scholarship, the Community Health Program prepares students for careers in the rapidly changing world of health and rehabilitative services. It is an exciting time in health care with emerging behavioral and environmental health concerns that challenge the field for new theories, policies, and technological innovations. The department's programs place special emphasis on the community context in which health care is delivered. Students can become involved in a variety of research projects related to issues such as bioethics, cancer epidemiology, disability studies, cultural aspects of health and disability, information technologies in health education, and health policy.

The Community Health Program offers students the opportunity to focus their studies in Health Planning and Administration, Health Education or Rehabilitation Studies. In addition to the core of community health courses, course work is completed in areas related to business, health behavior, marketing, and promotion. The degree is culminated with a fieldwork experience in setting appropriate to the area of concentration. **Graduates are equally prepared for jobs in progressive careers such as health education, policy, planning, and administration or for graduate study in areas such as medicine, nursing, and physical therapy.**

Interdisciplinary Health Sciences Program

Based on the premise that human health is too complex to be addressed within a single discipline, the Interdisciplinary Health Sciences (i-Health) degree program integrates knowledge from a variety of social and behavioral fields, such as psychology and sociology, as well as the applied health sciences. While the core curriculum provides students with a solid understanding of human health, students may build a customized program addressing their specific interests within three

concentration areas; Health and Aging, Health Behavior Change, and Health Diversity.

Students in this program are equipped to assume leadership roles in a variety of health-related careers, as well as professional and graduate degree programs. **Graduates have pursued careers in pharmaceutical sales, health education, corporate wellness and patient/client relations.**

Graduates are also fully prepared to pursue graduate school in a variety of professional or biomedical programs such as law, medicine, physical and occupational therapy, nursing, or public health.

Kinesiology Program

The Kinesiology Program is committed to the study and research of human movement in all its dimensions. Undergraduate study focuses on exercise stress, movement efficiency, and fitness; the social, cultural, and psychological aspects of participation in physical activity and sport; coordination, control and skill of physical activity; physical growth, development, and body form throughout the life span; the effects of therapeutic techniques of kinesiology upon recovery from physical injury; and the instructional process of teaching/coaching of physical activity and sport.

The curriculum combines a comprehensive liberal arts and sciences education with in-depth study in a particular area of interest. The program of study provides knowledge and understanding essential for human movement and sport careers in either public or private agencies. The hours required for graduation include prescribed courses for all students as well as requirements determined by the various areas of emphasis selected by the student. Teaching and research emphasize hands-on learning through the use of technology and modern laboratory equipment. **Graduates find employment in a variety of fields including teaching, corporate fitness, coaching, and athletic training. Many students continue their education and become physical therapists, physicians, exercise physiologists, and sport psychologists.**

Recreation, Sport and Tourism

The Department of Recreation, Sport and Tourism is internationally renowned for its excellence, low student-faculty ratio, ethnic and cultural diversity, and an extensive alumni network. In short, studying recreation, sport and tourism at the University of Illinois is an ideal way to prepare for a future of leadership in the world's most vigorous and exhilarating industry.

The curriculum in Recreation, Sport and Tourism prepares students to design, manage, and deliver services to a variety of populations and provides a firm foundation from which students may pursue graduate studies. A broad general education is emphasized and complemented with a core of professional courses which touch topics such as leadership, marketing, administration and human resource management. Beyond a strong core integrating leisure theory, management, and research, the program allows students to focus their studies in Recreation Management, Sport Management or Tourism Management. **Recreation, sport and tourism offer outstanding career prospects because they are each facets of one of the world's fastest growing industries. Graduates have enjoyed successful careers in amateur and professional sport organizations, public and commercial recreation organizations, resorts, and conference and convention centers.**

Speech and Hearing Science

Research has shown that communication is a key element in resolving the major problems of our society; improving communication for all people is an overall goal of study in speech and hearing science. In the Department of Speech and Hearing Science, students learn about human

interpersonal communication. Through studies in speech-language pathology and audiology, they focus on the prevention, diagnosis, and treatment of hearing, speech, and language disorders in people of all ages.

This major also equips students with strong oral and written communication skills and necessary tools to enter today's job market. **Graduates hold positions in school systems, hospitals, medical practices, and clinics. They also work in government agencies, research laboratories, and various businesses. A baccalaureate degree in speech and hearing science also prepares students to enter a graduate program in speech-language pathology or audiology or other areas including psychology, special education, business, medicine, and dentistry.**

Requirements for Admission

College Preparatory Subjects	Semesters of Course Work Required	Semesters of Course Work Recommended
English	8	8
Mathematics	6	6
One foreign language ¹	4	8
Laboratory science (not general science)	4	
Social studies	4	4
Flexible academic units: Two courses from any of the five subject categories. Approved art, music, or vocational education courses may be included.	4	
Total	30	

¹ At least 6 semesters of the same foreign language should be taken to meet the graduation requirement.

Special Programs

Honors at Graduation

Graduation from the College of Applied Health Sciences with any honors designation requires that a student must have attained at the University of Illinois at Urbana-Champaign a specific minimum cumulative grade point average based on a minimum of 55 semester hours in residence.

- Bronze Tablet (see Graduation with Honors section)
- Dean's List (see Graduation with Honors section)
- Highest Honors: 3.75 to 4.0
- High Honors: 3.5 to 3.74
- Honors: 3.25 to 3.49

Edmund James Scholars

The James Scholar Program is a University-wide honors program established to encourage undergraduate research and independent study and to foster scholarly endeavors.

- Community Health (p. 90)
- Interdisciplinary Health Sciences (p. 106)
- Kinesiology (p. 93)
- Recreation, Sport and Tourism (p. 99)
- Speech and Hearing Science (p. 100)

- Interdisciplinary Minor in Aging (p. 106)
- Speech and Hearing Science (p. 101)

Departments

- Kinesiology and Community Health (p. 89)
- Recreation, Sport and Tourism (p. 98)
- Speech and Hearing Science (p. 100)

Kinesiology and Community Health

Amy Woods, Department Head

117 Huff Hall
1206 South Fourth Street
PH: (217) 244-0823

The Kinesiology (p. 93) curriculum leads to a bachelor of science degree that will prepare students for careers in human movement-related fields and/or advanced professional or graduate study. The undergraduate program provides the student with a broad general education, a departmental core integral to the understanding of the diverse aspects of human movement, and a correlate area of courses specific to the student's area of concentration within Kinesiology.

The Community Health (p. 89) Program at the University of Illinois prepares students in the ever changing world of health care and health behavior as practitioners and offers three concentrations at the undergraduate level: Health Education and Promotion, Health Planning and Administration, and Rehabilitation Studies. All curricula are built on a foundation of general education courses which emphasize communication skills and critical thinking. The Professional Core courses are designed to help students develop skills in planning, implementation, and evaluation in the context of health services and programs. Students must complete an internship during their senior year in a setting related to the degree and their interests. Recent internship sites have included the American Heart Association, the American Red Cross, hospitals, nursing homes, fitness centers, work site health education programs, and substance abuse prevention centers.

- Community Health (p. 89)
- Kinesiology (p. 93)

Community Health

Amy Woods, Department Head

117 Huff Hall
1206 South Fourth
Champaign
PH: (217) 244-0823
<http://www.kch.illinois.edu>

The Community Health Program at the University of Illinois prepares students in the ever changing world of health care and health behavior as practitioners and offers three concentrations at the undergraduate level: Health Education and Promotion, Health Planning and Administration, and Rehabilitation Studies. All curricula are built on a foundation of general education courses which emphasize communication skills and critical thinking. The Professional Core courses are designed to help students develop skills in planning, implementation, and evaluation in the context of health services and programs. Students must complete

an internship during their senior year in a setting related to the degree and their interests. Recent internship sites have included the American Heart Association, the American Red Cross, hospitals, nursing homes, fitness centers, work site health education programs, and substance abuse prevention centers.

Further information is available from the Academic Affairs Office, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, 1206 S. Fourth Street, 2021 Khan Annex, Huff Hall, Champaign, IL 61820, (217) 333-2307.

A 5 year BS MPH joint degree program is available for students majoring in Community Health, I-Health, or Kinesiology. Students apply for the program in the latter part of their third year (junior year) of study. Students accepted into the BS MPH joint degree program take 12 credit hours of coursework in their senior year that apply to both BS and MPH degrees. In the 5th year of study, students complete the remaining requirements for the MPH degree, and graduate simultaneously with both BS and MPH degrees. A summary of the requirements for the MPH degree is provided here (p. 718). The requirements are explained in more detail on the MPH program website: <http://www.mph.illinois.edu/Program/>.

For the Degree of Bachelor of Science in Community Health Requirements Including General Education

The Community Health Program requires certain courses from the approved lists be taken as noted below. The prescribed courses prepare the student for upper division study and may be used to satisfy General Education Requirements provided they are on the appropriate General Education List.

Code	Title	Hours
Communication Arts		
	Composition I and an approved speech performance course; or CMN 111 and CMN 112	6-7
	Advanced Composition (CHLH 304 fulfills requirement)	3-4
Quantitative Reasoning I & II		
	From approved campus list (must include a course in statistics from approved campus list) (CHLH 244 and CHLH 421 fulfills requirement)	6
Humanities and the Arts		
	From approved campus list (CHLH 260 fulfills 3 hours of requirement)	9
Social and Behavioral Sciences		
	From approved campus list	9
Natural Sciences and Technology		
	From approved campus list	9
Cultural Studies ¹		
	From Western cultures approved campus list	3
	From U.S. minority cultures or non-Western cultures approved campus list	3
	Foreign Language: Completion through the third level of the same language in high school or college	
Total Hours		48-50

¹ Courses in cultural studies may be completed through other categories where appropriate.

Kinesiology and Community Health Department Core Requirements

Code	Title	Hours
Kinesiology and Community Health Department Core Requirements		
CHLH 101	Introduction to Public Health	3
KIN 122	Physical Activity and Health	3
Community Health Program Core Requirements		
CHLH 100	Contemporary Health	3
CHLH 125	Orientation KIN & Comm Health	1
CHLH 201	Public Health Research Methods	3
CHLH 210	Community Health Organizations	2
CHLH 250	Health Care Systems	3
CHLH 274	Introduction to Epidemiology	3
CHLH 304	Foundations of Health Behavior	4
CHLH 410	Public Health Practice	4
CHLH 421	Health Data Analysis	3 or 4

Areas of Concentration

- Health Education and Promotion (p. 93)
- Health Planning and Administration (p. 93)
- Rehabilitation Studies (p. 93)

Correlate Areas

Each student completes correlates that are planned with the assigned advisor. These courses are designed to enhance and support career goals.

Code	Title	Hours
	Select courses from the departmentally approved list.	18

Summary of Degree Requirements

Code	Title	Hours
	General Education	48-50
	Kinesiology and Community Health Core	6
	Community Health Professional Core	26
	Area of Concentration	18
	Correlate area	18
	Free electives	10-12
Total Hours		128

CHLH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHLH>)

Courses

CHLH 100 Contemporary Health credit: 3 Hours.

Examines concepts of health and health promotion in contemporary society with emphasis on a healthy lifestyle for individuals and groups. Topics include self care, health insurance, exercise, nutrition and weight control, sexuality, contraception, tobacco, alcohol, cardiovascular health, infectious diseases, and cancer.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

CHLH 101 Introduction to Public Health credit: 3 Hours.

Introduction to the nation's public health system; includes an overview of the basic concepts and core functions of public health practice, the scope of applications, and the variety of service organizations (both public and private) that shape public health.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CHLH 110 Intro to the Health Sciences credit: 3 Hours.

This elective course provides students with a general overview of the day to day job requirements and responsibilities of variety of allied healthcare professionals and how they interact with other members of the healthcare team. Students will also learn about the wide variety of practice settings available along the continuum of care. Through the course, students will learn basic medical terminology, concepts and skills in preparation for internships and graduate school. Same as KIN 110.

CHLH 125 Orientation KIN & Comm Health credit: 1 Hour.

Serves as an introduction to the Kinesiology and Community Health Department and provides an overview of the Kinesiology and Community Health curricula, areas of study, and opportunities available for careers in the field. Enrollment required for Community Health freshmen and transfer students. Credit is not given for both CHLH 125 and KIN 125.

CHLH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated up to a maximum of 10 hours.

CHLH 200 Mental Health credit: 2 Hours.

Introduction to the science of mental health and illness including personality development, the genesis and manifestations of mental illness, and the maintenance of mental health; taught with an emphasis on the preventive and medical aspects of mental health.

CHLH 201 Public Health Research Methods credit: 3 Hours.

This course is designed to provide students with an introduction to the basic principles and concepts underlying research methods on public health. Topics include conceptualization, measurement, research design, sampling, evaluation, data sources and ethics. The students will be exposed to a wide range of quantitative, and mixed methods.

CHLH 206 Human Sexuality credit: 2 Hours.

Emphasizes the behavioral aspects of human sexuality. Topics include: birth control; prenatal care, pregnancy and childbirth; sex roles; premarital sex; lifestyles; marriage and divorce.

CHLH 210 Community Health Organizations credit: 2 Hours.

Overview of institutions and agencies which provide health information, education, services, and care. Includes historical foundations, constituencies, organizational goals and structure, funding and expenditures, modes of service delivery, political and ethical issues.

CHLH 243 Drug Use and Abuse credit: 2 Hours.

Introduction to the biological, psychological, pharmacological, and legal aspects of drug use and abuse; surveys community and university resources concerned with drug use and abuse; emphasizes personal and social actions for responsible drug use.

CHLH 244 Health Statistics credit: 3 Hours.

Introduction to biostatistics. Students learn concepts necessary to understand statistical inference as applied to health issues.
This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CHLH 250 Health Care Systems credit: 3 Hours.

Overview of the major issues confronting health care systems from a macro perspective. Identification and analysis of the functions, major participants and trends in health care systems in the United States and abroad. Attention on current and emerging issues having implications for health care systems in industrialized nations.

CHLH 260 Introduction to Medical Ethics credit: 3 Hours.

Course stresses normative bioethics: decisions about what is ethical behavior in a variety of real and practical issues. Analysis of medical ethical cases at the individual, community and wider national and international levels will be addressed. Approved for both letter and S/U grading.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

CHLH 274 Introduction to Epidemiology credit: 3 Hours.

Basic concepts and methods of epidemiology; patterns of disease occurrence; applications of epidemiology to health education, health services administration and planning, health policy, and environmental health.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CHLH 304 Foundations of Health Behavior credit: 4 Hours.

Examination of the application of the social and behavioral sciences to health and health behavior. Psychological, social psychological, and sociological approaches to health behavior are analyzed. Topics covered include development of health attitudes and behaviors, perceptions of health and illness, methods of changing health behavior and patient-provider interaction. Prerequisite: CHLH 100, or consent of instructor; completion of the campus Composition I requirement.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci
Advanced Composition

CHLH 314 Introduction to Aging credit: 3 Hours.

A multidisciplinary introduction to the study of aging; the social, psychological and physiological context of changing roles in later life; public and private policies that affect older people and their families. Same as HDFS 314, RST 314, PSYC 314, and REHB 314.

CHLH 330 Disability in American Society credit: 3 Hours.

Same as REHB 330. See REHB 330.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CHLH 336 Tomorrow's Environment credit: 3 Hours.

Same as CPSC 336 and ENVS 336. See CPSC 336.

CHLH 340 Health Promotion Practicum credit: 3 Hours.

Preparation and presentation of lifestyle workshops to campus community groups. Practica selected from one or more of the following topics: chemical education, sexuality, stress management or campus acquaintance rape education (CARE). Same as SOCW 350. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing or consent of instructor.

CHLH 365 Civic Engagement in Wellness credit: 3 Hours.

Same as AHS 365, KIN 365, RST 365, and SHS 370. See KIN 365.

CHLH 380 Orientation to Internship credit: 1 Hour.

Provides students with information concerning placement in internship. Topics include internship requirements; student responsibilities; preparation of resumes and cover letters; selecting an organization or site; interviewing; issues of professional development. Prerequisite: Junior standing.

CHLH 390 Honors credit: 2 Hours.

Same as KIN 390 and RST 390. See KIN 390.

CHLH 393 Special Projects credit: 2 or 3 Hours.

Special projects in research and independent investigation in any phase of health, kinesiology, recreation, and related areas selected by the students. May be repeated to a maximum of 12 hours.

CHLH 402 Cancer Epidemiology credit: 3 or 4 Hours.

Class on cancer epidemiology will address the investigation of the descriptive and analytic epidemiology of cancer. It will include information on the development of malignancy and characteristics of tumor cells. The investigation of the relationship between various risk and protective factors and the development of different types of cancer will be discussed in an epidemiologic context. The role of primary prevention and secondary prevention (screening) will also be covered. 3 undergraduate hours. 4 graduate hours. Prerequisite: Previous or concurrent class in epidemiology or consent of instructor. Junior standing or above.

CHLH 404 Gerontology credit: 3 or 4 Hours.

Interdisciplinary approach to the study of aging and the aged from physiological, psychological, and social perspectives. Same as HDFS 404. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 405 Aging with Disability credit: 3 or 4 Hours.

Due to improvements in medical management, persons with disabilities are living longer lives. They, however, face new problems and impairments. This course will explore the psychological and physical changes persons with disabilities face as they age. In addition, the course examines the impact that aging with disability has on the US healthcare system, legislation and healthcare professionals. 3 undergraduate hours. 4 graduate hours.

CHLH 407 Disability, Culture & Society credit: 3 or 4 Hours.

Examines the cultural and social contexts of disability, their consequences for the experience and management of disability, and implications for cultural competence in disability-related research and practice. Same as ANTH 404, KIN 407, and REHB 407. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 409 Women's Health credit: 3 Hours.

Examines the culture of women in relationship to their health. Study is devoted to selected health care issues, developmental and physiological changes in the life cycle, health problems that affect women, and the maintenance of health. Same as GWS 409. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHLH 100 or equivalent; or consent of instructor.

CHLH 410 Public Health Practice credit: 4 Hours.

Theory and practice of public health promotion as they relate to educational approaches in solving community health problems. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHLH 210 or consent of instructor.

CHLH 415 International Health credit: 3 or 4 Hours.

Explores the various factors that impact the health of populations around the world. Political, cultural, social, environmental and other domains will be examined in relation to how they affect the health of residents of various countries. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 421 Health Data Analysis credit: 3 or 4 Hours.

Introduces health data analysis, sources and uses of health data, collection techniques and classification procedures, commonly used health indices, techniques of rate adjustment, graphic presentation of data as they relate to the planning, conducting, and evaluating of community health programs. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Quantitative Reasoning I course or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning II

CHLH 429 Research Techniques credit: 4 Hours.

Study of the ethics of research, research literature, research designs, and health measurement techniques utilized in the public health sciences. Emphasizes developing skills in analyzing research and assessment of health behaviors, and problem identification and research design for individual student research projects. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHLH 590, or SOC 485, or EPSY 480; or equivalent.

CHLH 439 Health Applications of GIS credit: 3 Hours.

Same as GEOG 439 and PATH 439. See PATH 439.

CHLH 444 LGBT Indiv, Fam & Community credit: 3 or 4 Hours.

Same as HDFS 444. See HDFS 444.

CHLH 448 Exercise & Health Psychology credit: 3 or 4 Hours.

Same as KIN 448. See KIN 448.

CHLH 455 Health Services Financing credit: 3 Hours.

Examines major topics and emerging trends in health financing, including sources of revenue, public and private financing organizations, reimbursement and sources of revenue to health providers, and capital financing in the health care industry. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

CHLH 456 Organization of Health Care credit: 2 to 4 Hours.

Examines types and performance of health care organizations (e.g., doctors' offices, clinics, hospitals, and nursing homes), networks of health services, evaluation of health care, and social policy issues relating to organizations in the U. S. health care system. Same as SOC 476. 2 to 4 undergraduate hours. 2 to 4 graduate hours.

CHLH 457 Health Planning credit: 3 Hours.

Survey of the history and objectives of health planning as related to medical care delivery in the United States; methods of health, institutional and community planning; planning and marketing concepts and methods; analysis of consumer behavior, public policies, and private competitive forces. Same as SOCW 457. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHLH 250 and junior standing.

CHLH 458 Health Administration credit: 3 Hours.

Examines management principles relative to health care institutions emphasizing goal setting, decision making, system analysis, organizational structure, conflict resolution, and leadership theories. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate standing, or consent of instructor.

CHLH 461 Environ Toxicology & Health credit: 3 Hours.

Same as ENV5 431 and IB 485. See IB 485.

CHLH 465 Social Marketing Health&Behav credit: 3 or 4 Hours.

Same as CMN 465. See CMN 465.

CHLH 469 Environmental Health credit: 3 or 4 Hours.

Appreciation of the concepts and mechanisms used to prevent or control environmental conditions that may lead to infectious or other environmentally induced diseases. Presents topics from a public health perspective that include air pollution, water supply management, waste management, radiation protection, food hygiene, occupational health and disaster management. Same as ENVS 469. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CHLH 274 or equivalent.

CHLH 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as LLS 473, SOC 473, and SOCW 473. See LLS 473.

CHLH 474 Principles of Epidemiology credit: 4 Hours.

Investigation of descriptive epidemiologic techniques (comparisons of disease rates in different populations) and analytic study designs (case-control and cohort studies and randomized trials). Applications to and examples from infectious and chronic diseases are presented. Group exercises involving the investigation of epidemiologic problems and application of analytic epidemiologic techniques are performed. Same as ENVS 474 and PATH 474. 4 undergraduate hours. 4 graduate hours. Prerequisite: One statistics course.

CHLH 485 Community Health Internship credit: 8 Hours.

Supervised field experience in official, voluntary and professional health agencies; designed to provide students with work experience in actual field situations. Students work in University approved health agencies for a minimum of 320 undergraduate hours. 8 undergraduate hours. 8 graduate hours. Approved for S/U grading. Prerequisite: Senior standing in Community Health.

CHLH 494 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

Health Education and Promotion

Code	Title	Hours
FSHN 120	Contemporary Nutrition	3
CHLH 200	Mental Health	2
CHLH 206	Human Sexuality	2
CHLH 243	Drug Use and Abuse	2
CHLH 380	Orientation to Internship	1
CHLH 485	Community Health Internship	8

Health Planning and Administration

Code	Title	Hours
CHLH 455	Health Services Financing	3
CHLH 457	Health Planning	3
CHLH 458	Health Administration	3
CHLH 380	Orientation to Internship	1
CHLH 485	Community Health Internship	8

Rehabilitation Studies

Code	Title	Hours
REHB 330	Disability in American Society	3
REHB 402	Medical Aspects of Disability	4
REHB 435	Work and Disability	2

CHLH 380	Orientation to Internship	1
CHLH 485	Community Health Internship	8

Kinesiology

Amy Woods, Department Head

117 Freer Hall, 906 South Goodwin, Urbana

PH: (217) 244-0823

<http://www.kch.illinois.edu>

The Kinesiology program is committed to the study and research of human movement in all its dimensions. Undergraduate study focuses on exercise stress, movement efficiency, and fitness; the social, cultural, and psychological aspects of participation in physical activity and sport; coordinaton, control, and skill of physical activity; physical growth, development, and body form throughout the lifespan; the effects of therapeutic techniques of kinesiology upon recovery from physical injury; and the instructional process of teaching/coaching of physical activity and sport.

The curriculum combines a comprehensive liberal arts and sciences education with in-depth study in a particular area of interest. The program of study provides knowledge and understanding essential for human movement and sport careers in either public or private agencies. The hours required for graduation include prescribed courses for all students as well as requirements determined by the various areas of emphasis selected by the student. Teaching and research emphasize hands-on learning through the use of technology and modern laboratory equipment. Graduates find employment in a variety of fields including teaching, corporate fitness, coaching, and athletic training. Many students continue their education and become physical therapists, physicians, exercise physiologists, and sport psychologists.

A 5 year BS MPH joint degree program is available for students majoring in Community Health, I-Health, or Kinesiology. Students apply for the program in the latter part of their third year (junior year) of study. Students accepted into the BS MPH joint degree program take 12 credit hours of coursework in their senior year that apply to both BS and MPH degrees. In the 5th year of study, students complete the remaining requirements for the MPH degree, and graduate simultaneously with both BS and MPH degrees. The requirements are explained in more detail on the MPH program website: <http://www.mph.illinois.edu/Program/>.

For the Degree of Bachelor of Science in Kinesiology

Requirements Including General Education

The Kinesiology Program requires that General Education requirements must be selected from the Campus General Education course list. The prescribed courses prepare the student for upper division study and may be used to satisfy General Education requirements provided they are on the appropriate General Education list. Specifically required General Education courses are listed below.

Code	Title	Hours
Communication Arts		
Composition I and an approved speech performance course; or CMN 111 and CMN 112		6-7
Advanced Composition (KIN 340 fulfills requirement)		3
Quantitative Reasoning I & II		

From the approved campus list		6
Humanities and Arts		
From the approved campus list		6
Behavioral and Social Sciences ¹		
KIN 140	Social Sci of Human Movement (Social Science)	3
KIN 259	Motor Development and Control	3
Natural Sciences		
KIN 150	Bioscience of Human Movement (Life Science)	3
From the approved campus physical science list		3
Cultural Studies ²		
From Western cultures approved campus list		3
From U.S. minority cultures or non-Western cultures approved campus list		3
Foreign language: Completion through the third level of the same language in high school or college		
Anatomy		
MCB 244 & MCB 245	Human Anatomy & Physiology I and Human Anat & Physiol Lab I	5
MCB 246 & MCB 247	Human Anatomy & Physiology II and Human Anat & Physiol Lab II	5
Kinesiology and Community Health Department Core		
CHLH 101	Introduction to Public Health	3
KIN 122	Physical Activity and Health	3
Kinesiology Core Requirements		
KIN 125	Orientation KIN & Comm Health	1
KIN 140	Social Sci of Human Movement ³	3
KIN 150	Bioscience of Human Movement ³	3
KIN 201	Physical Activity Research Methods	3
KIN 259	Motor Development and Control ³	3
KIN 340	Soc & Psych of Phys Activity ³	3
KIN 352	Bioenergetics of Movement	3
KIN 355	Biomechanics of Human Movement	3

¹ Students pursuing teacher licensure must complete PSYC 100 or PSYC 103 in addition to KIN 259.

² Courses in cultural studies may be completed through other categories where appropriate.

³ Fulfills University General Education Requirements

Kinesiology Program Guided Electives

Code	Title	Hours
Elective Kinesiology Courses		
All courses must be at the 200, 300, or 400 level. At least six or more hours must be at the 400 level (at least 12 hours).		12
Correlate Area Studies		
Students select a standardized correlate that will prepare them for further education toward their career goals (at least 18 hours).		18

Summary of Degree Requirements

Code	Title	Hours
General Education and supporting coursework		46
Kinesiology and Community Health Department Core		6
Kinesiology Core		22
Elective Kinesiology courses		12
Correlate Area		18
Free electives		24
Total Hours		128

Requirements for Teacher Certification

Application to the Teacher Licensure curriculum is made at the end of the sophomore year. Admission depends on meeting minimum grade point average requirements and having passed an Illinois approved test of basic skills. Approved tests consist of the Illinois Test of Academic Proficiency (TAP), ACT or SAT with approved scores. In order to remain in good standing in this program and be recommended for licensure, candidates are required to maintain UIUC, cumulative, and content area grade point averages of 2.5 (A=4.0), and a professional education grade point average of 3.0. Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade point averages. In addition, candidates must receive a B- or higher in KIN 360, KIN 361, KIN 362, KIN 363, KIN 364, and KIN 460, and meet professional standards of scholarship, ethics, and responsibility as evaluated by the Physical Education Area of Specialization Committee. In addition, students must complete all professional education and content-area courses with a grade of C or better for licensure.

In addition to the General Education requirements for all Kinesiology undergraduates, the teacher licensure requirements for students in all curricula, and the Kinesiology core requirements, students pursuing licensure to teach physical education (K-12) must include the following courses in the elective kinesiology, correlate area studies, and free electives areas:

Code	Title	Hours
Required Electives and Correlate Area Studies		
KIN 360	Adapted Physical Education	3
KIN 361	Curriculum in Grades K-6	3
KIN 362	Curriculum in Grades 7-12	3
KIN 363	Instructional Strategies in PE	3
KIN 364	Exper in the Common School	3
KIN 401	Measure & Eval in Kinesiology	3
KIN 460	Technology & Pedagogical KINES	3
KIN 260	Teaching Activities I	3
KIN 261	Teaching Activities II	2
CI 473	Disciplinary Literacy	2
EPS 201	Foundations of Education	3
EPSY 201	Educational Psychology	3
EDPR 438	Educational Practice in Special Fields	8
EDPR 442	Educational Practice in Secondary Education	8

Students may not enroll for professional education courses from the Elective Kinesiology area until they have applied to the Teacher Education K-12 program and passed an Illinois approved test of basic skills.

Approved tests consist of the Illinois Test of Academic Proficiency (TAP), ACT, or SAT with approved scores.

KIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KIN>)

Courses

KIN 100 Development Activities credit: 1 to 2 Hours.

Skills and knowledge essential for leisure-time activities which are classified as developmental activities. Prerequisites and descriptions for each developmental activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 2 hours.

KIN 101 Dance Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as dance activities. May be repeated; more than one activity (Sections A through Z) may be taken in the same term. Prerequisite: See Class Schedule for prerequisites for each dance activity.

KIN 102 Individual and Dual Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as individual and dual activities. Prerequisites for each individual or dual activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 103 Indoor Court Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as indoor court activities. Prerequisites for each indoor court activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

KIN 104 Skating Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as skating activities. Prerequisites for each skating activity are provided in the Class Schedule. Additional Ice Skating Rink Facility charges are required and provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 107 Aquatic Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as aquatic sport activities. Prerequisites for each aquatic sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 109 Team Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as team sport activities. Prerequisites for each team sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

KIN 110 Intro to the Health Sciences credit: 3 Hours.

Same as CHLH 110. See CHLH 110.

KIN 111 Prescribed Exercise credit: 1 Hour.

Prescribed exercises adapted to individual needs, capacities, and interests; open to persons with paraplegia, permanently disabled, and individuals with significant temporary disabilities who will require long term rehabilitation. Students must be registered or eligible to register with DRES. May be repeated to a maximum of 4 hours. Prerequisite: Enrollment restricted to students with permanent disabilities or disabilities which are long-term in nature. Student should be registered or eligible to register with DRES.

KIN 120 Injuries in Sport credit: 2 Hours.

Emphasizes injury mechanisms, means of injury prevention, and emergency care applied to various types of sport injuries; laboratory sessions emphasize preventive and therapeutic taping and emergency first aid. Additional fees may apply. See Class Schedule.

KIN 121 Survey of Sports Medicine credit: 3 Hours.

Introduction to sports medicine for non-kinesiology majors; includes discussion of training, conditioning, preparation for sports, injury aspects of sports, and rehabilitation.

KIN 122 Physical Activity and Health credit: 3 Hours.

Provides the scientific evidence of physical activity in preventing disease and optimizing quality of life. Teaches behavioral change strategies to achieve an active lifestyle.

KIN 125 Orientation KIN & Comm Health credit: 1 Hour.

Serves as an introduction to the Kinesiology and Community Health Department and provides an overview of the Kinesiology and Community Health curricula, areas of study, and opportunities available for a career in the field. Enrollment required for Kinesiology freshmen and transfer students. Credit is not given for both KIN 125 and CHLH 125.

KIN 130 Analysis of Basic Movement credit: 2 Hours.

Introduction to human movement through development of skills and knowledge relative to structure and function of the human body in selected physical activities including: basic postural and locomotion patterns and fundamental throwing patterns; also studies developmental aspects of typical and atypical movement skills. Emphasizes performance and qualitative analysis of movement skills.

KIN 140 Social Sci of Human Movement credit: 3 Hours.

Introduction to the social scientific aspects of human movement including sport; particular emphasis on concepts derived from the social sciences (including psychology) that are appropriate to human movement. Additional fees may apply. See Class Schedule. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

KIN 142 Contemporary Issues in Sport credit: 3 Hours.

Examines current issues in sport relative to competition, economics, race, sex, youth, educational institutions, deviant behavior, religion, psychology, and the media.

KIN 150 Bioscience of Human Movement credit: 3 Hours.

Integrates anatomical and physiological aspects of human movement; emphasizes how the body moves, physiological responses to exercise stress, physical conditioning and physical fitness. Additional fees may apply. See Class Schedule. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

KIN 160 Introduction to Kinesiology credit: 3 Hours.

Kinesiology is the interdisciplinary study of physical activity that includes a number of sub-disciplines. This course will examine these areas of study within Kinesiology from scientific, applied, and experiential perspectives. Students will study fundamental/introductory concepts associated with each area of Kinesiology, explore those concepts within research and applied contexts, and complete activities in which they experience various dimensions of those concepts.

KIN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated.

KIN 201 Physical Activity Research Methods credit: 3 Hours.

This course provides an introduction of physical activity measurement and methods. The course will focus on (a) defining physical activity and associated terms and concepts; (b) providing detailed understanding of approaches and tools for measuring physical activity; and (c) facilitating understanding of scientific methods for physical activity research (e.g., experimental and non-experimental designs).

KIN 230 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.

Same as HDFS 263 and RST 230. See RST 230.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

KIN 247 Intro to Sport Psychology credit: 3 Hours.

Analysis of the competitive sport process, with study of how personality and situational variables affect motivation, anxiety, and aggression in sport. Attention is given to the psychological skills needed by coaches and athletes for successful and enjoyable sports participation.

KIN 249 Sport & Modern Society credit: 3 Hours.

The sociological analysis of sport in modern societies with regard to social class, politics, community, education, and collective behavior. Same as SOC 249.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

KIN 257 Coordination, Control & Skill credit: 3 Hours.

Introduction to the concepts and principles of the coordination and control of movement and the development of skilled action. The course will focus on such topics as fundamental movement activities; movement control processes; acquisition, retention and transfer of skill; and the role of constraints to action. These topics have implications for understanding skilled performance, motor development and human performance in general. Additional fees may apply. See Class Schedule. Prerequisite: KIN 140 and KIN 150 or consent of instructor.

KIN 259 Motor Development and Control credit: 3 Hours.

This course provides students with an overview of motor development across the life span as well as an introduction to the discipline of motor behavior/control. Specifically, it focuses on the concepts and principles of coordination, the control of movement, and development of skilled action throughout the life span. The course focuses on such topics as the development of fundamental movement activities; movement control processes; acquisition, retention and transfer skill; and the role of constraints to action. Same as HDFS 259. Additional fees may apply. See Class Schedule. Credit is not given for both KIN 259 and KIN 257.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

KIN 260 Teaching Activities I credit: 3 Hours.

An activity-based course focusing on skills, knowledge, and teaching progressions related to territorial and net sports for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: KIN 130.

KIN 261 Teaching Activities II credit: 2 Hours.

An activity-based course focusing on skills, knowledge, and teaching progressions related to target sports, rhythms, dance and fitness activities, and adventure education activities for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: KIN 130.

KIN 262 Motor Develop, Growth & Form credit: 3 Hours.

Examination of the concepts of motor development, physical growth, and body form throughout the lifespan. Major emphasis is on the period of birth through adolescence. Same as HDFS 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

KIN 268 Children's Movement credit: 3 Hours.

Introduction and overview of kinesiology principles and physical activity related to children. Laboratory portion of class focuses on the application of information to teaching physical activity to elementary school children. Prerequisite: For non-kinesiology majors.

KIN 340 Soc & Psych of Phys Activity credit: 3 Hours.

Discusses how social and psychological processes and constraints affect human action in physical activity environments. Attention is given to socialization, personal dynamics, stratification, and ideological and economic constraints upon the manifestations of physical activity.

Prerequisite: KIN 140 or PSYC 100 and completion of the Campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

KIN 345 Sport and Society credit: 3 Hours.

Same as HIST 390. See HIST 390.

KIN 346 Case Study: Endless Summer credit: 3 Hours.

The 1966 classic film –The Endless Summer– and related films and literature are used as lenses for the historical-cultural study of human movement in the form of riding waves of water. Surf culture and films are global phenomena and by using such as unique cases, students gain mastery in cultural-interpretive theories, themes, and vocabulary, and in articulating perspectives on social roles, knowledge, and power. Same as RST 346 and MACS 346.

KIN 352 Bioenergetics of Movement credit: 3 Hours.

Study of the nature of energy transfer during physical activity; mechanisms of metabolic control, force production, cardiorespiratory support and adaptation relative to physical activity. Additional fees may apply. See Class Schedule.

KIN 355 Biomechanics of Human Movement credit: 3 Hours.

Studies the biological and mechanical principles of human motor performance; analyzes selected movement skills in depth. Additional fees may apply. See Class Schedule.

KIN 360 Adapted Physical Education credit: 3 Hours.

Organization, administration, and conduct of physical education programs for the most prevalent types of medical conditions found in school settings; emphasis on analyzing motoric needs and prescribing programs of motor activity for special populations, including individuals with mental retardation and learning disabilities Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

KIN 361 Curriculum in Grades K-6 credit: 3 Hours.

Examines the theoretical and philosophic curricular principles necessary to the development of a sound, professionally grounded, and research-based curriculum for children in grades K-6. Requires planning a variety of developmentally appropriate learning activities that are taught to children during micro-teaching experiences in the field. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

KIN 362 Curriculum in Grades 7-12 credit: 3 Hours.

Provides students with theoretical knowledge and professional practice in secondary physical education curriculum and instruction. This research-based course emphasizes effective teaching, development of content, and analysis of curricular models in grades 7-12. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

KIN 363 Instructional Strategies in PE credit: 3 Hours.

Analyzes the teaching-learning process, emphasizing the identification of instructional strategies specific to the development of skilled performance in movement activities. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program.

KIN 364 Exper in the Common School credit: 3 Hours.

Supervised practice in observing, assisting, and teaching children in elementary, junior high school, and senior high school. Emphasis is on understanding motor behavior, teacher-learner behavior, and interrelatedness with other aspects of the learning environment. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

KIN 365 Civic Engagement in Wellness credit: 3 Hours.

Provides scholarly knowledge and practical experience related to environmental, intellectual, physical, psychological, spiritual, and social wellness. Students acquire leadership and real-world skills while working in teams to develop and implement projects that facilitate health and well-being in the population of adults living in the community. Projects emphasize integrative learning and are showcased in both written and oral formats. Same as AHS 365, CHLH 365, RST 365, and SHS 370.

KIN 369 Coaching Strategies credit: 3 Hours.

Examination of philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and equipment and facility management related to coaching.

KIN 375 Comm Partners & Health credit: 3 Hours.

Same as AHS 375 and SHS 375. See SHS 375.

KIN 385 Exper in Kinesiology Research credit: 3 Hours.

Supervised laboratory experiences in kinesiology research; individual work under the supervision of members of the faculty in their respective fields. The student assists with data collection, processing, and analysis for research in progress. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

KIN 386 Exercise Instruction & Elderly credit: 3 Hours.

This course is designed to offer practical experience opportunities to undergraduate Kinesiology students aspiring to work in applied exercise fields with a diverse aged population. It will entail extensive "on the job" training through the Lifetime Fitness Program, an older adult service program of the Department of Kinesiology. Additionally, students will gain training in current program management practices. May be repeated to a maximum of 6 hours. Prerequisite: KIN 352 or consent of instructor is required. A current CPR is required at the beginning of the term and certification must remain current.

KIN 387 Exper in the Agency Setting credit: 3 Hours.

Supervised practical experience in leadership roles in nonschool agency settings; emphasis on observing, planning, and conducting physical activity programs for children and/or adults in preschool, recreation, or other social agencies. May be repeated for a maximum of 6 hours.

KIN 390 Honors credit: 2 Hours.

Course is restricted to James Scholars pursuing the Civic Commitment and Leadership Tracks. Designed to support completion of the James Scholar honors project. Same as CHLH 390 and RST 390. May be repeated to a maximum of 6 hours. Prerequisite: James Scholar standing.

KIN 391 Special Project-Problems credit: 2 or 3 Hours.

Special projects in research and independent investigation in any phase of health, kinesiology, physical education, and related areas selected by the students. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; grade-point average of 2.5; consent of instructor.

KIN 393 Honors Thesis credit: 3 Hours.

Planning, researching and writing of an honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. Paper will be presented at a suitable meeting and/or seminar. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing when enrolling; minimum grade point average (total, University and Kinesiology prefix courses) of 3.25; a minimum of one full year (2 semesters) remaining at the University of Illinois, Urbana-Champaign campus; and submission of a written proposal.

KIN 401 Measure & Eval in Kinesiology credit: 3 or 4 Hours.

Examines the concepts of observation, measurement, and evaluation of human motor performance and functioning in physical activity contexts. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140 and KIN 150, or graduate standing, or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

KIN 407 Disability, Culture & Society credit: 3 or 4 Hours.

Same as ANTH 404, CHLH 407, and REHB 407. See CHLH 407.

KIN 442 Body, Culture & Society credit: 3 or 4 Hours.

Analysis of the significant social aspects of the human body including anthropological, historical, psychological and sociological perspectives. Places emphasis on cross-culture and cross-national studies of bodily behavior with particular stress on exercise, health and sport practices. Same as GWS 442. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 249 or SOC 249, or graduate standing; or consent of instructor.

KIN 443 Psychophysiology in Ex & Sport credit: 3 or 4 Hours.

Designed to give the student an understanding of the interaction between psychological processes and physiological parameters in exercise and sport. Examines psychophysiological exercise and sport research with particular attention to relevant models and theories. Same as PSYC 443. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior or senior standing, KIN 340, or graduate standing, or consent of instructor.

KIN 444 Physical Activity and Chronic Diseases credit: 3 or 4 Hours.

Focuses on the scientific evidence regarding the health benefits of exercise, physical activity, and physical fitness in the prevention and management of chronic diseases. 3 undergraduate hours. 4 graduate hours.

KIN 447 Psych of Sport Performance credit: 3 or 4 Hours.

Outlines the social psychological parameters which influence behavior and performance in sport; emphasizes the impact of social influences upon the individual within the sport context, including such factors as achievement motivation, competition, anxiety, aggression, and personality. Same as PSYC 447. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140, KIN 247, or PSYC 201, or graduate standing, or consent of instructor.

KIN 448 Exercise & Health Psychology credit: 3 or 4 Hours.

Examines the psychological determinants and consequences of exercise and physical activity as a health promoting behavioral process. Same as CHLH 448. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above, or graduate standing, or consent of instructor.

KIN 450 Biochemistry of Exercise credit: 3 or 4 Hours.

Introduces the metabolic and biochemical adaptation of the body in response to acute and chronic physical activity. Primary focus is given to the subcellular and enzymatic regulation and integration during exercise. Substrate metabolism, bioenergetics, hormonal action and nutritional influences as related to exercise are emphasized. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352 or MCB 450; or consent of instructor.

KIN 451 Skeletal Muscle Physiology credit: 3 or 4 Hours.

Offers basic information on skeletal muscle anatomy, physiology and function which will provide a basis for understanding changes in muscle structure and function during periods of increased or decreased use. Knowledge gained in this course can be used in areas such as design of training programs, physical therapy, or injury prevention. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352 or prior consent of the instructor.

KIN 452 Clin & Applied Ex Physiology credit: 3 Hours.

Physical fitness appraisal and guidance in clinical and applied settings with emphasis on medical clearance, risk factor assessment, physical fitness assessment and exercise prescription. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352, or graduate standing, or consent of instructor.

KIN 453 Nutrition for Performance credit: 3 or 4 Hours.

Nutrition for performance is the fusion of two disciplines, nutrition and exercise physiology, which provides the knowledge-base to support and optimize training, performance, and recovery. This course will provide information regarding the use of nutrition to increase performance in athletes training for strength or endurance. Same as FSHN 453. 3 undergraduate hours. 4 graduate hours.

KIN 457 Motor Learning & Control credit: 3 Hours.

Discussion and analysis of scientific principles related to the learning and control of motor skills; review of related literature and research in motor learning and control. The focus of the course is on mechanisms for the control of movement and recent theories of how movements are acquired and performed. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

KIN 458 Neurobio of Aging credit: 0 to 4 Hours.

Same as PSYC 451 and NEUR 451. See PSYC 451.

KIN 459 Physical Activity & Aging credit: 3 or 4 Hours.

Examines aging and age-related changes in the cells, tissues, organs, and systems of the human body; emphasizes the role of physical activity and other lifestyle choices in modifying the aging process and in influencing the onset and progression of the chronic diseases which accompany aging. Same as HDFS 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior, or graduate standing or consent of instructor.

KIN 460 Technology & Pedagogical KINES credit: 3 or 4 Hours.

Promotes mastery of technology skills and complex computer applications through the analysis of research and critical issues related to technology in Kinesiology. The completion of technology modules, requiring problem solving and the collection and analysis of assessment data, will culminate in an interactive, multimedia project. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing.

KIN 470 Exercise Endocrinology credit: 3 or 4 Hours.

The objective of this course is to gain a better understanding of the endocrine system and its response to physical exercise. Therefore, this course will provide a basic review of 1) the major glands and tissues that secrete chemical messengers, 2) the ability of acute exercise and exercise training to regulate chemical messengers, and 3) the physiological consequences of endocrine adaptation to exercise. Clinical disorders associated with endocrine dysfunction will also be discussed when relevant. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: KIN 352.

KIN 473 Skill Acquisition Strategies credit: 3 or 4 Hours.

Examines theory and practice related to structuring practice conditions to maximize the acquisition and performance of motor skills. The nature of skill, activities, and strategies for enhancing skill are discussed with particular emphasis placed on strategies that instructors, teachers, and/or coaches can use to enhance skill acquisition and performance. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

KIN 474 Tech-Driven Health Intervention credit: 3 or 4 Hours.

Course will review and critique the state of the science of technology-driven health behavior interventions. A broad scope of technologies and health behaviors will be covered and students will acquire an understanding of current uses of technology for facilitating health behavior change and maintenance. Students will examine the efficacy and potential for large-scale adoption and dissemination; and develop skills necessary to apply technology-based solutions to address public health problems. 3 undergraduate hours. 4 graduate hours.

KIN 485 Clin Exper in Sports Medicine credit: 2 to 8 Hours.

Clinical experiences in medical supervision of sports programs, in the areas of therapeutic exercises, fitness programming, and cardiac rehabilitation. 2 to 8 undergraduate hours. 2 to 8 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

KIN 494 Special Topics credit: 1 to 4 Hours.

Lecture course on topics of current interest; specific topics announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

Recreation, Sport and Tourism

Laurence Chalip, Department Head

104 Huff Hall, 1206 South Fourth Street, Champaign

PH: (217) 333-4410

<http://rst.illinois.edu>

The Department of Recreation, Sport and Tourism originated at the University of Illinois in 1940. Today, this program continues to rank nationally among the top three in the field, and takes pride in producing a large number of exceptional professionals in the field. The Department of Recreation, Sport and Tourism offers a bachelor of science degree with three areas of concentration: recreation management, sport management, and tourism management. The curriculum prepares students to design, manage, and deliver leisure services to a variety of populations in diverse settings and provides a firm foundation from which students may pursue graduate studies. A broad general education is emphasized and complemented with a core of professional courses. Beyond a strong core integrating leisure theory, management, and research, the program allows students to focus on a major market segment within the leisure and recreation field by choosing an area of concentration. A total of 128 hours is needed for graduation. For further information, contact the Department of Recreation, Sport and

Tourism, 104 Huff Hall, 1206 S. Fourth Street, Champaign, IL 61820, (217) 333-4410.

Internship Program

All students in the Department of Recreation, Sport and Tourism must satisfactorily complete the Internship Program prior to graduation. The program is designed to augment formal classroom instruction with active experiential learning under the guidance of a university and an agency-based supervisor.

The program consists of two courses and a pre-internship field experience. The pre-internship program requires students to accumulate a minimum of 300 Hours of practical work experience in leisure service settings. It is strongly recommended that students begin acquiring field experiences as early in their academic career as possible. Students register for RST 480 in the first semester of their senior year. During this semester, students make final arrangements for completing RST 484, the Recreation, Sport and Tourism Practicum the following semester.

The practicum is taken after the student satisfactorily completes all course work including RST 480, and fulfills the pre-internship field experience. RST 484 is taken in agencies that are approved by the department and contracted for this program. Since a limited number of assignments for practica are available in the campus area, most students look forward to the opportunity of an off-campus assignment. Students have been placed across the United States and even abroad.

For the Degree of Bachelor of Science in Recreation, Sport and Tourism Requirements Including General Education

The Campus Senate, the faculty General Education Board, and the colleges and departments are working to implement enhanced General Education requirements. Some changes in requirements are expected. Thus, new students should confirm their General Education requirements by consulting college and departmental offices, handbooks, or advisors. The Department of Recreation, Sport and Tourism also requires that certain courses from the approved lists be taken as noted below. The prescribed courses prepare the student for upper division study and may be used to satisfy General Education requirements provided they are on the appropriate General Education list.

Code	Title	Hours
Core Courses		39
RST 100	Recreation, Sport, and Tourism in Modern Society	3
RST 101	Orientation to Recreation, Sport and Tourism	1
RST 200	Leadership in Recreation, Sport and Tourism	2
RST 210	(Management in RST)	3
RST 240	Financial Resource Management in Recreation, Sport and Tourism (Finance Resource Management)	3
RST 255	Ethical Issues in Recreation, Sport and Tourism	2
RST 325	Marketing in Recreation, Sport and Tourism	3
RST 340	Facility Management in Recreation, Sport and Tourism	3

RST 360	(Communication)	3
RST 370	Research Methods & Analysis	3
RST 410	Administration of Leisure Serv	3 or 4
RST 429	Contemporary Issues in Recreation, Sport and Tourism	4
RST 460	(Event Management)	3
RST 465	(Event Implementation and Evaluation)	3

Code	Title	Hours
Concentration Requirements		9
Recreation Concentration		
RST 120	Foundations of Recreation	3
RST 217	Public Recreation	3
RST 441	(Community Planning)	3
Sport Concentration		
RST 130	Foundations of Sport Mgt	3
RST 354	Legal Aspects of Sport	3 or 4
RST 430	(Sport & Development)	3
Tourism Concentration		
RST 150	Foundations of Tourism	3
RST 350	Tourism and Culture	3
RST 450	Tourism Planning & Development	4

Code	Title	Hours
Electives		32
Restricted Electives: Departmental courses not required in the core or counted toward concentration requirement.		
Free Electives: Any courses not counted toward core requirements, concentration requirements, or restricted electives.		

Code	Title	Hours
Experimental Education ¹		12
RST 480	Orientation to Practicum	1
RST 485	Practicum	12
Total Hours		25

Summary of Degree Requirements

Code	Title	Hours
General Education		36
Recreation, Sport and Tourism Core Courses		39
Concentration Requirements		9
Electives (12 of which are restricted electives)		32
Internship		12
Total Hours		128

128 hours minimum required for graduation.

¹ 300 volunteer hours are required.

Speech and Hearing Science

Karen Kirk, Department Head
901 South Sixth Street, Champaign
PH: (217) 333-2230
<http://shs.illinois.edu>

The undergraduate curriculum in Speech and Hearing Science provides a broad background in the biological, behavioral, linguistic, and social foundations of human communication and communication disorders. The major prepares students to pursue a career or graduate education in many fields related to human communication and healthy communication practices. The degree requires at least 128 hours. The program has four concentrations: Audiology, Speech-Language Pathology, Neuroscience of Communication, and Cultural-Linguistic Diversity. Each of the four concentrations can be combined with pre-certification requirements from the American Speech-Language-Hearing Association for undergraduates wanting to pursue a career as either a speech-language pathologist or audiologist. The American Sign Language sequence of courses is available to students across all four concentrations.

A concentration must be declared prior to the senior year. Academic advising is required in the College of Applied Health Sciences and students are advised to consult Undergraduate Advising (<http://shs.illinois.edu/undergrad-advising>) on a regular basis to ensure they are meeting all requirements.

For an overview of the program and career opportunities, see this site (<http://labs.shs.illinois.edu/Undergraduates/Careers.aspx>). For further information, contact the Department of Speech and Hearing Science (<http://www.shs.uiuc.edu>), 220 Speech and Hearing Building, 901 S. Sixth Street, Champaign, IL 61820, (217) 333-2230.

For the Degree of Bachelor of Science in Speech and Hearing Science General Education

Students are advised to select their General Education course requirements from the University's approved list of courses (www.courses.illinois.edu/cis/) and to work in close consultation with their academic advisor to ensure graduation requirements are addressed.

Code	Title	Hours
Communication Skills		
Composition I		
RHET 105	Writing and Research	4-6
or CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		3
One course in Advanced Writing/Composition II from approved list ¹		
Quantitative Reasoning I		3
One course from the approved Gen. Ed. list ²		
Quantitative Reasoning II		3
One course from the approved list required.		
Humanities and the Arts		6
Minimum of two courses from approved list required		
Social and Behavioral Sciences		6

Minimum of two courses from approved list required

Natural Sciences and Technology	6
Two classes or six hours from the university approved Gen. Ed. list required. ³	
Cultural Studies	6
One course from Western cultures approved campus list	
One course from U.S. Minority Cultures or Non-Western Cultures approved campus list	
Foreign Language	0-12
May be satisfied if had three years of one non-English language in high school or completed the equivalent of three semesters of college level foreign language (through the intermediate level).	
Total Hours	37-51

¹ must be taken at U of I

² A course in general statistics will address the BS degree requirement; however, those planning to pursue a graduate degree in communication science and disorders are advised to consider taking additional math (calculus may be required by some programs).

³ While not specifically required for the BS degree, students planning to pursue the Speech-Language Pathology or Audiology concentrations and eventual graduate studies in these areas, are advised to take one course in Life Science (a biological science is suggested) and one course in Physical Science (a course in Physics or Chemistry is recommended) to satisfy eventual ASHA certification requirements.

Speech and Hearing Science Professional Core Requirements

All students must complete a series of SHS core classes regardless of their area of concentration. Students are advised to work with the undergraduate academic advisor to ensure courses are taken in proper sequential order. One area of concentration (Speech-Language Pathology, Audiology, Neuroscience of Communication, or Cultural-Linguistic Diversity) must be declared prior to the senior year.

Code	Title	Hours
SHS 170	Intro Hum Comm Sys & Disorders	3
SHS 191	Freshmen Seminar	1
SHS 200	General Phonetics	3
SHS 240	Intro Sound & Hearing Science	3
SHS 300	Anat & Physiol Spch Mechanism ¹	4
SHS 301	General Speech Science ²	4
SHS 320	Development of Spoken Language	3
SHS 450	Intro Audiol & Hear Disorders	4
Total Hours		25

¹ Same as LING 300.

² Same as LING 303. Should be taken after SHS 300.

Areas of Concentration (24-30 Hours)

- Audiology (p. 105)
- Cultural-Linguistic Diversity (p. 104)
- Neuroscience of Communication (p. 104)
- Speech-Language Pathology (p. 105)

Electives

All students are encouraged to take electives in and outside the department that will count towards the 128 required hours for graduation (the total number of electives students may take may vary with each individual). Students are encouraged to select electives that will complement their areas of interest and future goals. Areas listed below are only a sampling of possibilities; they are not to be considered as requirements and students are not limited to these choices. All students are responsible for addressing course pre-requisites and course availability may vary.

Anthropology (ANTH), Communications (CMN), Kinesiology and Community Health (KIN, CHLH), Educational Organization and Leadership (EOL), Curriculum & Instruction (CI), Educational Policy Studies (EPS), Educational Psychology (EPSY), English (ENGL), English as a Second Language (ESL), Gender and Women's Studies (GWS), Human Development and Family Studies (HDFS), Library and Information Science (LIS), Linguistics (LING), Psychology (PSYC), Recreation, Sport, & Tourism (RST), Rehabilitation Counseling (REHB), Special Education (SPED), Sociology (SOC), Social Work (SOCW). Additional areas to explore may include: courses in a foreign language beyond the completion of the University's requirement, as well as additional courses in science, such as Biology (IB, MCB), Physics (PHYS), microcomputer applications (e.g. ACE), and courses in cultural studies.

Summary of Degree Requirements

Code	Title	Hours
General Education		37-51
Speech and Hearing Science Core		25
Area of Concentration (and Correlate, if required by concentration)		24-30
Electives		22-42
Total Hours		128

Speech and Hearing Science Minor

The undergraduate Speech and Hearing Science Minor is designed for students who seek a basic familiarity with the physical, behavioral, biological, and social aspects of human communication. The minor is tailored to each student's individual needs, thus accommodating students from different disciplines across the campus. There are no prerequisites for this minor. For more information contact Kathi Ritten, Academic Advisor, at ritten@illinois.edu.

Code	Title	Hours
SHS 170	Intro Hum Comm Sys & Disorders	3
Select two of the following:		6-7
SHS 222	Language & Culture of Deaf Communities	
SHS 240	Intro Sound & Hearing Science	
SHS 300	Anat & Physiol Spch Mechanism	
SHS 320	Development of Spoken Language	
SHS 352	Hearing Health and Society	
Eight to Nine additional hours of speech and hearing science courses chosen from the following list:		8-9
SHS 120	Child, Comm, & Lang Ability	
SHS 171		
SHS 200	General Phonetics	

SHS 270	Comm Disability in the Media
SHS 271	Communication and Aging
SHS 301	General Speech Science
SHS 375	Comm Partners & Health
SHS 410	Stuttering: Theory & Practice
SHS 411	Normal and Disordered Voice
SHS 427	Language and the Brain
SHS 450	Intro Audiol & Hear Disorders
SHS 451	Aural Rehab Children to Adults
SHS 470	Neural Bases Spch Lang
SHS 473	Augmentative & Alt Comm
Total Hours	17-19

Note: Students must take at least six credits hours of speech and hearing science courses at the 300 or 400 levels from this approved list.

SHS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SHS>)

Courses

SHS 111 Living-Learning ASL Part 1 credit: 2 Hours.

An introductory course in American Sign Language (ASL); no previous knowledge or skills are needed. It is offered through the Living in Residence Program at Allen Hall. The focus is on the acquisition of beginning-level vocabulary items and grammar of ASL. ASL is a non-Indo-European language that uses the visual/manual rather than spoken/auditory modality. Students develop a core vocabulary and basic grammar to enable you to communicate using ASL. The Deaf Community, like other cultural groups, defines a population that shares both a language and pattern of transmission of beliefs and values. The course provides an introduction to the culture, traditions, and values of the Deaf Community.

SHS 112 Living-Learning ASL Part 2 credit: 2 Hours.

The second part of an introductory course in American Sign Language (ASL); some knowledge of and skills in ASL are required. It is offered through the Living in Residence Program at Allen Hall. The focus is on the continued acquisition of beginning-level vocabulary items and grammar of ASL. ASL is a non-Indo-European languages that uses the visual/manual rather than spoken/auditory modality. Students develop core vocabulary and grammar to enable you to communicate using ASL. The Deaf Community, like other cultural groups, defines a population that shares both a language and pattern of transmission of beliefs and values. The course provides further information of the culture, traditions, and values of the Deaf Community.

SHS 120 Child, Comm, & Lang Ability credit: 3 Hours.

Provides an introduction to the study of the human communication and language capacity and includes an overview of three areas of inquiry: language science, language development in children, and language disability in children.

This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

SHS 121 American Sign Language I credit: 4 Hours.

This is an introductory course in American Sign Language (ASL). No prior experience with the language is necessary. Students will learn vocabulary, elementary-level grammatical structures, and elements of U.S. Deaf Culture in order to engage in entry-level conversations in ASL. Basic social and communication skills associated with the use of ASL will be emphasized. This course is part of a sequence of courses that will fulfill the foreign language requirement for UIUC undergraduate students. Approved for Letter and S/U grading.

SHS 150 Hearing Processes & Disorders credit: 3 Hours.

An introduction to basic and clinical aspects of audition and their relevance to communication processes and communication disabilities from biological, humanistic, and technological perspectives. Communication processes and development are explored within historical, behavioral, and scientific frameworks. Hearing disabilities are described according to prevention etiology, manifestation, evaluation and treatment. The effects of disability on individuals and families across the lifespan are also addressed.

SHS 170 Intro Hum Comm Sys & Disorders credit: 3 Hours.

Examines broad perspectives of theories and information regarding normal and abnormal communication: how speech and language develop, how people hear, how they produce speech and what can go wrong; addresses the impact of speech and hearing science on society, culture, and modern technologies.

SHS 191 Freshmen Seminar credit: 0 to 9 Hours.

Special experimental seminar or independent study course intended to cover topics not treated by regular course offerings; open to undergraduates at any level. Requests for activation of this course may be made by students or by faculty and should be directed to the head of the academic department concerned. Although credit toward graduation is normally granted, credit toward satisfying specific college or departmental requirements is contingent upon approval by the appropriate college or departmental committee. Approved for S/U grading only.

SHS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated, if topics vary.

SHS 200 General Phonetics credit: 3 Hours.

Basic principles of phonetic study; includes observation and representation of pronunciation, ear training, and practice in transcription.

SHS 221 American Sign Language II credit: 4 Hours.

This intermediate course in American Sign Language (ASL) is part of a sequence to fulfill the foreign language requirement. Students must have successfully completed SHS 121 or should be able to demonstrate advanced beginner ASL skills. Students will continue to learn vocabulary items and intermediate-level grammatical structures in order to improve conversation skills. As compared to SHS 121, a greater focus is placed on ASL constructions involving the complex use of space (e.g., verb inflections, so-called "classifiers", and constructed action). Same as LING 221. Approved for letter and S/U grading. Prerequisite: SHS 121 or equivalent language skills.

SHS 222 Language & Culture of Deaf Communities credit: 3 Hours.

Students will learn about culture and how it is manifested in various subgroups of society with a particular focus on the culture and language of Deaf people in the United States. Themes include: the linguistics of American Sign Language, aspects of social unity for Deaf people, common experiences of Deaf individuals, the educational system and Deaf students, and current issues that affect the Deaf community. For those students requiring 4 semesters of language other than English credit (LAS or BUS), SHS 222 can be used as the fourth course in the American Sign Language sequence that includes SHS 121, 221, and 321 to fulfill that requirement but cannot also then be used for Gen Ed requirements. Same as EPSY 222.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

SHS 231 Lang Diff Dis: American Persp credit: 3 Hours.

Same as AFRO 231. See AFRO 231.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

SHS 240 Intro Sound & Hearing Science credit: 3 Hours.

Acoustics, anatomy, and physiology of the auditory system; psychophysical methods; and a consideration of auditory theories and mechanics.

SHS 270 Comm Disability in the Media credit: 4 Hours.

Introduction to the study of human communication disability across the lifespan as depicted in the media and includes an overview of three areas of inquiry: behavioral/psychosocial impact of communication disability, ethical decisions in rehabilitation interventions, and disability rights.

This course satisfies the General Education Criteria for:
Advanced Composition
Social Beh Sci - Soc Sci

SHS 271 Communication and Aging credit: 3 Hours.

Course introduces social and physical issues of communication and aging, with particular emphasis on intergenerational interactions and on the physical disabilities of aging (e.g., hearing loss, Parkinson's disease, strokes, dementia). Discourse analysis techniques are used to integrate the social and physical aspects of aging and communication that are discussed in class.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SHS 280 Communication Neuroscience credit: 3 Hours.

This course provides an overview of neuroscience with emphasis on human communication, moving from general concepts in neuroanatomy and neurophysiology to the specifics of the neuroscience of hearing, speech and language.

SHS 291 Research Lab Experience in SHS credit: 1 to 3 Hours.

Supervised participation in research laboratory and scholarly activities, usually as an assistant to an investigator. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 6 hours.

SHS 300 Anat & Physiol Spch Mechanism credit: 4 Hours.

Introduction to the anatomic and physiologic characteristics of the normal speech mechanism. Same as LING 300.

SHS 301 General Speech Science credit: 4 Hours.

Consideration of the physiology of the speaking act, and the acoustical and perceptual aspects of speech. Same as LING 303.

SHS 320 Development of Spoken Language credit: 3 Hours.

Study of the correlates of language development from the prelinguistic period to adulthood.

SHS 321 American Sign Language III credit: 4 Hours.

This advanced-intermediate course in American Sign Language (ASL) is part of a sequence to fulfill the foreign language requirement. Students must have successfully completed SHS 221 or should be able to demonstrate intermediate ASL conversation skills. Students will learn technical vocabulary items and complex elements of ASL narratives. In this course, students will focus on the fluid use of ASL across various registers and situations. Special emphasis will be placed on receptive fluency of complex constructions in ASL. Same as LING 321. Approved for letter and S/U grading. Prerequisite: SHS 221 or equivalent language skills.

SHS 352 Hearing Health and Society credit: 3 Hours.

An analysis of how hearing loss influences behavior of individuals and interactions among individuals within larger social/societal groups across the lifespan. Considers issues associated with early detection of hearing loss and promoting hearing conservation in different environments. Approaches to promoting behaviors that enhance communication in the presence of hearing loss will be explored. Philosophical, policy, and cultural controversies for defining hearing loss as a disability will be examined. Each of these topics will be considered within the interplay between the individual person, culture, age, disability, educational environment, community, and social/family interactions.

SHS 370 Civic Engagement in Wellness credit: 3 Hours.

Same as AHS 365, CHLH 365, KIN 365, and RST 365. See KIN 365.

SHS 375 Comm Partners & Health credit: 3 Hours.

Combines a community-based volunteer experience with class-based readings/discussion to introduce students to the study of communication in context. Students will use learning journals to document their volunteer experiences, describe the characteristics of conversational interactions they observe, and reflect on their own skills as flexible communication partners with people of various backgrounds and abilities and in a variety of clinical and professional settings. Includes a one-hour weekly discussion section (taught by SHS faculty/instructional staff) and three-four hour weekly community volunteer experiences (supervised by volunteer site employees). Same as AHS 375 and KIN 375. May be repeated in separate terms to a maximum of 6 hours.

SHS 380 Comm Competence and Disorders credit: 3 Hours.

This course explores ways of defining and documenting communicative competence for individuals with communication disorders in everyday interactions. It introduces students to theories of communication-in-context and methods of discourse analysis. Students will critically review research on discourse of individuals with communication disorders across the lifespan and discuss its relevance to clinical practice. Prerequisite: Minimum sophomore standing or consent of instructor.

SHS 383 Special Topics credit: 3 or 4 Hours.

Lecture course in topics of current interest in speech and hearing science; specific subject matter announced in the Class Schedule. May be repeated if topics vary.

SHS 385 Evidence-Based Practice in Communication Sciences and Disorders credit: 3 Hours.

This course is designed to examine how the field of Speech and Hearing Science creates knowledge or evidence to support the assessment and intervention for individuals with communication disorders. Students will gain an introductory understanding of clinical research methodology and become familiar with the process of selecting evidence-based practices. Prerequisite: Sophomore standing or consent of instructor.

SHS 390 Individual Study credit: 2 to 4 Hours.

Individual investigation of special problems. May be repeated to a maximum of 6 hours. Prerequisite: Ten hours of speech and hearing science, and written approval by the faculty members who will supervise the student's work.

SHS 395 Honors Individual Study credit: 2 Hours.

Individual study leading either to a thesis or to departmental honors. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; a cumulative grade point of 3.5 or consent of the head of the department.

SHS 410 Stuttering: Theory & Practice credit: 3 or 4 Hours.

Study of the theoretical and research literature concerning the causes, diagnosis, and treatment of stuttering and an analysis of clinical procedures in stuttering therapy. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS Program or consent of instructor. For graduate credit, students must have graduate level status in SHS Program or consent of instructor. Additional work involved.

SHS 411 Normal and Disordered Voice credit: 3 or 4 Hours.

Study of the biomechanics of normal and disordered voice production with application to both clinical and pedagogical voice training and care. 3 undergraduate hours. 4 graduate hours. Additional work is involved for 4 credit hours.

SHS 427 Language and the Brain credit: 3 or 4 Hours.

How the human brain supports production and comprehension of language. Topics covered include: neuroanatomy of language; neuroimaging of language; language disorders; brain lateralization for language; bilingualism and the brain; sign language and the brain. Same as LING 427 and PSYC 427. 3 undergraduate hours. 4 graduate hours. Prerequisite: One of PSYC 210, PSYC 224, PSYC 248, LING 225, SHS 170, or consent of instructor.

SHS 430 Devel & Disorders Phonol Artic credit: 3 or 4 Hours.

Survey of basic knowledge concerning normal and deviant phonological development, and principles for applying this knowledge to the assessment and remediation of phonological disorders. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS Program or consent of instructor. Additional work is involved for 3 hours. For graduate credit, students must have graduate level status in the SHS Program or consent of instructor. Additional work involved for 4 hours.

SHS 431 Lang Disorders Preschool Child credit: 3 or 4 Hours.

Advanced study of early language milestones, processes, and theories; examination of the nature and character of disordered language acquisition in preschool children, and evaluation of current theory and intervention research in the area. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS program or consent of instructor. For graduate credit, students must have graduate level status in the SHS Program or consent of instructor. Additional work involved for 4 hours credit.

SHS 450 Intro Audiol & Hear Disorders credit: 4 Hours.

Review of the history of audiology as a profession; study of symptoms, causes, and treatment of hearing losses; and principles and application of basic audiometry. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of Instructor.

SHS 451 Aural Rehab Children to Adults credit: 2 to 4 Hours.

Principles and methods of clinical and classroom retraining of the hard-of-hearing; includes lip reading, auditory training, speech disorders and conservation, and counseling. 2 to 4 undergraduate hours. 2 to 4 graduate hours. Prerequisite: Consent of instructor.

SHS 470 Neural Bases Spch Lang credit: 4 Hours.

Advanced study of neuroanatomy and neurophysiology with emphasis on current research pertaining to nervous system structures and functions important for speech and language. Critical analyses of current theories of the function of neural mechanisms utilized in speech and language. 4 undergraduate hours. 4 graduate hours. Prerequisite: SHS 300 and SHS 301, or equivalent, or consent of instructor.

SHS 473 Augmentative & Alt Comm credit: 2 to 4 Hours.

Introduces students to the field of augmentative and alternative communication (AAC), to the range of assistive technologies, and to diagnostic and treatment approaches used by speech-language pathologists. Focuses on the communicative needs of adults and children with acquired communication disorders in a variety of settings (e.g., hospital, school, home, work). 2 to 4 undergraduate hours. 2 to 4 graduate hours. Prerequisite: For undergraduate credit, 2 or 3 hours, students must have senior level status in the SHS Program, or consent of instructor. Additional work is involved for 3 hours. For graduate credit, 2 to 4 hours, students must have graduate level status in the SHS Program, or consent of instructor. Additional work involved for 4 hours.

SHS 475 Prepracticum in SHS credit: 1 to 2 Hours.

A mentoring experience in which students will be paired with clinical instructors in SHS and provided opportunities to observe clinical speech-language pathology and audiology sessions in a variety of settings. Prepracticum is designed to provide students: 1) initial opportunities to integrate course work with clinical practice; 2) supported experiences in documentation/data collection skills used in clinical settings; and 3) supervised observation hours required by the American Speech-Language and Hearing Association (ASHA) for certification as a Speech-Language Pathologist or Audiologist. 1 to 2 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 2 hours.

SHS 477 Beginning Practicum in SHS credit: 1 to 3 Hours.

Mentored experience in which students are paired with a clinical instructor in SHS and provided opportunities to assist in the ongoing management of clinical cases in a variety of settings. The beginning practicum is designed for students with less than a year of supervised clinical experience (i.e. 100 or fewer contact hours as defined by the American Speech-Language Hearing Assoc.-ASHA). Working with the clinical team, the beginning practicum will provide students with: 1) supported opportunities to assist in all aspects of clinical practice (e.g., diagnosis, intervention, documentation, team meetings/planning); 2) opportunities to obtain supervised contact hours required by ASHA for certification in Speech-Language Pathology or Audiology. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in same term to a maximum of 3 undergraduate or 4 graduate hours. May be repeated in separate terms to a maximum of 3 undergraduate or 6 graduate hours. Prerequisite: For students pursuing clinical preparation in speech-language pathology and/or audiology.

Concentration in Cultural-Linguistic Diversity

The **Cultural-Linguistic Diversity** concentration is designed to examine ways that individual communication differences, including disorders, interface with sociocultural systems, institutions, and practices. Students will take courses in theory and research methods to explore ways in which sociolinguistic differences shape child development, socialization, and identity. This concentration is intended to help provide students with knowledge related to cultural-linguistic differences (race, ethnicity, socioeconomic status, neurodiversity) that is needed to serve an increasingly

global society concerned with human rights and responsibilities. Such expertise is expected to enhance multiple career paths in education, law, business, and health-related fields. In addition, undergraduates interested in pursuing careers as an audiologist or speech-language pathologist can combine this concentration with pre-certification requirements.

Code	Title	Hours
SHS 222	Language & Culture of Deaf Communities	3
SHS 270	Comm Disability in the Media	4
SHS 271	Communication and Aging	3
SHS 352	Hearing Health and Society	3
SHS 380	Comm Competence and Disorders	3
Six hours from the following:		6
Up to 6 hours of a language other than English (only courses taken above and beyond those used to satisfy the University's language requirement or taken in a different area for elective credit)		
CMN 232	Intro to Intercultural Comm	
CHLH 330	Disability in American Society	
CHLH 407	Disability, Culture & Society	
EPS 310	Race and Cultural Diversity	
EPSY 202	Exploring Cultural Diversity	
LING 111	Language in Globalization	
LING 210	Language History	
LING 450	Sociolinguistics I	
SPED 117	The Culture of Disability	
SOC 225	Race and Ethnicity	
SOC 227	Latina/Latinos in the Contemporary United States	
SHS 291	Research Lab Experience in SHS (Approved for S/U grading only. Must be arranged with individual faculty member.)	
Total Hours		22

Concentration in Neuroscience of Communication

The **Neuroscience of Communication** concentration provides and interdisciplinary understanding of the neurological systems that underlie human communication. Students will study the biological basis of communication in order to understand brain-behavior correlates of typical and disordered speech, language, and hearing function. In addition, students will benefit from faculty research that utilizes innovative technologies to study the structure and function of the sensory-motor systems that underlie human communication abilities.

This concentration is intended to help prepare students for health and science-related careers, including medicine and neuroscience. In addition, undergraduates interested in pursuing careers as an audiologist or speech-language pathologist can combine this concentration with pre-certification requirements.

Code	Title	Hours
SHS 280	Communication Neuroscience	3
SHS 285	(Title of course is: Quantitative Bases in SHS) ¹	3

SHS 389	(Title of course is: Neuroplasticity and Communication)	3
SHS 427	Language and the Brain	3 or 4
SHS 470	Neural Bases Spch Lang	4
Students must also take 6 hours from the following specified electives:		6
Any Chemistry or Physics 100-level class ²		
IB 100	Biology in Today's World ²	
PSYC 204	Intro to Brain and Cognition	
PSYC 216	Child Psych	
or EPSY 236	Child Dev in Education	
PSYC 230	Perception & Sensory Processes	
PSYC 224	Cognitive Psych	
PSYC 248	Learning and Memory	
SHS 291	Research Lab Experience in SHS ³	
SHS 375	Comm Partners & Health	
SHS 473	Augmentative & Alt Comm ⁴	
Total Hours		22-23

¹ Approved substitutions include: CHEM 101, CHEM 102 & 103, CHEM 108, PHYS 101, PHYS 140, PHYS 150, or PHYS 193 provided this is not being used to satisfy a university General Education requirement.

² Provided courses are not used to satisfy a university General Education requirement

³ Approved for S/U grading only. Must be arranged with individual faculty member.

⁴ Prerequisite: Senior level in the SHS program or consent of instructor.

Concentrations in Audiology and Speech Language Pathology

The **concentrations in either Speech-Language Pathology or Audiology** provide explicit background in the theoretical and clinical areas necessary for graduate study. Students will learn foundational knowledge for understanding human speech, language, swallowing, hearing, and balance processes, with a particular eye toward the implications of differences and disruptions in the communication systems associated with disorders. Although students across any of the concentrations can pursue the graduate study and pre-certification requirements associated with becoming an audiologist or speech-language pathologist, these two concentrations are the most closely connected to practical application with opportunities for clinical observation and community engagement.

More information about the fields of speech-language pathology and audiology may be found on the American Speech-Language Hearing Association's web site: <http://www.asha.org>.

Concentration for Audiology

Code	Title	Hours
SHS 280	Communication Neuroscience	3
SHS 285 Quantitative Bases in SHS, or an approved substitution ¹		3
SHS 352	Hearing Health and Society	3

SHS 385 Evidence-Based Practice in Communication Sciences and Disorders		3
SHS 451	Aural Rehab Children to Adults (requires senior standing and completion of core classes)	2 to 4
SHS 475	Prepracticum in SHS (requires senior standing and completion of core classes)	1 to 2
Students must also take 6 hours from the following specified electives:		6
SHS 222	Language & Culture of Deaf Communities	
SHS 270	Comm Disability in the Media	
SHS 271	Communication and Aging	
SHS 291	Research Lab Experience in SHS (Approved for S/U grading only. Must be arranged with individual faculty member.)	
SHS 375	Comm Partners & Health	
SHS 473	Augmentative & Alt Comm (Requires senior standing and completion of core classes)	

NOTE: For those planning on pursuing graduate studies in Speech-Language Pathology or Audiology, many graduate programs require 25 clinical observation hours. These should be completed and recorded prior to graduation (some may be completed prior to serving as a clinical participant in the required SHS 475 pre-practicum).

Total Hours 22

Concentration for Speech-Language Pathology (16-17 hours)

Code	Title	Hours
SHS 280	Communication Neuroscience	3
SHS 380	Comm Competence and Disorders	3
SHS 385 Evidence-Based Practice in Communication Sciences and Disorders		3
SHS 451	Aural Rehab Children to Adults	2 to 4
SHS 473	Augmentative & Alt Comm	2 to 4
SHS 475	Prepracticum in SHS (Requires senior standing and completion of core classes. Offered Fall and Spring.)	1 to 2
Students must also take 6 hours from the following specific electives:		6
SHS 271	Communication and Aging	
SHS 285 Quantitative Bases in SHS (or an approved substitute) ¹		
SHS 291	Research Lab Experience in SHS (Approved for S/U grading only. Must be arranged with individual faculty member.)	
SHS 375	Comm Partners & Health	
SHS 410	Stuttering: Theory & Practice (requires senior standing in the SHS program or instructor consent)	

SHS 411	Normal and Disordered Voice (requires senior standing in the SHS program or instructor consent)	
SHS 430	Devel & Disorders Phonol Artic (requires senior standing in the SHS program or instructor consent)	
SHS 431	Lang Disorders Preschool Child (requires senior standing in the SHS program or instructor consent)	
Total Hours		20-24

¹Approved course substitutions include: CHEM 101, CHEM 102 & 103, CHEM 108, PHYS 101, PHYS 140, PHYS 150, PHYS 193 provided this is not used to satisfy a university General Education requirement.

Aging

Tanya M. Gallagher

10 Huff Hall, 1206 South Fourth, Champaign

PH: (217) 333-2131

<http://ahs.illinois.edu>

Interdisciplinary Minor in Aging

The Interdisciplinary Minor in Aging provides students with the opportunity to study aging as it relates to health, communication, development and activity. The minor is offered through the Departments of Kinesiology and Community Health, Recreation, Sport and Tourism, Psychology and Sociology; the Department of Human and Community Development; and the School of Social Work. LAS psychology and sociology students interested in the minor should consult with their major department's undergraduate studies director. All other interested students should consult their departmental academic advisor. Minors should be declared by filling out the intent to pursue a minor form which can be found at <http://provost.illinois.edu/educational-innovation/advising-resources/pursuing-undergraduate-minor/> and turning the form into Julie Bobitt, Interdisciplinary Health Advisor, in 226 Huff Hall or contact Julie via email at jbobbitt@illinois.edu.

Code	Title	Hours
Required Courses		9
IHLT 240	Health and Aging Policy	
CHLH 404	Gerontology	
PSYC 361	The Psychology of Aging	
Additional aging-related courses chosen from the following list: ¹		9
KIN 459	Physical Activity & Aging	
SOCW 240	Death & Dying	
SOCW 315	Social Work Services for Older Adults	
CHLH 494	Special Topics ²	
RST 316	Leisure and Human Development	
RST 335	Leisure and Consumer Culture	
SHS 271	Communication and Aging	
KIN 386	Exercise Instruction & Elderly	
EPSY 407	Adult Learning and Development	
UP 340	Planning for Healthy Cities	
Total Hours		18

¹ Students may also earn elective credit by participating in an aging-related internship or independent study that is also pre-approved by the advisor for the minor. Minor modification forms should be filled out if you are requesting to use an independent study or internship. Forms can be found at <http://provost.illinois.edu/files/2017/01/Minor-Modification-Form.pdf>.

² Special Topics courses must include aging-related content and be approved by the Aging minor advisor.

Interdisciplinary Health Sciences

William Stewart

110 Huff Hall, 1206 South Fourth Street, Champaign

PH: (217) 333-2131

For the Degree of Bachelor of Science in Interdisciplinary Health Sciences

The undergraduate degree program in Health is interdisciplinary in nature, and focused on applied health and societal issues that cut across a range of traditional fields. The program of study includes a set of core courses that builds an interdisciplinary foundation in the study of health, and provides a basic knowledge of health-related issues. The degree program also includes a set of three concentrations, of which a student must complete at least one, that emphasize some of the foremost issues facing society: health and aging; health behavior change; and health diversity. Finally, the degree program includes a capstone experience with several options for completion, e.g., an internship, faculty-guided research experience. The program of study addresses a major need across the nation and world for graduates prepared to enter a range of biomedical and health-related careers and/or to pursue graduate study in fields relevant to health, wellness, and the biomedical sciences. For questions regarding iHealth contact Julie Bobitt, Assistant Director, at jbobbitt@illinois.edu.

A 5 year BS MPH joint degree program is available for students majoring in Community Health, I-Health, or Kinesiology. Students apply for the program in the latter part of their third year (junior year) of study. Students accepted into the BS MPH joint degree program take 12 credit hours of coursework in their senior year that apply to both BS and MPH degrees. In the 5th year of study, students complete the remaining requirements for the MPH degree, and graduate simultaneously with both BS and MPH degrees. A summary of the requirements for the MPH degree is provided here (p. 718). The requirements are explained in more detail on the MPH program website: <http://www.mph.illinois.edu/Program/>.

Requirements Including General Education

The curriculum requires certain existing courses from the approved lists be taken as noted below. The prescribed courses prepare the student for upper division study and may be used to satisfy General Education Requirements provided they are on the appropriate General Education List.

Code	Title	Hours
Communication Arts		
	Composition I	3-6
	Advanced Composition	3
Quantitative Reasoning I & II		
	From approved campus list	6

Humanities and the Arts	
From approved campus list	6
Social and Behavioral Sciences	
From approved campus list	6
Natural Sciences and Technology	
From approved campus list	6
Cultural Studies ¹	
From Western cultures approved campus list	3
From U.S. minority cultures or non-Western cultures approved campus list	3
Foreign Language: Completion through the third level of the same language in high school or college	
Total Hours	36-39

¹ Courses in cultural studies may be completed through other categories where appropriate.

Code	Title	Hours
Health Major Requirements		
CHLH 101	Introduction to Public Health	3
CHLH 274	Introduction to Epidemiology	3
CHLH 456	Organization of Health Care	2-4
KIN 122	Physical Activity and Health	3
RST 100	Recreation, Sport, and Tourism in Modern Society	3
SHS 170	Intro Hum Comm Sys & Disorders	3
FSHN 120	Contemporary Nutrition	3
PSYC 100	Intro Psych	4
STAT 100	Statistics	3
REHB 330	Disability in American Society	3
IHLT 101	Introduction to i-Health	1
IHLT 102	Survey of Interdisc Health	1
IHLT 375	Interdis Collab in Health Serv	4
IHLT 474	Pre-Field Experience in Health	1
IHLT 475	Field Experience in i-Health	4
Total Hours		42

Concentrations (at least one concentration is required)

Health and Aging

Code	Title	Hours
KIN 262	Motor Develop, Growth & Form	3
CHLH 404	Gerontology	3,4
SHS 271	Communication and Aging	3
PSYC 361	The Psychology of Aging	3
Select three of the following (at least two at the 300- or 400-level):		9
CHLH 494	Special Topics	
EPSY 407	Adult Learning and Development	
HDFS 310	Adult Development	
IHLT 240	Aging and Health Policy	
IHLT 498	Interdisciplinary Health Study Abroad	
KIN 365	Civic Engagement in Wellness	
KIN 386	Exercise Instruction & Elderly	
KIN 459	Physical Activity & Aging	

RST 316	Leisure and Human Development	
SHS 320	Development of Spoken Language	
SHS 375	Comm Partners & Health	
SOCW 240	Death & Dying	
UP 340	Planning for Healthy Cities	
Total Hours		21-22

Health Behavior Change

Code	Title	Hours
KIN 340	Soc & Psych of Phys Activity	3
CHLH 304	Foundations of Health Behavior	4
RST 316	Leisure and Human Development	3
SHS 352	Hearing Health and Society	3
Select three of the following (at least two at the 300- or 400-level):		9

ANTH 143	Biology of Human Behavior	
CHLH 469	Environmental Health	
CMN 260	Intro to Health Communication	
CMN 336	Family Communication	
CMN 462	Interpersonal Health Comm	
CMN 463	Organizational Health Comm	
CMN 464	Health Communication Campaigns	
CMN 467	Communication & Health Equity	
EPSY 407	Adult Learning and Development	
IHLT 230	Leadership in Health	
IHLT 498	Interdisciplinary Health Study Abroad	
KIN 365	Civic Engagement in Wellness	
KIN 448	Exercise & Health Psychology	
PSYC 201	Intro to Social Psych	
PSYC 322	Intro Intellectual Disability	
PSYC 352	Attitude Theory and Change	
SHS 375	Comm Partners & Health	
SOC 273	Social Perspectives on the Family	
Total Hours		22

Health Diversity

Code	Title	Hours
SOC 162	Intro to Intl Health Policy	3
or GLBL 240	Global Health	
CHLH 409	Women's Health	3
EPS 310	Race and Cultural Diversity	4
SHS 270	Comm Disability in the Media	4
Select three of the following (at least two at the 300- or 400-level):		8-9
AFRO 421	Racial and Ethnic Families	
ANTH 143	Biology of Human Behavior	
CHLH 415	International Health	
GLBL 100	Intro to Global Studies	
HDFS 322	US Latina and Latino Families	
HIST 263	US History of Medicine	
HIST 281	Constructing Race in America	
IHLT 232	Health Disparities in the U.S.	
IHLT 498	Interdisciplinary Health Study Abroad	

LLS 387	Race, Gender and the Body
LLS 473	Immigration, Health & Society
LLS 479	Race, Medicine, and Society
MACS 356	Sex & Gender in Popular Media
RSOC 110	Intro to Rural Society
RST/KIN 230	Diversity in Recreation, Sport, and Tourism
PSYC 312	Psychology of Race & Ethnicity
SHS 271	Communication and Aging
SOCW 300	Diversity: Identities & Issues

Total Hours	22-23
-------------	-------

Free Electives

Code	Title	Hours
Free Electives		24-28
Total Hours		24-28

Summary of Degree Requirements

Code	Title	Hours
General Education		36-39
Health Major Requirements		42
Concentration Requirements		22-23
Free Electives		24-28
Total Hours		128

IHLT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IHLT>)

Courses**IHLT 101 Introduction to i-Health credit: 1 Hour.**

Introduction to the interdisciplinary major in Health. The course is designed to familiarize students with the concepts of interdisciplinary health, campus resources, academic policies, and program requirements.

IHLT 102 Survey of Interdisc Health credit: 1 Hour.

Introduction to topics in interdisciplinary health with particular emphasis on the five dimensions of health: physical, emotional, social, intellectual and spiritual. Students will explore their personal health beliefs and patterns and discuss the benefits of studying health within an interdisciplinary curriculum.

IHLT 230 Leadership in Health credit: 3 Hours.

Develops a framework to understand practices of exemplary leadership. Topics include: 1) Modeling behavior, 2) Inspiring a shared vision, 3) Challenging processes, 4) Enabling others to act, and 5) Encouraging passionate leadership. Case studies of individuals who are recognized leaders in health and well ?being at local, regional, national and global levels will be explored. Through various assignments, students identify their own leadership style and understand the important role they can play as leaders to address local and global health challenges.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

IHLT 232 Health Disparities in the U.S. credit: 3 Hours.

Provides an overview of health disparities in the United States, including existence and magnitude of health disparities, theories that explain health disparities, strategies to address their complexity, and solution required to eliminate them. Disparities are examined related to groups of diverse racial/ethnic backgrounds, socio-economic status, gender, age, and ability level.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

IHLT 240 Aging and Health Policy credit: 3 Hours.

Provides an understanding of the policies that affect service delivery to older adults including key historical and current policies such as the Older Americans Act, Medicare, Medicaid, and Social Security. Theories of public policy and involvement of older adults in the political process will be introduced. Challenges of issues such as chronic disease prevention, housing, transportation, nutrition, and elder abuse will also be explored.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

IHLT 375 Interdis Collab in Health Serv credit: 4 Hours.

Provides scholarly knowledge and field experiences for interdisciplinary collaboration in the health services. Topic include health service delivery systems, vulnerable populations, models of health and health promotion, communication, policy and ethics in health care. Emphasis on introducing students to the importance of working with individuals from a variety of health disciplines to best address issues of health in society.

IHLT 474 Pre-Field Experience in Health credit: 1 Hour.

This is an independent study course that expands student's knowledge of health professions and prepares them for field work in an applied setting with a variety of health professionals. 1 undergraduate hour. 1 graduate hour.

IHLT 475 Field Experience in i-Health credit: 4 Hours.

Designed to emphasize field/research experiences that facilitate working with individuals from a variety of health disciplines. Field experience/research placements will be selected to best prepare students address issues of health within their concentrations areas. In class sessions will focus on interdisciplinary collaboration, professionalism and important global health issues. Serves as the capstone course for i-Health majors. 4 undergraduate hours. 4 graduate hours. Prerequisite: Restricted to senior i-Health majors.

IHLT 498 Interdisciplinary Health Study Abroad credit: 1 to 6 Hours.

An advanced-level study abroad experience where students complete assigned scholarly readings; participate in facilitated discussions prior to, during, and/or after the trip; and write a final paper. The on-campus and abroad activities are supervised and facilitated by campus faculty. 1 to 6 undergraduate hours. No graduate credit. May be repeated in separate terms for a total of 12 undergraduate hours, if the countries differ between terms. Prerequisite: Social & Behavioral Sciences General Education requirement fulfilled, and sophomore or higher standing.

Business, College of

Office of Undergraduate Affairs
1055 Business Instructional Facility
515 East Gregory Drive
Champaign, IL 61820
PH: (217) 333-2740
FX: (217) 244-9992
<http://www.business.illinois.edu>

undergrads@business.illinois.edu

The purpose of the College of Business is to provide an educational experience that will help students develop their potential for leadership and service in business, government, teaching, and research. The undergraduate curricula provide a study of the basic aspects of business and preparation for careers in fields such as accounting, business management, banking, insurance, and marketing.

The curricula, leading to the Bachelor of Science degrees in the various degree programs in business, are based on 124 hours of college work. Students are required to elect courses in other colleges of the University, including mathematics, rhetoric, humanities and the arts, speech, and natural and behavioral sciences, and to secure as liberal an education as possible to avoid the narrowing effects of overspecialization.

The College of Business offers graduate and professional programs in business areas. Detailed information on graduate programs may be obtained from the Graduate College or visit our web site (<https://business.illinois.edu>).

Departments and Curricula

Undergraduate instruction in the College of Business is organized under the Departments of Accountancy, Business Administration, and Finance. Each of these departments offers courses that provide one or more curricula that a student may elect. These curricula lead to Bachelor of Science degrees in the various fields of study in the college and are designed to encourage each student to fully realize his or her intellectual promise. There can be changes to curricular requirements and new course offerings. For the most current information, visit our advisors in 1055 Business Instructional Facility and our web site (<http://www.business.uiuc.edu/undergrad>).

Requirements

Admission

Applicants must meet general University requirements as well as those specified by the College of Business.

Students transferring from other institutions must have met the requirements specified by the college. See our web site (<http://www.business.uiuc.edu>) and the Illinois Office of Undergraduate Admissions (<http://admissions.illinois.edu>) for further information.

Mathematics Placement Test

The ALEKS Math Placement Exam is used to place the students in the appropriate math course. The results of the test are used to place students in MATH 112 or to exempt them from college algebra and allow them to enroll in the first course of one of the mathematics sequences required for graduation (see below).

Graduation

Students in the College of Business who meet the University's requirements with reference to registration, residence, and fees and who maintain satisfactory scholastic records in the college are awarded degrees appropriate to their curricula.

Each candidate for a degree must have a 2.0 (A = 4.0) grade point average or above for all courses counted toward graduation, a 2.0 grade point average or above for all courses taken at this University, a 2.0 grade point average or above for all courses taken in the major or field of

concentration, and a 2.0 grade point average or above for courses taken in the major or field of concentration at this University.

Students are responsible for meeting the requirements for graduation. Therefore, students should familiarize themselves with the requirements listed in this catalog and other information in the Office of Undergraduate Affairs, 1055 Business Instructional Facility, and should refer to them each time they plan their programs. The College of Business requires that undergraduate degrees be completed in nine semesters or less. If you need assistance with course planning, consult the Office of Undergraduate Affairs.

Mathematics Requirement

Any one of the sequences described below meets the College of Business requirement. The most appropriate mathematics sequence depends on the student's background, interest, motivation, and objectives. Background can be evaluated in terms of mathematics courses already completed and the student's score on the ALEKS Math Placement Exam. Interest, motivation, and objectives must be determined by the student. The three sequences open to the student are:

- MATH 220/MATH 221 Calculus I and MATH 231 Calculus II. This sequence is appropriate for those students with a good background in mathematics but who have not had analytic geometry. Students who believe they may want to take upper-level courses in mathematics should take this sequence.
- MATH 125 Elementary Linear Algebra and MATH 234 Calculus for Business I. This sequence provides a good background in linear algebra and calculus. It is difficult to take upper-level courses in mathematics after this sequence.
- MATH 220/MATH 221 Calculus I and MATH 125 Elementary Linear Algebra. This is an alternative to the previous sequence. It is particularly suitable for those with AP credit in calculus who do not plan to take upper-level mathematics courses.

Residency

Students must earn no fewer than 60 semester hours of University of Illinois Urbana-Champaign coursework applicable to their degree—including at least 21 credit hours of advanced coursework.

Special Programs

Honors At Graduation

Honors, designated on diplomas, are awarded to superior students as follows: for graduation with honors, a minimum grade point average of 3.5 (A = 4.0) in all courses accepted toward the student's degree; for graduation with high honors, a minimum grade point average of 3.75 in all courses accepted toward the degree; and for graduation with highest honors, a minimum grade point average of 3.90 in all courses accepted toward the degree. To qualify for graduation honors, transfer students' University of Illinois at Urbana-Champaign and total cumulative grade point averages both must qualify.

Curricula

Core Curriculum

Normally, students must register for no fewer than 12 hours or more than 18 hours in each semester. Students should take mathematics, economics, and accountancy courses in the semesters indicated in the sample schedule of courses. The computer science course must be taken

during the first year. A required course that is failed must be repeated the next semester.

Up to 4 hours of Kinesiology activity courses, numbered 100-110 may be counted toward the 124 hours for the degree. The same section of a course may not be repeated for credit. Credit is limited to a maximum of 12 credit hours for 199 courses. Students may receive foreign language credit for courses only 2 levels below highest level taken in high school. For example: 4 years of high school French-no credit below FR 102.

Credit toward the 124 degree hours is not given for MATH 002 or MATH 112. Once the math requirement is completed, lower level math courses cannot be taken for credit. For military and naval science courses, only credit at the 300 level and above may be counted toward the degree.

Any course used to fill a specific degree requirement may not be taken on the credit-no credit grade option. Only free electives may be taken on the credit-no credit option. All finance and accountancy courses must be taken for a grade. It is recommended that all courses taken in the business administration area be taken for a grade.

University Composition Requirements

Code	Title	Hours
	Composition I: Principles of Composition ¹	4-7
	Advanced Composition	3

General Education Requirements

Code	Title	Hours
	A minimum of six courses is required, as follows:	18
	Humanities & the Arts: Literature & the Arts (1-2 courses) ⁴	
	Humanities & the Arts: Historical & Philosophical Perspectives (1-2 courses) ⁴	
	Natural Sciences & Technology: Physical Sciences (0-2 courses) ⁵	
	Natural Sciences & Technology: Life Sciences (0-2 courses) ⁵	
	Behavioral Sciences (1 course)	
	Cultural Studies: Non-Western/U.S. Minorities Cultures (1 course)	
	Cultural Studies: Western/Comparative Cultures (1 course)	

Non-Primary Language Requirement

Code	Title	Hours
	Completion of the fourth semester or equivalent of a non-primary language is required. Completion of four years of a single language in high school satisfies this requirement. A student may also meet this requirement by completing two non-primary languages to the third level.	0-12

Business Core Requirements

Code	Title	Hours
BUS 101	Professional Responsibility and Business ²	2
ACCY 201 & ACCY 202	Accounting and Accountancy I and Accounting and Accountancy II	6
BADM 300	The Legal Environment of Bus	3
BADM 310	Mgmt and Organizational Beh ⁶	3
BADM 320	Principles of Marketing	3

BADM 449	Business Policy and Strategy	3
CS 105	Intro Computing: Non-Tech	3
ECON 102 & ECON 103	Microeconomic Principles and Macroeconomic Principles	6
ECON 202 & ECON 203	Economic Statistics I and Economic Statistics II	6
ECON 302	Inter Microeconomic Theory	3
FIN 221	Corporate Finance	3
MATH 125 & MATH 234	Elementary Linear Algebra and Calculus for Business I ³	7
CMN 101	Public Speaking	3
Total Hours		51

Code	Title	Hours
	Courses to yield this total	15-38

Code	Title	Hours
	Elective course work	0-32
Minimum total hours for the degree		124

¹ For a list of the specific courses that meet this requirement, see the college Office of Undergraduate Affairs in 1055 Business Instructional Facility or see the Course Explorer for a list of approved general education courses.

² BUS 101 is required for all College of Business students. All students entering the College of Business take BUS 101 in the fall semester, including Inter-College Transfers (ICT) and Off-Campus Transfers (OCT).

³ MATH 220/MATH 221 and MATH 231, or MATH 220/MATH 221 and MATH 125 may be substituted for MATH 125 and MATH 234. (See college mathematics requirement above.)

⁴ Three courses in the Humanities & the Arts area are required and students must complete at least one course in the Literature & the Arts and Historical & Perspectives subcategories. At least one of the courses must be a 200 or higher level course.

⁵ Two courses in the Natural Sciences & Technology area are required. It is strongly recommended that students complete on course in the Physical Sciences and Life Sciences subcategories.

⁶ This course includes limited voluntary participation as a subject in experiments.

Sample Schedule

First Year		Hours
First Semester		
BUS 101	Professional Responsibility and Business	2
ECON 102	Microeconomic Principles or 103	3
MATH 125	Elementary Linear Algebra	3
CMN 101	Public Speaking	3-4
(or Composition I)		

CS 105 Intro Computing: Non-Tech (or General Education or Language other than English requirement)	3-5
<hr/>	
Semester Hours	14-17

Second Semester

ECON 102 Microeconomic Principles or 103	3
MATH 234 Calculus for Business I	4
CMN 101 Public Speaking (or Composition I)	3-4
CS 105 (or Intro Computing: Non-Tech General Education or Language other than English requirement)	3-5
<hr/>	
Semester Hours	13-16

Second Year**First Semester**

ACCY 201 Accounting and Accountancy I	3
ECON 202 Economic Statistics I	3
ECON 302 Inter Microeconomic Theory	3
BADM 310 Mgmt and Organizational Beh	3
General Education, Elective, or Language other than English requirement	3-4
<hr/>	
Semester Hours	15-16

Second Semester

ACCY 202 Accounting and Accountancy II	3
ECON 203 Economic Statistics II	3
FIN 221 Corporate Finance	3
BADM 320 Principles of Marketing	3
General Education, Electives, or Language other than English	3-4
<hr/>	
Semester Hours	15-16

Total Hours:	57-65
--------------	-------

- Accountancy (p. 111)
- Finance (p. 121)
- Information Systems (p. 118)
- Management (p. 119)
- Marketing (p. 120)
- Operations Management (p. 118)
- Supply Chain Management (p. 120)
- Business for Non-Business Majors (p. 124)
- Technology and Management (p. 125)

Departments

- Accountancy (p. 111)
- Business Administration (p. 113)
- Finance (p. 121)

Accountancy

Brooke Elliott

360 Wohlers Hall, 1206 South Sixth, Champaign

PH: (217) 333-0857

<http://business.illinois.edu/accountancy>

For the Degree of Bachelor of Science in Accountancy

Organizations are a nexus of contracts, implicit and explicit, among resource owners who contract with each other to the benefit of all. In most complex organizations, these contracts specify who has the knowledge, and thus the rights, to make decisions about the use and control of the contracted resources. The effectiveness and efficiency of decisions regarding initiation, execution, and monitoring of organizations' contracts depend on the quantity and quality of information available. The accountant assists in the development, accumulation, evaluation, and dissemination of the information necessary for contracting parties to make effective and efficient contracting decisions. Organizations, in turn, contract with various segments of society such as labor unions, capital markets, regulatory agencies, and governments. The accountant assists in the development, accumulation, evaluation, and dissemination of the information necessary for ensuring that organizations comply with the terms of their social contracts.

Study in accountancy is designed to prepare individuals for entry into the accountancy professions independent of subsequent specialization. This preparation includes knowledge of the activities of organizations, businesses, and accounting practices; intellectual, interpersonal, and communication skills; and personal capabilities and professional attitudes. Specializations in accountancy include such fields as financial accounting, management accounting, accounting information systems, taxation, and auditing. Specialization in an accounting field requires additional graduate education and practical experience.

In addition to the accountancy major requirements, students in accountancy must meet the University General Education requirements and the College of Business core requirements (for more detail, see the College of Business undergraduate section (p. 108)).

Minimum requirements in the major for the Bachelor of Science Degree in Accountancy are:

Code	Title	Hours
ACCY 301	Atg Measurement & Disclosure	3
ACCY 302	Decision Making for Atg	3
ACCY 303	Atg Institutions and Reg	3
ACCY 304	Accounting Control Systems	3
ACCY 312	Principles of Taxation	3
ACCY 405 or ACCY 415	Assurance and Attestation Auditing Stds and Practice	3
Select one of the following:		3
ACCY 410	Advanced Financial Reporting	

ACCY 451	Advanced Income Tax Problems	
Total Hours		21

Accountancy courses (both required and elective) to be applied toward the 124-hour requirement for the Bachelor of Science Degree in Accountancy may not be taken on a credit/no-credit basis. In addition, a limit of 33 hours of accountancy courses (including ACCY 201 and ACCY 202) may be counted toward the 124 total hour requirement. Finally, students must select from **either** ACCY 405 **or** ACCY 415. Both courses cannot count toward the Bachelor of Science degree.

ACCY Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ACCY>)

Courses

ACCY 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

ACCY 200 Fundamentals of Accounting credit: 3 Hours.
Survey course in the principles of accounting for students registered in schools and colleges other than the College of Business. Credit is not given for both ACCY 200 and either ACCY 201 or ACCY 202. Prerequisite: Sophomore standing.

ACCY 201 Accounting and Accountancy I credit: 3 Hours.
Introduction to the role of accounting information in establishing organization objectives and goals and identification of strategies to best achieve such objectives and goals. Topics focus on the utility of information necessary for the formation, execution and monitoring of the variety of contracts embedded in organization strategies. Projects facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Credit is not given for both ACCY 201 and ACCY 200. Prerequisite: ECON 102, and credit or concurrent enrollment in ECON 103.

ACCY 202 Accounting and Accountancy II credit: 3 Hours.
Continuation of ACCY 201 with focus on strategic management of economic resources, together with acquisition of such resources, and financial and non-financial measures of organizational performance. Credit is not given for both ACCY 202 and ACCY 200. Prerequisite: ACCY 201 or equivalent.

ACCY 211 Understanding Financial Statements credit: 3 Hours.
Provides a basic understanding of financial statements. Topics include financial statement components and their meaning, the broader purpose of financial statements, and the role of accounting in producing financial statements. Emphasizes the ability to read and, to some extent, interpret real-world financial statements. Credit is not given for ACCY 211 if credit has been given for ACCY 200, ACCY 201, and/or ACCY 202. ACCY 211 does not count toward undergraduate degree requirements for degrees offered through the College of Business or toward the Business Minor. Prerequisite: Intended for non-business majors.

ACCY 212 Understanding Accounting for Business Decisions credit: 3 Hours.

This course provides a fundamental understanding of how accounting facilitates and influences decisions made by owners, managers, and employees within an organization. Accounting provides information for all types of decisions, ranging from everyday operational and procedural decisions to decisions about the long-term strategy and direction of the firm. Course topics include pricing, product selection, resource planning and allocation, and operational and strategic performance measurement. Credit is not given for ACCY 212 if credit has been given for ACCY 200, ACCY 201, and/or ACCY 202. ACCY 212 does not count toward undergraduate degree requirements for degrees offered through the College of Business or toward the Business Minor. Prerequisite: Intended for non-business majors.

ACCY 290 Prof Internship in Accountancy credit: 0 to 3 Hours.
Formalized learning experience in combination with practice of accounting while engaged in an internship with a public accounting firm, business, or other off-campus organization; prior approval of learning plan and a summary report of learning experience are required. Approved for Letter and S/U grading. May be repeated in subsequent terms to a maximum of 3 hours. Prerequisite: Open to Department of Accountancy students; completion of ACCY 201 and ACCY 202 (or equivalent); and consent of department.

ACCY 301 Atg Measurement & Disclosure credit: 3 Hours.
Introduction to measurement and reporting of organizational performance for strategic and operational purposes with a focus on a variety of financial and non-financial performance measures suitable for both internal and external decision-making. Projects, together with a series of practical workshops, facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent and concurrent enrollment in ACCY 302 by students majoring in accountancy (recommended for non-accountancy majors); or consent of department.

ACCY 302 Decision Making for Atg credit: 3 Hours.
Decision making implications of information provided to organization managers and to external stakeholders such as investors, creditors, customers, and regulators. Concepts from economics, statistics, and psychology emphasize the use of quantitative techniques to comprehend uncertainty and risk. Projects, together with a series of practical workshops, facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent; ECON 203 or equivalent or concurrent enrollment; and concurrent enrollment in ACCY 301 by students majoring in Accountancy (recommended for non-Accountancy majors); or consent of department.

ACCY 303 Atg Institutions and Reg credit: 3 Hours.
Regulation theory and practice as applied to accounting information. A general framework for regulation of accounting procedures is developed. This framework is applied to reporting, taxation, and regulated business activities. Projects facilitate self-discovery of knowledge and the development of professional attitudes and skills with emphasis on professional research. Prerequisite: ACCY 301 and ECON 302 and FIN 221; or consent of department.

ACCY 304 Accounting Control Systems credit: 3 Hours.

Broad perspective on accounting and control that considers attainment of all goals of an organization, including those concerned with financial objectives. Topics include the conceptual foundations of control and application of practical, analytical tools to the evaluation of an organization's control environment. Cases, class discussion and field research projects emphasize independent thinking, group processes, and communication. Prerequisite: ACCY 301 and ACCY 302 and BADM 310; or consent of department.

ACCY 312 Principles of Taxation credit: 3 Hours.

Introduction to the United States federal income tax system with an emphasis on income tax determination and the taxation of property transactions. Topics include the tax environment, tax provisions relevant to businesses, employees and business owners. Projects facilitate self-discovery of knowledge and envelopment of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent.

ACCY 321 Principles of Public Policy credit: 3 Hours.

Same as ACE 321, BADM 303, and PS 321. See PS 321.

ACCY 352 Database Design and Management credit: 3 Hours.

Same as BADM 352. See BADM 352.

ACCY 353 Info Sys Analysis and Design credit: 3 Hours.

Same as BADM 353. See BADM 353.

ACCY 398 Practical Problems in Atg credit: 0 to 16 Hours.

Course covers the professional standards relating to corporate financial reporting, taxation, auditing and public sector reporting. Serves as a review course for the Uniform Certified Public Accountant (CPA) Examination. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated up to 16 hours in separate terms, if topics vary. Credit is not given towards degree requirements. Prerequisite: Consent of the Department. Intended for students enrolled in the BS in Accountancy, Certificate in Accountancy, MAS, and MSA programs. Students from other UIUC programs must demonstrate that they have taken courses in financial accounting (beyond introductory level), cost/managerial accounting (beyond introductory level), auditing, and taxation.

ACCY 405 Assurance and Attestation credit: 3 Hours.

Conceptual introduction to diverse means by which assurers improve the quality of information used by third parties for contracting purposes, with emphases on the credibility- and relevance-enhancement properties of assurers' services. Topics include the economics of assurance and attestation, and concepts including independence, risk, evidence, and control. Projects facilitate self-discovery of knowledge and development of professional skills and attitudes. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACCY 304 or consent of department.

ACCY 410 Advanced Financial Reporting credit: 3 or 4 Hours.

Current authoritative accounting standards and applications to accounting practice. Topics do not represent the full range of financial reporting issues, but are selected based on relevance of the underlying business transaction, complexity of the topic, consistency of applicable standard with underlying reporting concepts, and transferability of the standard to other accounting issues. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACCY 303 or consent of department.

ACCY 415 Auditing Stds and Practice credit: 3 Hours.

Framework for understanding and evaluating the professional auditing standards for assurance services. Model of financial reporting provides an overview of the types of information disseminated by companies to external users, and provides the basis for identifying professional standards areas for future standards' development. 3 undergraduate hours. No graduate credit. Credit is not given for both ACCY 415 and ACCY 515. Prerequisite: ACCY 304 or consent of department.

ACCY 451 Advanced Income Tax Problems credit: 3 or 4 Hours.

Introduction to the U.S. federal income taxation of corporations, their shareholders and owners, as well as entities receiving flow-through treatment under U.S. federal tax law e.g., Subchapter S corporations, partnerships and limited liability companies). 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Senior standing and ACCY 312.

ACCY 499 Senior Research credit: 2 to 4 Hours.

Research and readings course for students majoring in accountancy. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Cumulative grade-point average of 3.0., honors in the junior year, or consent of department; senior standing.

Business Administration

Cele Otnes, Interim Department Head

350 Wohlers Hall, 1206 South Sixth Street, Champaign

PH: (217) 333-4240

<http://business.illinois.edu/ba>

The Department of Business Administration offers five Undergraduate majors: Information Systems, Management, Marketing, Operations Management and Supply Chain Management. All majors require completion of a minimum of twenty-seven credit hours within each major's content area.

In addition to the Business Administration majors' requirements, Business Administration students must also fulfill the Urbana-Champaign campus's General Education requirements and the College of Business's Core Courses requirements (for more detail, refer to the College of Business Undergraduate Section (p. 108)).

Double Majors Within the Department of Business Administration

Only College of Business students with a declared Business Administration major may earn a second Business Administration major.

Business Students may earn only **two** Business Administration majors.

The Business Administration Majors:

- Information Systems
- Management- only **one** concentration can be selected: Entrepreneurship or General Management or International Business
- Marketing
- Operations Management
- Supply Chain Management

Each Business Administration major requires nine courses. Students desiring to earn a second Business Administration major must fulfill the course requirements for both majors.

Some Business Administration (BADM) courses will fulfill requirements of both majors, but a second Business Administration major will add two to five additional BADM courses during a student's junior and senior years since each Business Administration major requires unique advanced coursework.

Students may earn only **one** Management Major Concentration.

- Information Systems (p. 118)
- Management (p. 119)
- Marketing (p. 120)
- Operations Management
- Supply Chain Management (p. 120)

BADM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BADM>)

Business Administration Courses

BADM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

BADM 205 Business Location Decisions credit: 3 Hours.
Same as GEOG 205. See GEOG 205.

BADM 261 Technology & Mgmt Seminar credit: 1 Hour.
Current topics in technology and management presented by senior executives from a wide range of industries. Executives discuss challenges they confront and approaches taken in execution of their respective businesses. Format encourages dialogue and discussions between executives and students. Same as ENG 261. Credit is not given toward technical electives in the College of Engineering nor business electives in the College of Business, nor toward the T&M Minor.

BADM 300 The Legal Environment of Bus credit: 3 Hours.
Introduction to law and the legal system, litigation, contracts, business organizations, intellectual property, employment law and governmental regulation of business.

BADM 301 Summary of Business Law credit: 3 Hours.
Basic principles of the private law of business including the law of contracts, agency, and business organizations; a brief introduction to the law of sales, negotiable instruments, security devices, and property. Credit is not given for both BADM 301 and BADM 403. Course is not open to students in the College of Business.

BADM 303 Principles of Public Policy credit: 3 Hours.
Same as ACCY 321, ACE 321, and PS 321. See PS 321.

BADM 310 Mgmt and Organizational Beh credit: 3 Hours.
General analysis of management and organizational behavior from a systems point of view, including classical organizational theory and management, organizational behavior, and management science; environmental forces; planning, organizing, and control processes; motivation, incentives, leadership, communication, and interpersonal relations; and discussion of production and decision-making and mathematical models.

BADM 311 Individual Behavior in Orgs credit: 3 Hours.
Understanding the behavior of employees in work organizations; particular attention to the motivation of individuals to join and perform in organizations and to employee satisfaction with elements of the work environment; and emphasis on various management strategies to modify employee motivation and satisfaction. Prerequisite: BADM 310.

BADM 312 Org Design and Environment credit: 3 Hours.
Understanding of complex organizations; particular attention to ways of dividing work, achieving coordination, and issues connected with change and adaptation. Prerequisite: BADM 310.

BADM 313 Human Resource Management credit: 3 Hours.
Studies concepts and methods used by the staff personnel unit in building and maintaining an effective work force in an industrial organization; development of ability to design the personnel subsystem within the firm and to deal effectively with problems encountered in such areas as recruitment, selection, training, and wage and salary administration; and considerable emphasis on case analysis, role playing, and research. Credit is not given for both BADM 313 and PSYC 245. Prerequisite: BADM 310.

BADM 314 Leading Negotiations credit: 3 Hours.
Aims to advance students' ability to negotiate formal and informal business agreements and resolve conflicts effectively. Because leaders depend on others to accomplish goals, leaders need to be skilled negotiators to generate solution that are acceptable, valuable, and able to be implemented. Students will engage in a series of negotiations that provide practice and impart a framework for planning for, conducting, and analyzing negotiations. Restricted to College of Business students and Business Minor students. Restricted to students with Junior or Senior class standing.

BADM 320 Principles of Marketing credit: 3 Hours.
Emphasizes the concepts of planning, organization, control, and decision making as they are applied in the management of the marketing function. Provides an overview of aspects of the marketing discipline.

BADM 321 Principles of Retailing credit: 3 Hours.
Gives a general analysis of the structure of retailing emphasizing the retailing environment and operating efficiencies; includes patronage behavior, merchandise control, pricing, promotion, location, and vendor relations; and gives special attention to emerging trends in retailing. Prerequisite: BADM 320.

BADM 322 Marketing Research credit: 3 Hours.
Focuses on the techniques and methods of marketing research; emphasizes primarily survey research and experimental design; and offers students the opportunity to apply techniques to real-world situations. Prerequisite: BADM 320 and ECON 202.

BADM 323 Marketing Communications credit: 3 Hours.
Introduces the student to the topic of marketing communications and promotion management. Topics covered include: advertising, sales promotion, point-of-purchase communications, interactive marketing, and event sponsorships. Prerequisite: BADM 320.

BADM 324 Purchasing and Supply Mgmt credit: 3 Hours.
Examines the analysis, planning, and forms of organization that are associated with the buying functions in business. Major focus on the principal issues involved in the procurement of raw materials, components, equipment, operating supplies, and services. Also treats the unique aspects of institutional and government purchasing. Case problems constitute a major vehicle of instruction. Prerequisite: Credit or concurrent enrollment in BADM 320.

BADM 325 Consumer Behavior credit: 3 Hours.

Studies the factors affecting customer behavior in household and organizational markets and their relevance for marketing management planning and analysis; provides an overview of explanations of consumption differences anchored in socioeconomic, demographic, cultural, and psychological processes; and surveys buyer decision-making processes and their implications for marketing strategy.

Prerequisite: BADM 320.

BADM 326 Pricing Policies credit: 3 Hours.

The role of pricing in contemporary marketing and major pricing decisions facing the firm; theoretical, economic, and practical methods and models for setting prices; pricing new products, initiating price changes, and responding to competitive pricing; the relationship of pricing objectives and strategies to the goals of the firm; and sealed bidding for contracts. Prerequisite: BADM 320.

BADM 327 Marketing to Business and Govt credit: 3 Hours.

Introduces the general area of industrial marketing; examines the nature of industrial markets especially as they compare to consumer markets and emphasizes such factors as the demand for industrial goods, marketing intelligence systems for industrial firms, marketing strategy in industrial markets, and analyses and control of industrial marketing programs; integrates important concepts from sales management and business logistics throughout the course; uses case studies.

Prerequisite: BADM 320.

BADM 328 Business-to-Business Selling credit: 3 Hours.

Introduces the use of persuasive personal communication in attracting and retaining customers. Uses experiential learning exercises to address principles and techniques of personal selling and the administration of the selling function as it relates to the development of marketing strategy and the achievement of corporate objectives. Prerequisite: Junior standing.

BADM 329 New Product Development credit: 3 Hours.

Exposes student to business and marketing decisions in the context of new product development and marketing. Helps students learn how to use state-of-the-art management techniques to identify markets, develop new product ideas, measure customer benefits, and design profitable new products. Prerequisite: BADM 320.

BADM 332 Sustainable Product Design & Marketing Plans I: Bottom-Up Immersion in Subsistence Marketplaces credit: 4 Hours.

Focuses on sustainable product design and enterprise plan development; uses extreme resource constrained contexts, i.e., subsistence marketplaces, to learn about bottom-up immersion and design for any context; virtual immersion in subsistence contexts; emersion of principles for business, design, and engineering; idea generation and evaluation by groups of business, engineering, design and other students; optional international field trips. Prerequisite: Application process. Junior or senior class standing.

BADM 333 Sustainable Product Design & Marketing Plans II: Bottom-Up Enterprise & Marketing Innovation credit: 4 Hours.

Focuses on sustainable product design and marketing plan development; uses extreme resource constrained contexts, subsistence marketplaces, to learn about bottom-up enterprise and innovation for any context; project based course focusing on systematic approach for designing sustainable products and developing enterprise plans; covers concept generation and evaluation, detailed design, cost modeling, market-testing & prototyping, product innovation, and sustainable enterprise plan development for subsistence marketplaces or upward innovation for advanced economies. Prerequisite: BADM 332 or instructor approval. Junior or senior class standing.

BADM 334 Sustainable Marketing Enterprises credit: 3 Hours.

Understanding of the relationship between sustainable marketing/business practices, societal welfare and ecological systems; topics covered including sustainability in the areas of consumption and consumer behavior, product design, marketing research, value chains and communications; project to apply marketing and business concepts toward a business plan for organizations that captures economic, environmental and social sustainability. Prerequisite: Junior or Senior Class Standing.

BADM 335 Supply Chain Management Basics credit: 3 Hours.

Course broadly exposes students to the basics of supply chain management. It concentrates on the basic concepts, terminology, techniques and tools in supply chain management. Introduces the main functions of supply chain management and its interface with marketing, finance, and information management. Studies the interactions among the logistics of manufacturing, inventory, and transportation. Students are introduced to mathematical modeling and computer simulations to optimize the performance of supply chains.

BADM 336 Modeling the Supply Chain credit: 3 Hours.

Course introduces students to supply chain modeling. It covers optimization and simulation modeling, value stream mapping, and the SCOR model for representation of supply chains. Models for strategic and tactical decision-making in supply chain design and operations will be considered. Presents examples of supply chain modeling in practice and integration of supply chain models with other business functions. Prerequisite: BADM 335.

BADM 337 Practicum in Supply Chain Mgt credit: 3 Hours.

This is the capstone course for the Supply Chain Management major. Students are required to work in teams to solve real-world supply chain management problems using the tools and techniques learned from their other classes. Students are required to present their progress and final reports to both the faculty and company sponsors. Also covers some basic elements of project management and a large case study.

BADM 340 Ethical Dilemmas of Business credit: 3 Hours.

Examines business decision making and the role ethics plays in that process. Analysis of how managers behave and whether ethical choices are knowingly made or only realized thereafter. The object is to increase awareness of the moral dimension of business activity.

BADM 350 IT for Networked Organizations credit: 3 Hours.

Examines the information technology and its impact on modern organizations. Topics include: (1) IT, Internet Technologies, E-Commerce and business models, (2) organizing and modeling enterprise data, (3) Network protocol and architecture, (4) development of IT systems, and (5) IT management and organization design.

BADM 351 E-Business Management credit: 3 Hours.

Designed to provide current perspective about enterprise IT-applications and the management issues that such applications entail. Emphasis is on current developments that will be explored with lectures, case studies, and hands-on applications. The course builds on BADM 350. May be repeated in subsequent terms. Prerequisite: BADM 350.

BADM 352 Database Design and Management credit: 3 Hours.

Introduce the modern concepts, techniques and management practices when dealing with data and use of data in organizations. Topics include data modeling, database logical and physical designs, implementation, database administration and web-based database environment. Students will be involved in constructing a database and researching an advanced topic to solidify the learning. Same as ACCY 352.

BADM 353 Info Sys Analysis and Design credit: 3 Hours.

Methodologies and techniques used and deliverables created in developing large-scale information systems, including preliminary planning, feasibility analysis, design implementation, and post-implementation review of the system; a term-long project which familiarizes students with methodology and techniques is required. Same as ACCY 353. Prerequisite: BADM 350.

BADM 354 Mgmt of Data Communications credit: 3 Hours.

Course stresses a top-down, business oriented approach to evaluating and selecting data communications technology. Students who successfully complete this course gain practical knowledge of network telecommunications technology including hardware and software. They learn enough to allow them to help design systems that include network components. Prerequisite: BADM 350.

BADM 355 Enterprise Software Management credit: 3 Hours.

Almost every professional who works in a field related to Information Technology requires an understanding of how enterprise projects and IT projects, in general, should be managed. Provides fundamental managerial skills for students who will work on IT projects. Covers different kinds of enterprise software applications - Enterprise Resource Planning Systems, Customer Relationship management systems and supply chain management IT systems. Students will get hands-on understanding through a term project and project-management software. Discusses approaches to estimate and manage costs, schedules and resources. Students get an understanding of real-world challenges through case studies throughout the course. May be repeated in subsequent terms. Prerequisite: BADM 350.

BADM 365 New Product Marketing credit: 3 Hours.

Exposes engineering students to the discipline of marketing and to business decision-making in the unique context of new product marketing decisions. Credit is not given for both BADM 365 and BADM 320.

BADM 366 Product Design and Development credit: 3 Hours.

Presents an overview of the product development process from concept generation to design manufacturing and project management. There is an emphasis on product definition, early concept development, visual reasoning and engineering graphics. Students work in cross disciplinary teams working through product development projects. Same as TMGT 366. Prerequisite: Admission to the Technology and Management Program.

BADM 367 Mgmt of Innov and Technology credit: 3 Hours.

Course is the first jointly taken course for the engineering and business college undergraduates in the Technology and Management program. It focuses on the strategic management of technology and innovation in organizations. It builds primarily on broad models of technological evolution and organizational change. Same as TMGT 367. Prerequisite: Admission to the Technology and Management program.

BADM 374 Management Decision Models credit: 3 Hours.

Introduction to methods of operations research from an executive or managerial viewpoint, emphasizing formulation of business problems in quantitative terms; industrial applications of linear programming, dynamic programming, game theory, probability theory, queuing theory, and inventory theory. Prerequisite: ECON 203.

BADM 375 Business Process Management credit: 3 Hours.

Explores methods of design and management of manufacturing and service business processes; central concepts include managing process-speed, -capacity, -inventory, and -uncertainty; additional topics include simultaneous product and process design, and an introduction to quality management, process improvement and lean thinking.

BADM 376 Enterprise Proc Integr & Dynm credit: 3 Hours.

Enterprise-level study of a business that focuses on the integration and management of many interrelated processes. The focus is on linkages between these business processes and the management of these linkages in a dynamic business environment. Prerequisite: BADM 375.

BADM 377 Project Management credit: 3 Hours.

In-depth treatment of management concepts, tools, and techniques that apply to the organization, planning, and control of projects; particular emphasis on analyzing needs, defining work, scheduling tasks, allocating resources; assessing costs, managing risks; tracking and evaluating performance; and building and leading teams.

BADM 378 Logistics Management credit: 3 Hours.

Treats the total flow of materials from their acquisition as basic or unprocessed supplies to delivery of the finished product, as well as the related counter-flows of information that both record and control material movement. Major topics include forecasting material requirements; transportation planning; order processing system; raw material, in-process and finished goods inventory management; packaging; in plant and field warehousing; location theory (space, time, and cost trade-offs); communications; and control.

BADM 379 Business Process Improvement credit: 3 Hours.

The survival and growth of any organization requires the continuous improvement of its processes. This course focuses on philosophies and tools for enhancing customer-defined value created through processes. Contemporary process improvement programs are emphasized along with conventional ideas - topics include Statistical Quality Control, Value Stream Mapping, Total Quality Management, and Six Sigma.

BADM 380 International Business credit: 3 Hours.

Introduces the field of international business and management. Examines the economic, political, and legal environments of international business. Analyzes differences in financial management, marketing, and management practices for firms doing business abroad.

BADM 381 Multinational Management credit: 3 Hours.

Examines critical issues facing managers who work in multinational firms. Designed to develop students' skills for working in a global business environment. Topics include foreign market entry strategies, global management of the functional areas of business, and management and control of multinational firms in the global marketplace.

BADM 382 International Marketing credit: 3 Hours.

Analyzes marketing strategy across national boundaries, the problems of marketing within foreign countries, and the coordination of global marketing programs. Includes problems faced by the exporter, licensor, joint venture, and multinational firm. The full range of market activities are discussed from a global perspective. Prerequisite: BADM 320.

BADM 394 Senior Research I credit: 2 to 4 Hours.

Research and readings course for students majoring in business administration. May be taken by students in the college honors program in partial fulfillment of the honors requirements. May be repeated in the same or separate terms for unlimited undergraduate hours. Not applicable to graduate or professional hours.

BADM 395 Senior Research II credit: 1 to 4 Hours.

Research and readings course for students majoring in business administration. May be taken by students in the college honors program in partial fulfillment of the honors requirements. Additional fees may apply. See Class Schedule. May be repeated in the same or separate term for unlimited undergraduate hours. Not applicable to graduate or professional hours.

BADM 403 Corporate & Commercial Law credit: 4 Hours.

Advanced discussion of corporate and commercial law, including topics tested on the CPA exam: agency, contracts, debtor-creditor relationships, governmental regulation of business and business organizations. 4 undergraduate hours. 4 graduate hours.

BADM 420 Advanced Marketing Management credit: 3 Hours.

Integrative study of methods and models for marketing decision-making; emphasizes the application of analytical tools and behavioral and quantitative models to marketing decision-making. Uses lectures, case studies and simulation exercises. 3 undergraduate hours. No graduate credit. Prerequisite: BADM 320.

BADM 436 Intl Business Immersion credit: 4 Hours.

Same as ACE 436. See ACE 436.

BADM 438 Agri-food Strategic Management credit: 3 Hours.

Same as ACE 431. See ACE 431.

BADM 440 Business Applications of GIS credit: 3 Hours.

Same as GEOG 440. See GEOG 440.

BADM 445 Small Business Consulting credit: 4 Hours.

Through guided experience, students identify and offer advice to local small business firms; exposes students, serving as consultants, to the wide variety of problems facing the smaller firm as well as enables them to apply current business methods to real problems. Students work in teams. 4 undergraduate hours. 4 graduate hours.

BADM 446 Entrepreneurship Sm Bus Form credit: 4 Hours.

Studies entrepreneurship for those with a serious interest in owning their own business within five years of graduation; students prepare a comprehensive business plan for starting or acquiring such a business; also studies the problems of an existing small business. 4 undergraduate hours. 4 graduate hours.

BADM 447 Legal Strat for Entrep Firm credit: 4 Hours.

Addresses the legal and managerial strategies important to the emerging firm, with particular focus on defensive legal strategies in the context of entrepreneurship. From the entrepreneur's perspective, examines the law of partnerships, sole proprietorships, corporations, joint ventures, agency, and defensive strategies to thwart takeovers. 4 undergraduate hours. 4 graduate hours.

BADM 449 Business Policy and Strategy credit: 3 Hours.

Analysis of policy formulation and implementation from a company-wide standpoint; emphasis on integration of knowledge and approaches across functional areas; both endogenous and exogenous factors which affect company policies; and the role of the firm in society. 3 undergraduate hours. No graduate credit.

BADM 451 E-com Apps & Web-based Systems credit: 3 or 4 Hours.

Provides students with technical skills for building web-based e-commerce applications using the Microsoft.NET framework as well as knowledge of web services. Topics include: ActiveServerPages.NET (ASP.NET), VisualBasic.NET (VB.NET), XML, web services, the Microsoft.NET framework. 3 undergraduate hours. 4 graduate hours. Prerequisite: BADM 350.

BADM 453 Decision Support Systems credit: 3 Hours.

This advanced course examines recent developments in information technology for managerial decision support with an emphasis on Internet-based and mobile information technologies. Real-world cases will be used to discuss the application of these technologies to management information systems. 3 undergraduate hours. No graduate credit.

BADM 454 Enterprise Computing Mgmt credit: 3 Hours.

Aims to prepare students with programming skills for building and managing enterprise applications. Java is used as the language for implementation. C and C++ are also introduced briefly. General principles of computing are emphasized over specific languages. 3 undergraduate hours. No graduate hours. Prerequisite: BADM 350.

BADM 458 IT Governance credit: 3 or 4 Hours.

Provides students with a core body of knowledge concerning the state of development, research and business practice of IT governance on topics such as: managerial issues for the prevention of business frauds and threats; the key technology for IT governance for users and businesses; issues concerning integrity control, privacy, ethics, risk management, and reliability; best practices concerning regulatory compliance requirements; and enterprise information management issues, policies and practices. 3 undergraduate hours. 4 graduate hours. Prerequisite: BADM 350.

BADM 460 Business Process Modeling credit: 3 Hours.

Introduces the identification and analysis of various aspects of business processes. The course defines business processes and provides tools for designing and analyzing them. Same as TMGT 460. 3 undergraduate hours. No graduate credit. Prerequisite: BADM 367.

BADM 461 Tech, Eng, & Mgt Final Project credit: 2 Hours.

Course is the capstone interdisciplinary new product development project course for the Technology & Management Program. Students work in cross-functional teams (joint business and engineering teams) to solve new product development project problems provided by client firms. Because the client firms differ each year, so do the problems. Same as TMGT 461. 2 undergraduate hours. No graduate credit. May be repeated up to 4 hours. Prerequisite: BADM 366, BADM 367, BADM 460.

BUS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BUS>)

Business Courses

BUS 101 Professional Responsibility and Business credit: 3 Hours.

Introduces business students to professional responsibility. Develops the concept of professional responsibility within a personal and interpersonal context. Continues by expanding the concept to encompass the firm and explore the global corporate context. Introduces business majors and career paths and provides an understanding of ethical decision-making. Encourages the development of a professional identity and skills, preparing students to represent the College and the University with integrity and confidence in their careers. Prerequisite: First Semester Freshman, Intercollegiate and Off-Campus Transfer Students.

BUS 120 Business Honors Seminar credit: 2 Hours.

Introduction to business and an overview of the role of the College of Business and the University of Illinois in providing opportunities for undergraduates to prepare to become business leaders. Introduction to the College of Business Honors Program, a leadership program for approximately 40 incoming freshmen in the College of Business. Students will begin to work as a team to use leadership in service to all undergraduates in the College of Business. Approved for both letter and S/U grading. Prerequisite: Membership in freshman class of College of Business Honors Program.

BUS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

BUS 299 BUS Internship credit: 0 Hours.

Accommodates students who must be registered for a course at the University while completing an internship, either because the internship is unpaid and the company requires registration, or because of visa requirements. Only internships in the College of Business will be considered. Approved for S/U grading only.

BUS 302 Principles Prof Responsibility credit: 3 Hours.

Examines in depth a number of the multi-dimensional attributes required to advance understanding of professional responsibility in the context of an ever-changing business environment, focusing on principles for addressing dilemmas that regularly arise in professional life in the work of business. Explores connections between academic integrity while in school and professional responsibility in later work life. Builds on BUS 101 and provides a breadth and depth of that body of knowledge that will enable highly successful students in BUS 302 to be considered for the role of section leaders in BUS 101. Aspiring section leaders in BUS 101 must have excelled in BUS to be considered for the position. Prerequisite: BUS 101; by application and interview.

BUS 399 Business Study Abroad credit: 0 to 18 Hours.

Upon prior written approval of the College of Business' Office of Undergraduate Affairs, a student may earn up to 18 credit hours per term undertaking a study and/or research project in international business at accredited foreign institutions or approved overseas programs. Final determination of appropriate credit will be made upon completion of the work done abroad. While absent from the Urbana-Champaign campus, the student must continue to pay all fees required by the University of Illinois to retain continuity of enrollment and to allow the time spent away from this campus to count toward residency. Approved for both letter and S/U grading. Maximum of 18 hours per term and 36 hours total. Prerequisite: One academic year (or one semester in the case of transfer students) in residence at UIUC, good academic standing, completion of at least thirty semester hours toward the bachelor's degree, and prior approval of course work by the College of Business' Office of Undergraduate Affairs. Some programs have additional requirements.

Major in Operations Management

For the Degree of Bachelor of Science in Operations Management

The Operations Management major develops concepts and skills for crafting innovative ways to deliver a firm's goods and services. It focuses upon the productive management of capital, human capital and information resources upon the process of value creation. The coursework devotes particular attention to the definition of business goals and the design of management policies and procedures for achieving those goals. Students majoring in Operations Management typically will seek careers as operations or strategy consultants, supply chain analysts, quality management professionals, manufacturing or service operations managers, project managers or leaders within other mission-critical functions of an organization.

In addition to the Operations Management major's requirements, Business Administration students must also fulfill the Urbana-Champaign campus's General Education requirements and the College of Business Core Courses requirements (for more detail, refer to the College of Business Undergraduate section (p. 108)).

Requirements for the major are:

Code	Title	Hours
BADM 350	IT for Networked Organizations	3
BADM 374	Management Decision Models (Prerequisite: ECON 203)	3
BADM 375	Business Process Management	3
BADM 377	Project Management	3
BADM 378	Logistics Management	3
BADM 379	Business Process Improvement	3
Select three of the following:		9-10
BADM 311	Individual Behavior in Orgs (Prerequisite: BADM 310) ¹	
BADM 312	Org Design and Environment (Prerequisite: BADM 310) ¹	
BADM 329	New Product Development (Prerequisite: BADM 320) ¹	
BADM 353	Info Sys Analysis and Design (Prerequisite: BADM 350) ¹	
BADM 445	Small Business Consulting ¹	
BADM 453	Decision Support Systems ¹	
Total Hours		27

¹ One of these three course requirements may be satisfied by an appropriate internship, approved in advance by the Head of the Department of Business Administration or designee.

Major in Information Systems

For the Degree of Bachelor of Science in Information Systems

The Information Systems major provides students the skills necessary to understand and manage information, information technology development, systems analysis, e-business management and electronic commerce.

In addition to the Information Systems major's requirements, Business Administration students must also fulfill the Urbana-Champaign campus's General Education requirements and the College of Business's Core Courses requirements (for more detail, refer to the College of Business Undergraduate Section (p. 108)).

Code	Title	Hours
BADM 350	IT for Networked Organizations	3
BADM 352	Database Design and Management	3
BADM 353	Info Sys Analysis and Design (Prerequisite: BADM 350)	3
Select two of the following:		6
BADM 351	E-Business Management (Prerequisite: BADM 350)	
BADM 355	Enterprise Software Management (Prerequisite: BADM 350)	
BADM 453	Decision Support Systems (Prerequisite: BADM 350)	
BADM 458	IT Governance (Prerequisite: BADM 350)	
Select four of the following:		12-14

BADM 311	Individual Behavior in Orgs (Prerequisite: BADM 310)
BADM 312	Org Design and Environment (Prerequisite: BADM 310)
BADM 322	Marketing Research (Prerequisite: BADM 320)
BADM 324	Purchasing and Supply Mgmt (Prerequisite: Credit or concurrent enrollment in BADM 320)
BADM 374	Management Decision Models (Prerequisite: ECON 203)
BADM 375	Business Process Management
BADM 377	Project Management
BADM 379	Business Process Improvement
BADM 380	International Business
BADM 445	Small Business Consulting
BADM 446	Entrepreneurship Sm Bus Form
Total Hours	27

Major in Management For the Degree of Bachelor of Science in Management

The Management major is designed to prepare students to be leaders and innovators in analyzing and solving managerial problems that every organization faces in its day-to-day operations. To be effective, managers must be able to design organizations that can compete in complex and volatile business environments and to execute their strategies within these organizations. Effective managers also must be ethical leaders and competent decision-makers who formulate goals and long-term plans, build effective teams, and motivate their employees. Students majoring in Management have the option to select **one** concentration either in Entrepreneurship or General Management or International Business, depending on their career objectives.

The Entrepreneurship Concentration studies how business opportunities are identified and exploited to create wealth. This concentration is intended for students who are interested in new venture creation. Some graduates will work within existing organizations while others will create new organizations. The General Management Concentration is designed to educate and train future business leaders, decision makers and strategic thinkers to skillfully manage human capital in firms and organizations. The International Business Concentration is designed to provide students with the sound understanding of how International Business principles and the managerial issues faced by multinational companies. Students who select the International Business concentration will focus on political, cultural and institutional differences among nations by taking courses offered across the campus.

In addition to the Management major's requirements, Business Administration students must also fulfill the Urbana-Champaign campus's General Education requirements and the College of Business's Core Courses requirements (for more detail, refer to the College of Business Undergraduate Section (p. 108)).

Management Major-Entrepreneurship Concentration

Code	Title	Hours
PSYC 201	Intro to Social Psych (Preferred prerequisite: PSYC 100 or PSYC 103)	3
BADM 311	Individual Behavior in Orgs (Prerequisite: BADM 310)	3
BADM 350	IT for Networked Organizations	3
BADM 374	Management Decision Models (Prerequisite: ECON 203)	3
BADM 375	Business Process Management	3
BADM 445	Small Business Consulting	4
BADM 446	Entrepreneurship Sm Bus Form	4
FIN 423	Financing Emerging Businesses (Prerequisite: FIN 221 and consent of the Department of Finance)	3
Select one of the following:		3-4
BADM 312	Org Design and Environment (Prerequisite: BADM 310)	
BADM 403	Corporate & Commercial Law	
BADM 447	Legal Strat for Entrepre Firm	
Total Hours		27

Management Major-General Management Concentration

Code	Title	Hours
PSYC 201	Intro to Social Psych (Preferred prerequisite: PSYC 100 or PSYC 103)	3
BADM 311	Individual Behavior in Orgs (Prerequisite: BADM 310)	3
BADM 312	Org Design and Environment (Prerequisite: BADM 310)	3
BADM 313	Human Resource Management (Prerequisite: BADM 310)	3
BADM 350	IT for Networked Organizations	3
BADM 374	Management Decision Models (Prerequisite: ECON 203)	3
BADM 375	Business Process Management	3
Select two of the following:		6-8
BADM 329	New Product Development (Prerequisite: BADM 320)	
BADM 353	Info Sys Analysis and Design (Prerequisite: BADM 350)	
BADM 377	Project Management	
BADM 378	Logistics Management	
BADM 380	International Business	
BADM 403	Corporate & Commercial Law	
BADM 446	Entrepreneurship Sm Bus Form	
Total Hours		27

Management Major-International Business Concentration

Code	Title	Hours
PSYC 201	Intro to Social Psych (Preferred prerequisite: PSYC 100 or PSYC 103)	3
BADM 350	IT for Networked Organizations	3

BADM 374	Management Decision Models (Prerequisite: ECON 203)	3
BADM 375	Business Process Management	3
BADM 380	International Business	3
BADM 381	Multinational Management	3
BADM 382	International Marketing (Prerequisite: BADM 320)	3
General International Elective		
Choose one course from the list of courses relating to International Trade, International Economics or International Finance.		3
Area Specific Elective		
Choose one course from the list of courses relating to 1) the European Union or other customs unions or 2) the economy, politics or sociology of a specific nation state or geographical region.		3
Total Hours		27

View the General International Elective Course List. (<https://business.illinois.edu/ba/undergraduate/management/international-business/electives-1>) View the Area Specific Elective Course List. (<https://business.illinois.edu/ba/undergraduate/management/international-business/electives-2>) The Elective Courses's Lists will be reviewed periodically and new courses may be added. A student may substitute a course not on the lists by obtaining consent in advance from the Department of Business Administration Head or designee.

Major in Marketing For the Degree of Bachelor of Science in Marketing

The Marketing Major studies those business activities directly related to the process of placing meaningful assortments of goods and services in the hands of the consumer. The Marketing Student is concerned with the efficient performance of marketing activities and with their effective coordination with the other operations of the firm.

In addition to the Marketing Major requirements, Business Administration students must also fulfill the University's General Education requirements and the College of Business Core Courses requirements (for more detail, refer to the College of Business Undergraduate Section (p. 108)).

Code	Title	Hours
BADM 322	Marketing Research (Prerequisite: BADM 320)	3
BADM 325	Consumer Behavior (Prerequisite: BADM 320)	3
BADM 350	IT for Networked Organizations	3
BADM 375	Business Process Management	3
BADM 420	Advanced Marketing Management (Prerequisite: BADM 320)	3
Select four of the following (which must include at least two Marketing courses - marked with *):		12-13
BADM 321	Principles of Retailing (Prerequisite: BADM 320) *	
BADM 323	Marketing Communications (Prerequisite: BADM 320) *	

BADM 324	Purchasing and Supply Mgmt (Prerequisite: Credit or concurrent enrollment in BADM 320) *	
BADM 326	Pricing Policies (Prerequisite: BADM 320) *	
BADM 327	Marketing to Business and Govt (Prerequisite: BADM 320) *	
BADM 328	Business-to-Business Selling *	
BADM 329	New Product Development (Prerequisite: BADM 320) *	
BADM 382	International Marketing (Prerequisite: BADM 320) *	
PSYC 201	Intro to Social Psych (Prerequisite: PSYC 100 or PSYC 103)	
BADM 311	Individual Behavior in Orgs (Prerequisite: BADM 310)	
BADM 312	Org Design and Environment (Prerequisite: BADM 310)	
BADM 374	Management Decision Models (Prerequisite: ECON 203)	
BADM 378	Logistics Management	
BADM 403	Corporate & Commercial Law	
Total Hours		27

Major in Supply Chain Management For the Degree of Bachelor of Science in Supply Chain Management

The Supply Chain Management major studies the movement of materials from their procurement as raw material, parts or components through the manufacturing or processing sector to the marketing and distribution of end products for industrial or commercial users. The Supply Chain Management major is available only to qualified students based upon application and personal interview. For more information, contact the Director of the Supply Chain Management Program.

In addition to the Supply Chain Management major's requirements, Business Administration students must also fulfill the Urbana-Champaign campus's General Education requirements and the College of Business's Core Courses requirements (for more detail, refer to the College of Business Undergraduate Section (p. 108)).

Students are required to complete an approved internship to graduate with the Bachelor of Science in Supply Chain Management degree.

Code	Title	Hours
BADM 324	Purchasing and Supply Mgmt (Prerequisite: Credit or current enrollment in BADM 320)	3
BADM 327	Marketing to Business and Govt (Prerequisite: BADM 320)	3
BADM 335	Supply Chain Management Basics	3
BADM 336	Modeling the Supply Chain (Prerequisite: BADM 335) ¹	3
BADM 337	Practicum in Supply Chain Mgt	3
BADM 350	IT for Networked Organizations	3
BADM 375	Business Process Management	3

BADM 378	Logistics Management	3
Select one of the following:		3
BADM 322	Marketing Research (Prerequisite: BADM 320)	
BADM 328	Business-to-Business Selling	
BADM 352	Database Design and Management	
BADM 374	Management Decision Models (Prerequisite: ECON 203)	
BADM 377	Project Management	
BADM 379	Business Process Improvement	
Total Hours		27

¹ The internship must be completed prior to enrollment into the **BADM 336** course and a report on the internship must be submitted.

Finance

Louis Chan

340 Wohlers Hall
1206 S. Sixth Street
Champaign, IL 61820
PH: (217) 244-2239
FX: (217) 333-3102
<http://www.business.illinois.edu/finance>

For the Degree of Bachelor of Science in Finance

The field of finance is primarily concerned with the acquisition and management of funds by business firms, governments, and individuals. A business seeks financial advice when considering the purchase of new equipment, the expansion of present facilities, or the raising of additional funds. Determining the value of financial and real assets and derivatives is a key activity in finance.

As the study of finance is designed to provide the student with both the theoretical background and the analytical tools required to make effective judgments in finance, many students select careers in business financial management, commercial and investment banking, investments, government finance, insurance, and real estate.

In addition to the finance major requirements, students in finance must meet the University General Education requirements and the College of Business core requirements (for more detail, see the College of Business undergraduate section (p. 108)). Minimum requirements in the major for the Bachelor of Science degree in Finance are:

Code	Title	Hours
For Students Admitted Prior to Fall 2016		
FIN 300	Financial Markets (Prerequisite: FIN 221 Corporate Finance)	3
FIN 321	Advanced Corporate Finance (Prerequisite: FIN 300 Financial Markets)	3
Three additional full-semester, 3-hour 400-level Finance courses except FIN 494 or FIN 495 (Senior Research) and FIN 490 (Special Topics).		9
Select one of the following (Major elective):		3-4
ACCY 301	Atg Measurement & Disclosure (Prerequisite: ACCY 202)	

ACCY 302	Decision Making for Atg (Prerequisite: ACCY 202)
ACE 428	Commodity Futures and Options
BADM 374	Management Decision Models (Prerequisite: ECON 202 or consent of instructor)
Economics: any 300- or 400-level course excluding ECON 302	
GEOG 483	Urban Geography
Mathematics or statistics: any course above the minimum mathematics or statistics requirement of the college with the exception of MATH 225.	
Other courses as recommended by the Department of Finance faculty and approved by the Department of Finance chairperson.	

Code	Title	Hours
For Students Admitted Fall 2016 and Later		
FIN 300	Financial Markets (Prerequisite: FIN 221 Corporate Finance)	3
FIN 321	Advanced Corporate Finance (Prerequisite: FIN 300 Financial Markets)	3
FIN 411	Investment & Portfolio Mngt (Prerequisite: FIN 300 Financial Markets)	3
Four additional full-semester, 3 hour 400 level-Finance courses except FIN 494 or FIN 495 (Senior Research) and FIN 490 (Special Topics).		12
One additional full-semester, 3-hour Finance course, which may be one 200-level course, one 3-hour 490, or one 3-hour 494 or 495		3

Advising Notes

- Courses taken to fulfill major requirements may not be taken on a credit-no credit basis.
- It is recommended that Finance majors take additional accounting. ACCY 201 and ACCY 202 are required in the business core. Many employers look favorably upon additional accounting courses.

FIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FIN>)

Courses

FIN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. Course may be repeated for credit.

FIN 221 Corporate Finance credit: 3 Hours.

Introductory study of corporate financial management, in particular how the financial manager's choices add value to shareholder wealth through investment financing and operating decisions. Prerequisite: Completion of ECON 102 or ECON 103.

FIN 230 Introduction to Insurance credit: 3 Hours.

Introductory course on the role of insurance in society; covers insurance terminology, common personal insurance policies (auto, health, life and homeowners) and current issues.

FIN 232 Intro to Wealth Management credit: 3 Hours.

Creating a sound personal financial plan and issues related to becoming a financial planner. Course enrollment is limited to non-College of Business students and College of Business students with freshman or sophomore standing. Credit will not satisfy Finance major requirements. Credit is not given for both FIN 232 and ACE 240.

FIN 241 Fundamentals of Real Estate credit: 3 Hours.

A survey of real estate finance, appraisal, investment, law, brokerage, management, development and economics. Special attention is given to the analysis of aggregate real estate and mortgage markets, to the individual transactions within these markets, and to the legal and institutional factors which affect these markets. Prerequisite: ECON 102.

FIN 300 Financial Markets credit: 3 Hours.

Theory and applications associated with the functioning of financial markets to include the conceptual foundations of portfolio theory, risk management, and asset valuation. The stock, money, bond, mortgage, and futures and options markets are examined. Prerequisite: FIN 221.

FIN 321 Advanced Corporate Finance credit: 3 Hours.

Theories of firms' investment and financing decisions are covered. Topics include dividend policy, capital budgeting, capital structure, bankruptcy, long-term debt and leasing decisions. Prerequisite: FIN 300.

FIN 390 Finance Academy credit: 1 Hour.

The Finance Academy is an enrichment program for outstanding undergraduate Finance majors. A select program that focuses on developing future business leaders via enhanced academic and career opportunities. Students are normally invited to participate by the faculty during their junior year, when they are enrolled in FIN 300. If inducted, students participate throughout their junior and senior years. Approved for letter and S/U grading. May be repeated in separate terms. Course will not satisfy Finance major requirements. Prerequisite: Induction into the Finance Academy.

FIN 391 Investment Banking Academy credit: 1 Hour.

A diversified curriculum designed to prepare students for a successful career in investment banking; course incorporates peer mentorship, guest lectures (from bankers, accountants, private equity associates and hedge fund analysts), a case competition and a field trip. Course will not satisfy Finance major requirements. May be repeated for a maximum of 6 hours in separate terms. Prerequisite: Admission by application only.

FIN 392 Investment Management Academy credit: 1 Hour.

Overview of security analysis with the objective of how to value an investment proposition for inclusion in a portfolio of securities managed by students in the class. Focus will be in areas of fundamental securities analysis with the emphasis on equity valuation. Course will not satisfy Finance major requirements. May be repeated to a maximum of 6 hours in separate terms. Prerequisite: Admission by application only. Primarily for Finance majors with sophomore standing or above who show interest in pursuing their CFA credential.

FIN 411 Investment & Portfolio Mngt credit: 3 Hours.

Current theories of portfolio management are covered in considerable detail to provide a conceptual framework for the evaluation of investment strategies. Applications and implementation are covered in depth, including performance evaluation and international diversification. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300.

FIN 412 Options and Futures Markets credit: 3 Hours.

Introduction of options and futures markets for financial assets; examination of institutional aspects of the markets; theories of pricing; discussion of simple as well as complicated trading strategies (arbitrage, hedging and spread); applications for asset and risk management. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 413 Financial Engineering credit: 3 Hours.

This course will present and analyze modern tools for identification, measurement, and management of financial risk faced by corporations and institutional investors; in particular as related to the application of futures, forwards, options, swaps, and other derivatives. The focus will be evenly split between theoretical models and practical applications, and will include careful consideration of parameter estimation and numerical implementation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 414 Urban Economics credit: 3 or 4 Hours.

Same as ECON 414. See ECON 414.

FIN 415 Fixed Income Portfolios credit: 3 Hours.

Conceptual foundations and implementation of strategies for the selection, evaluation, and revision of portfolios of fixed-income financial assets (bonds). 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 418 Financial Modeling credit: 3 Hours.

The objective is to learn the fundamentals and practice building financial models using Microsoft Excel. By the end of the term, each student should be able to develop an understanding of any financial relationship and build that financial relationship into a model using the built-in functions of Excel. Financial modeling, by definition, requires significant work outside of the classroom. Models are introduced, demonstrated, and reviewed in class, but each student is expected to research and collect data, and to construct the models, prior to each week's class meeting. 3 undergraduate hours. 3 graduate hours. Prerequisite: FIN 300 and FIN 321, or consent of instructor.

FIN 419 Real Client Managed Portfolios credit: 3 Hours.

Applies academic topics on financial markets, security analysis/valuation and portfolio management to hands-on investment management. Students will form and review objectives, constraints, and investment policy as it relates to the client's money under management. They will purchase securities, monitor performance of the portfolio, and make recommendations for any adjustments to the holdings. They will be fully educated and responsible to the fiduciary and ethical standards of professional money management as guided by the CFA Institute. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 9 hours. Prerequisite: FIN 321 or consent of instructor.

FIN 422 Cases in Corporate Finance credit: 3 Hours.

Course totally devoted to the study of financial management cases, provides students a hands-on learning experience. The case work helps students to develop their analytical and interpretative skills in solving unstructured real world problems. The theoretical concepts and tools learned in the introductory finance courses provide the foundation for the case studies. Topics discussed include financial forecasting and working capital management; capital budgeting and cost of capital; and capital structure, dividend policy, corporate financing, financial restructuring, financial distress, mergers, acquisitions and firm valuation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 and FIN 321.

FIN 423 Financing Emerging Businesses credit: 3 or 4 Hours.

The study of the business environment, alternative methods of organization and financing, use of financial statements as a management tool, valuation methods and approaches to ethical dilemmas from the perspective of an owner-manager. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 300 or consent of instructor.

FIN 424 Mergers and Acquisition credit: 3 Hours.

Focuses on identifying ways to increase firm value through mergers and acquisitions (M&A) and corporate restructurings. Surveys the drivers of success (failure) in M&A transactions and develop your skills in the design and evaluation of transactions. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 425 Private Equity/Venture Capital credit: 3 Hours.

Provides students with an understanding of the nature of the private equity market, the principal participants in this market, and how they function. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 431 Property-Liability Insurance credit: 3 or 4 Hours.

Examines in detail the functions of property-liability insurers, including marketing, underwriting, claims, ratemaking and administration, and the major current issues facing this industry. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 230.

FIN 432 Managing Fin Risk for Insurers credit: 3 or 4 Hours.

Introduces basic concepts in financial economics used in the analysis and management of financial risks, with an emphasis on the applications by insurers and pension plans; topics include decision making under uncertainty, economic statistics, deterministic and stochastic interest rate models, derivative securities, valuation, binomial models and option pricing models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 300; either FIN 230 or FIN 435.

FIN 433 Corporate Risk Management credit: 3 or 4 Hours.

Case study course examining how corporations deal with pure risk. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 221, FIN 431, and FIN 434.

FIN 434 Employee Benefit Plans credit: 3 Hours.

Studies the purpose, structure, and financial aspects of employee benefit plans, including pensions, health insurance, life insurance, and disability plans. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 435 Personal Wealth Management credit: 3 Hours.

Studies personal wealth management techniques with an emphasis on life insurance products; covers life insurance policies, annuities, trusts, buy-sell arrangements, investing in stocks, bonds and mutual funds, banking and borrowing, purchasing residential and commercial real estate, income and estate taxation and management of personal financial portfolio. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300.

FIN 443 Legal Issues in Real Estate credit: 3 or 4 Hours.

Overview of legal concepts, issues, and principles involving real estate. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

FIN 444 Urban Real Estate Valuation credit: 3 Hours.

The terminology, theory and techniques of real estate valuation (appraisal); a modern view of the three approaches to estimating value - sales comparison, cost and income. Special requirements include local field trips to appraise at least one single-family property and one income property. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of the instructor, FIN 241 is recommended but not required.

FIN 445 Real Estate Investment credit: 3 Hours.

An approach to the evaluation of real estate investment opportunities. Begins with the identification of the investor's goals and ends with an investment decision. Considers legal, physical, locational, and financial constraint, aggregate real estate and financial markets, tax considerations and investment criteria. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of the instructor, FIN 241 is recommended but not required.

FIN 446 Real Estate Financial Markets credit: 3 Hours.

Discusses real estate financing techniques and the secondary market for real estate financial assets including residential and commercial mortgage-backed securities (RMBS and CMBS). 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor, FIN 241 is recommended but not required.

FIN 447 Real Estate Development credit: 3 or 4 Hours.

Provides students with an exposure to the real world of real estate through a series of lectures by real estate professionals focused primarily on retail real estate development. A side benefit of the class will be to provide graduating seniors some insights into different career paths to help improve the career choices that they make. 3 undergraduate hours. 4 graduate hours. Prerequisite: FIN 221 or FIN 241.

FIN 451 Intl Financial Markets credit: 3 Hours.

This course covers the three major international financial markets; the foreign exchange market, the eurocurrency market, and the international equity and bond market. The course looks at international financial decisions including operations, structure and valuation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 and FIN 321.

FIN 461 Financial Intermediation credit: 3 Hours.

Financial intermediaries survey of the structure, functions, regulation, and risk management activities of financial intermediaries; central banking and monetary policy effects on financial intermediaries. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 463 Investment Banking credit: 3 Hours.

The mechanics of financial statement analysis and ratio analysis; development of investment banking/corporate finance valuation models (including DCF, leveraged buyout and merger models) in order to determine the intrinsic value of companies and price investment banking deals. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 (FIN 300 is waived if student is admitted to FIN 391 IBA). Priority to finance majors.

FIN 464 Investment Management credit: 3 or 4 Hours.

Students learn the fundamental equity research process including valuation and market and industry analysis. Students then select their own multi-asset portfolios using an online trading simulation software program. The course pays special attention to risk management. Ultimately, students implement hedging strategies based on real returns over the course of the semester. 3 undergraduate hours. 4 graduate hours. Prerequisite: FIN 300. Priority given to finance majors.

FIN 490 Special Topics in Finance credit: 1 to 3 Hours.

1 to 3 undergraduate hours. No graduate credit. May be repeated in the same term to a maximum of 6 hours. May be repeated in subsequent terms to a maximum of 9 hours. Course will not satisfy Finance major requirements. Prerequisite: FIN 300 or consent of instructor.

FIN 494 Senior Research credit: 2 to 4 Hours.

Research and reading course for students concentrating in finance, insurance, urban land economics, or related areas who meet one of the following requirements: (1) have a cumulative grade-point average of 3.0 or better; (2) have attained Honors Day recognition in the junior year; or (3) have consent of instructor. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated as topics vary. Prerequisite: Senior standing.

FIN 495 Senior Research credit: 2 to 4 Hours.

Research and reading course for students concentrating in finance, insurance, urban land economics, or related areas. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; and cumulative grade-point average of 3.0 or better, Honors Day recognition in the junior year, or consent of instructor.

Minor in Business for Non-Business Majors

Contact busminor@business.illinois.edu to address academic and admission questions.

The Business Minor is designed for students earning Undergraduate degrees in colleges other than the College of Business. The Business Minor provides course work through which Non-Business students can obtain skills and learn tools used in business. Business Minor students will learn the theories, techniques and concepts of Accounting, Finance, Management and Marketing. The Business Minor provides an academic background that will be useful for Non-Business students who wish to pursue a business career. The Business Minor is not available to College of Business students and Technology and Management Minor students. The Business Minor is not to be considered as preparation for transfer into the College of Business to earn an Undergraduate Business degree.

Admission into the Business Minor Program is very competitive and is **based upon both** the Cumulative GPA of the Prerequisite courses and the Overall/Total Cumulative GPA of the pool of applicants. Grade exceptions will be made only for the Prerequisite courses fulfilled by Advanced Placement credits, Dual Degree credits, Advanced Level credits and International Baccalaureate credits. Students are admitted by application into the Business Minor Program. Admission Applications are accepted in **330 Wohlers Hall, January 1st - 31st**.

Admission Requirements:

1. Applicants must complete at least 36 credit hours prior to the January Application period to become eligible for admission review.
2. Applicants **must complete all four** Prerequisite courses prior to the January Application period to become eligible for admission review. Please refer to the Business Minor Program's website (<http://go.illinois.edu/busminor>) for additional admission and academic information as well as the approved on-campus substitutionary Prerequisite courses.

Prerequisite Courses Requirement

Code	Title	Hours
CS 105	Intro Computing: Non-Tech	3
ECON 102	Microeconomic Principles	3
MATH 234	Calculus for Business I	4
STAT 100	Statistics	3

All applicants must have Academic Good Standing status (2.00 Cumulative GPA or higher). In addition, a Cumulative 2.50 GPA or higher is required from the four Prerequisite courses. Application is made by submitting the Statement of Intent to Pursue a Campus-Approved Minor (<http://provost.illinois.edu/educational-innovation/advising-resources/pursuing-undergraduate-minor>) into **350 Wohlers Hall**. Admission Applications will be reviewed by the College of Business in February and all applicants will be notified of a decision by mid-February.

Only those students officially admitted into the Business Minor Program by the College of Business may earn the Business Minor.

Business Minor students should enroll into Summer Session and Winter Term Business Minor courses to ensure their completions of the Business Minor requirements before their graduations.

Core Courses Requirement

Code	Title	Hours
ACCY 200	Fundamentals of Accounting (Enrollment is permitted only to Business Minor students.)	3
BADM 310	Mgmt and Organizational Beh	3
BADM 320	Principles of Marketing	3
FIN 221	Corporate Finance (Prerequisite is the ACCY 200 course.)	3

Note: ACCY 200, BADM 310, BADM 320, FIN 221 and the two Elective courses **must be earned** from the Urbana-Champaign campus. No exceptions will be made for study abroad and transfer courses to fulfill the minor's course requirements.

All six Business Minor courses must be completed with letter grades.

Elective Courses Requirement

Business Minor students may select only **two** of the following Elective courses to fulfill the minor's course requirements.

Code	Title	Hours
BADM 300	The Legal Environment of Bus	3
BADM 311	Individual Behavior in Orgs	3
BADM 312	Org Design and Environment	3
BADM 313	Human Resource Management	3
BADM 314	Leading Negotiations	3
BADM 323	Marketing Communications	3
BADM 326	Pricing Policies	3
BADM 340	Ethical Dilemmas of Business	3
BADM 350	IT for Networked Organizations	3
BADM 367	Mgmt of Innov and Technology	3
BADM 375	Business Process Management	3

BADM 380	International Business	3
BADM 381	Multinational Management	3

Technology and Management

1055 Business Instructional Facility
515 East Gregory Drive
Champaign, IL 61820
PH: (217) 333-2740
FX: (217) 244-9992 (fax)
<http://www.techmgmt.illinois.edu/>

Email: tech-mgmt@illinois.edu

Successful management of technology-driven businesses today requires that employees work effectively in interdisciplinary teams. Team-based project management requires that each member of the team contribute not only in his or her own area of expertise, but in other aspects of the project as well. The better equipped a new employee is to reach this level of competency quickly, the more valuable will be his or her contributions. Moreover, an employee having such competency will be better prepared to assume positions of increased responsibility and challenge.

The Hoeft Technology & Management Program offers a minor in Technology & Management to undergraduate students in the College of Business and the College of Engineering. Students in the Colleges of ACES and LAS may also be eligible based on their major. The minor is designed to prepare students for success in a wide variety of careers. Today, more than ever, employers have high expectations of undergraduate hires. The T&M Program provides a comprehensive experience to ready graduates for early career success.

Students in the minor are able to acquire a thorough foundation in their major course of study and a comprehensive understanding of the fundamental elements of a cross-discipline education. The course of study leading to a minor in Technology & Management is comprised of the following:

Students in the minor are able to acquire a thorough foundation in their major course of study and a comprehensive understanding of the fundamental elements of a cross-discipline education. The course of study leading to a minor in Technology & Management for students in the College of Business is outlined below.

Throughout the program, emphasis is placed on an interdisciplinary team approach to the development of comprehensive solutions to real-world problems. In many cases, the problems are provided by industry sponsors who, along with business and engineering faculty advisors, provide assistance and guidance to student teams.

The T&M Program is sponsored by leading companies in a variety of industries. These companies provide strategic guidance, access to senior executives, real-world business problems, and internship and full-time employment opportunities. The current T&M Corporate Affiliates include Abbott, Anheuser-Busch InBev, BP, Boeing, Capital One, eBay, John Deere, Motorola Solutions, and Walmart.

In addition to formal courses, the T&M Program offers a comprehensive set of extracurricular activities to develop skills and provide valuable experiences to students. These include a leadership development and career development workshops, business skills workshops (for example, professional branding, etiquette dinner, and golf etiquette),

an international immersion trip, and an international business plan competition.

The Hoeft Technology & Management Program aims to prepare graduates for successful careers in a variety of functions and industries. T&M students have pursued careers in a wide range of industries and fields.

Students who wish to pursue this minor must apply for admission to The Hoeft Technology & Management Program during winter break of their sophomore year. Enrollment in the minor is limited and admission is competitive. Applications are reviewed by the program staff and offers of admission are based on the student's academic record, extracurricular involvement, demonstrated leadership, and career goals.

For more information regarding the Technology & Management minor, visit the Technology & Management website (<http://www.techmgmt.uiuc.edu>) or contact the Technology & Management Program Office (1055 Business Instructional Facility, (217)244-5752, tech-mgmt@illinois.edu).

TMGT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TMGT>)

Courses

TMGT 366 Product Design and Development credit: 3 Hours.
Same as BADM 366. See BADM 366.

TMGT 367 Mgmt of Innov and Technology credit: 3 Hours.
Same as BADM 367. See BADM 367.

TMGT 460 Business Process Modeling credit: 3 Hours.
Same as BADM 460. See BADM 460.

TMGT 461 Tech, Eng, & Mgt Final Project credit: 2 Hours.
Same as BADM 461. See BADM 461.

Education, College of

142 Education Building
1310 South Sixth Street
Champaign, IL 61820
PH: (217) 333-2800
<http://education.illinois.edu>

The College of Education at the University of Illinois at Urbana-Champaign offers undergraduate degree programs in the majors of Early Childhood Education, Elementary Education, Middle Grades Education, Special Education and a minor in Secondary Education, all of which include teaching licensure. The College of Education also offers a non-licensure undergraduate degree in the major of Learning and Education Studies.

A distinguishing hallmark of the College of Education is the commitment to diversity. Faculty members engage in research, teaching, and service activities developed to ensure that all children, including those who are racially, ethnically, linguistically, and economically different as well as people with different abilities and disabilities, are provided with educational opportunities.

The Early Childhood Education degree program prepares students for recommendation for Illinois Early Childhood licensure (birth through grade three). The program also incorporates course work leading to an Early Childhood Special Education approval. The Elementary Education program prepares students for recommendation for Illinois licensure

(grades one through six). The Middle Grades Education program prepares students for recommendation for Illinois licensure for grades five through eight in one or more areas of concentration from Math, Social Science, Science, or Literacy. The concentrations align with the Illinois State Board of Education areas of endorsement. The teacher education minor in Secondary Education is a component of the teaching option within the following majors in the College of Liberal Arts and Sciences: Biology, Chemistry, English, Geology, History, Mathematics, and Physics. Students who satisfactorily complete an LAS degree in one of these areas and the teacher education minor in secondary education are eligible for the University's recommendation for Illinois licensure in grades nine through twelve. For additional information regarding Liberal Arts and Sciences requirements, see the College of Liberal Arts and Sciences (p. 320).

The Special Education major offers an undergraduate field-based professional preparation program designed to prepare teacher candidates to work with individuals with varying disabilities including: learning disabilities, social or emotional disorders, cognitive disabilities, physical disabilities and other health impairments, autism and traumatic brain injury. Candidates who successfully complete the degree program are eligible for the University's recommendation for Illinois licensure to teach students with disabilities from pre-K through 21 in a range of settings.

The Learning and Education Studies degree program is a **non-licensure major** with concentrations in Applied Learning Science, Educational Equality and Cultural Understanding, Workplace Training and Development, and Digital Environments for Learning, Teaching and Agency. The curriculum prepares students for a broad range of positions requiring expertise in formal and non-formal learning and education. Examples include training and program development, international schools, and other education-related positions in agencies, business, and government.

Requirements

Admission

Admission to the College of Education at any level (freshmen, off campus and on-campus applicants) is competitive. Freshman and off-campus transfer application information is available on the Office of Undergraduate Admissions website (<https://www.admissions.illinois.edu/apply>). Information for on-campus applicants can be found on the College of Education website (<http://education.illinois.edu/programs/information-for/ui-students-applying-to-the-major>).

General Education

In order to meet the University's current requirements in general education, each candidate for a degree from the College of Education must complete the campus general education requirements and the Language other than English through the third level. In most teacher education curricula, specific coursework within the general education areas must be taken. Also, in some teacher education curricula, additional credit in the general education areas is required. For more information on required general education coursework, contact a College of Education academic adviser. Students must select their courses for general education from the campus general education course list (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

Graduation

Undergraduate students in the College of Education must meet the University requirements for graduation. For those in a major leading to

licensure, the requirements of the Council on Teacher Education (<http://cote.illinois.edu>) for licensure must also be met. Students in all curricula must meet the course and academic credit requirements of their curricula with satisfactory scholastic averages. Student teaching is required of all undergraduates in a licensure major and must be completed through the University of Illinois at Urbana-Champaign.

Students in need of additional information concerning regulations and degree requirements of the College of Education should consult their academic advisers or the Assistant Dean for Academic Affairs in the College of Education, University of Illinois at Urbana-Champaign, 142 Education Building, 1310 South Sixth Street, Champaign, IL 61820.

Special Programs

Honors at Graduation

Eligibility for graduation with honors is established after all grades are recorded following a student's final semester. A student who achieves the required scholastic average in all work presented for graduation (excluding credit for courses not included in the computation of the grade point average) may be recommended for honors as follows: honors, minimum cumulative grade point average of 3.75; high honors, minimum cumulative grade point average of 3.85; highest honors, minimum cumulative grade point average of 3.90.

Edmund J. James Scholars

The James Scholar program is a University-wide honors program established to encourage undergraduate research and independent study and to foster scholarly endeavors. As a James Scholar, students are entitled to certain academic privileges, including priority assignment of registration time, access to the "stacks" in the library, and official recognition on the University of Illinois transcript.

Entering freshmen are invited to participate for the upcoming fall semester based on the Office of Undergraduate Admissions standard that combines factors such as standardized test scores and high school GPA. Transfer and continuing students must have achieved at least a 3.5 cumulative and University of Illinois grade point average to participate.

Students are certified as James Scholars by the college on a yearly basis. To qualify for this certification, the student must successfully complete a James Scholar project/requirement in the fall and spring semester and maintain a 3.5 University of Illinois and cumulative grade point average. Details are available on the college website (<http://education.illinois.edu/current-students/undergraduate/james-scholars>).

Majors with teaching licensure

- Early Childhood Education (p. 127)
- Elementary Education (p. 128)
- Middle Grades Education (p. 133)
- Special Education (p. 136)

Major without teaching licensure

- Learning and Education Studies (p. 129)
- Teacher Education Minor in Secondary School Teaching (p. 139)

Early Childhood Education

For the Degree of Bachelor of Science in Early Childhood Education

<http://education.illinois.edu/ci>

Department: Curriculum and Instruction

Interim Head of Department: Sarah McCarthy
311 Education Building, 1310 South Sixth, Champaign, (217) 244-8286

Curriculum Preparatory to Early Childhood School Teaching

This program prepares student candidates to teach birth to grade 2. A minimum of 120 semester hours of credit is necessary for graduation¹.

Illinois law and Council on Teacher Education policy require that all candidates for admission to a teacher preparation program pass the Illinois Licensure Testing System Test of Academic Proficiency (TAP) (<http://www.icts.nesinc.com>) prior to admission. The Illinois State Board of Education has determined the ACT Plus Writing/SAT scores can be used in lieu of a passing score on the Test of Academic Proficiency (formerly known as the Illinois Test of Basic Skills). See information on the details (<http://education.illinois.edu/students/prospective-students/ACT>). (<http://education.illinois.edu/students/prospective-students/ACT>)

Students pursuing teacher licensure programs in the College of Education (COE) must meet requirements in a series of sequential gateways. Included in the gateway requirements are successful completion of specified coursework, achievement of appropriate grade point averages, requirements for clinical experiences, and appropriate tests for the licensure area. Meeting all Gateway requirements leads to degree and licensure completion.

In order to be recommended for licensure, candidates are required to maintain University of Illinois at Urbana-Champaign, cumulative, content area, and professional education grade point averages of 2.5 (A=4.0). Grades in courses of C- or lower may not be used for State of Illinois licensure, endorsements, or approvals. Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade point averages. For teacher education licensure requirements applicable to all curricula, see the Council on Teacher Education (<http://www.cote.illinois.edu>).

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

This is a Gateways to Opportunity (<http://www.ilgateways.com/en>) approved program.

Degree Requirements

Code	Title	Hours
Orientation Seminar		
EDUC 101	Education Orientation Seminar	1

The following degree requirements also meet general education course requirements and must be selected from the campus general education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) course list.

Code	Title	Hours
Composition I		
Composition I		4-6
Advanced Composition		
Advanced Composition		3-4
Natural Sciences and Technology ¹		
Life Science		3-4
Physical Science		3-4
Earth and Space Science ²		3-4
Cultural Studies ³		
Western/Comparative Cultures		3-4
Non-Western or U.S. Minority Cultures		3-4
Social and Behavioral Sciences ⁴		
Social & Behavioral Sciences		6-8
Quantitative Reasoning		
Quantitative Reasoning I		3-5
Quantitative Reasoning II		3-4
Humanities and the Arts ⁵		
Humanities & the Arts		6
Language other than English		
Three years of one language other than English in high school or completion of the third semester of college-level language.		0-12
Electives		
Elective Courses (if needed to complete the 120 hour graduation requirement)		0-6
Professional Education		
ART 201	Art in Early Childhood	2
CI 415	Language Varieties, Cultures and Learning	3
CI 420	Foundations of Early Childhood Education	5
CI 421	Prin & Prac in Early Childhood	3
CI 422	Families, Communities, Schools	3
CI 424	Child Development & Technology	3
CI 443	Mathematics in Early Childhood Education (Mathematics in Early Childhood)	3
CI 445	Science and Social Studies Inquiry (Science and Social Studies Inquiry)	3
CI 465	Lang Literacy in EC Educ I	3
CI 466	Lang Literacy in EC Educ II (Course will be 3 credit hours effective starting with the Fall, 2018 semester.)	2
EDPR 420	Ed Prac Students with Sp Needs	4
EDPR 432	Ed Prac in EC & ELED	12
EDUC 201 & EDUC 202	Identity and Difference in Edu and Social Justice Sch & Society	6
EPSY 201	Educational Psychology ⁵	3
EPSY 401	Child Language and Education	3
HDFS 301	Infancy & Early Childhood	4
MUS 345	Mus Methods in Early Childhood	2
SPED 414	Assessment in ECSE	3
SPED 450	Introduction to ECSE	2

SPED 465	Curriculum and Methods in ECSE	3
Total minimum hours for degree⁶		120

¹ Required to meet ISBE Science requirement. Exclusions apply including, but not limited to: Horticulture, Dance, and Urban Planning. Must be a science rubric. Consult with advisors for further information.

² Courses must be selected from a College of Education approved list (http://education.illinois.edu/docs/default-source/saao-documents/ece-earth_space-recommended.pdf?sfvrsn=0).

³ Across these gen ed categories, students will need to take at least one course from each of the following four different rubrics: ECON, GEOG, HIST, PS to meet the ISBE Social Science requirement.

⁴ A maximum of six hours of upper-level ROTC coursework can count toward the degree as free electives.

⁵ PSYC 100 is a prerequisite for EPSY 201.

⁶ The total hours required for the degree may be higher for students who have not already completed the language other than English requirement.

Elementary Education

<http://education.illinois.edu/ci>

Department: Curriculum and Instruction

Interim Head of Department: Sarah McCarthey
311 Education Building, 1310 South Sixth, Champaign, (217) 244-8286

For the Degree of Bachelor of Science in Elementary Education

Curriculum Preparatory to Elementary School Teaching

This program prepares teachers for grades one through six. A minimum of 120 semester hours is necessary for graduation¹.

Illinois law and Council on Teacher Education policy require that all candidates for admission to a teacher preparation program pass the Illinois Licensure Testing System Test of Academic Proficiency (TAP) (<http://www.icts.nesinc.com>) prior to admission. The Illinois State Board of Education has determined the ACT Plus Writing/SAT scores can be used in lieu of a passing score on the Test of Academic Proficiency (formerly known as the Illinois Test of Basic Skills). See information on the details (http://cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf).

Students pursuing teacher licensure programs in the College of Education (COE) must meet requirements in a series of sequential gateways. Included in the gateway requirements are successful completion of specified coursework, achievement of appropriate grade point averages, requirements for clinical experiences, and appropriate tests for the licensure area. Meeting all Gateway requirements leads to degree and licensure completion.

In order to be recommended for licensure, candidates are required to maintain University of Illinois at Urbana-Champaign, cumulative, content area, and professional education grade point averages of 2.5 (A=4.0). Grades in courses of C- or lower may not be used for State of Illinois licensure, endorsements, or approvals. Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade point averages. For teacher education licensure requirements applicable to all curricula, see the Council on Teacher Education (<http://www.cote.illinois.edu>)

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

Degree Requirements

Code	Title	Hours
EDUC 101	Education Orientation Seminar	1
Code	Title	Hours
Composition I		
Composition I		4
Advanced Composition		
Advanced Composition		3-4
Natural Sciences and Technology ²		
Life science		3-4
Physical science (mathematics not acceptable)		3-4
Cultural Studies ³		
Western/Comparative		3-4
Non-Western/US Minority		3-4
Social/Behavioral Sciences ³		
Two courses from the approved Social and Behavioral Sciences general education course list.		6-8
Quantitative Reasoning ⁴		
MATH 103	Theory of Arithmetic	4
MATH 117	Elementary Mathematics	3-4
or STAT 100	Statistics	
Humanities/Arts ³		
Two courses from the approved Humanities and the Arts general education course list.		6
Language Other Than English		
Three years of one language other than English in high school or completion of the third semester of college level language.		0-12
Health and Physical Development		
KIN 268	Children's Movement	3
Electives		
Elective Courses (if needed to complete the 120 hour graduation requirement) ¹		8
Professional Education		
EDUC 201 & EDUC 202	Identity and Difference in Edu and Social Justice Sch & Society (Or program approved equivalent courses)	6
EPSY 201	Educational Psychology ⁶	3
EDPR 250	School & Community Experiences ⁷	4
EDPR 432	Ed Prac in EC & ELED	12
SPED 405	Gen Educator's Role in SPED	3
CI 415	Language Varieties, Cultures and Learning	3
CI 405	Introduction to Teaching Elementary Age Children	3
CI 406	Theory Practice in Elementary School Teaching I	4
CI 407	Theory Practice in Elementary School Teaching II	3
CI 430	Teaching Children Mathematics	3
CI 432	Invest Approach Elem Math Inst	3

CI 448	Tchg Elem Social Studies	3
CI 450	Teaching Elementary Science I	3
CI 451	Teaching Elementary Science II	3
CI 467	Princ Tchg Lit to Child Youth	3
CI 475	Teaching Elementary Reading and Language Arts I	3
CI 476	Teaching Elementary and Middle Grade Language Arts	3
FAA 202	Artful Teaching through Integ	3
CI 452	Soc Stu as Action and Inquiry	3
Total Hours		120

TOTAL minimum hours include general education and professional education credits.⁵

¹ Six hours of ROTC upper level courses (300 level or above) can count toward the degree as free electives.

² Exclusions apply including, but not limited to: Horticulture, Dance and Urban Planning. Must be a science rubric. Consult with advisers for further information.

³ Across these gen-ed categories, students will need to take courses that include at least four different rubrics from the following: ANTH, ECON, GEOG, GLBL, HIST, PS, PSYC, SOC to meet the ISBE Social Science requirement.

⁴ ISBE standards require demonstration of proficiency in algebra and statistics. Consult with adviser for further information.

⁵ The total hours required for the degree may be higher for students who have not already completed the language other than English requirement and/or the ISBE algebra requirement.

⁶ PYSC 100 is a prerequisite for EPSY 201.

⁷ Students will register for EDPR 250 during their spring term of the year one professional education sequence year for zero credit hours and register for EDPR 250 again their fall term of the year two professional education sequence for four credit hours.

EDUC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EDUC>)

Courses

EDUC 101 Education Orientation Seminar credit: 1 Hour.

Informational orientation seminar for Education majors to enhance their understanding of college life and the field of education as a profession.

EDUC 102 Freshman Honors Seminar credit: 1 Hour.

Provides an introduction to critical issues in education with focus on selected contemporary issues in the field; emphasis is on critical analysis and reflection on relationships between teachers, schools, and society.

EDUC 201 Identity and Difference in Edu credit: 3 Hours.

Focuses on the role of identity in schooling and the way in which identity is socially constructed. Examine how power and privilege impact equity and opportunities based on socially constructed identities such as race, social class, gender, sexual identity, language, (dis)ability, and nationalism. Explore asset-based frameworks that are identity affirming and counter deficit-based perspectives. This course is designed for students interested in reflecting on their own experiences as learners by critically examining their socially constructed identities and "ways of knowing" and the societal implications of these experiences. It is also for those considering careers in teaching, and anyone interested in reflecting on how issues of inclusion, exclusion, power, and privilege play out in education. (Graduate candidates may take this course or approved graduate-level College of Education Educational Policy Studies Foundations Requirement course; undergraduates may take this or program-approved equivalent coursework).

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

EDUC 202 Social Justice Sch & Society credit: 3 Hours.

Examines the nature of justice and the dynamics of a pluralistic society to derive a conception of social justice. Working with this conception, it asks how schools function to perpetuate and/or remediate social injustice. The course will consider the history and nature of schooling, issues of access and tracking, and notions of the public and the common. The course is designed for students interested in reflecting on their own educational histories, for those considering careers in teaching, and for all future parents and citizens needing to be able to reflect critically on justice, school, and society. (Graduate candidates may take this course or approved graduate-level College of Education Educational Policy Studies Foundation Requirement course; undergraduates may take this or program-approved equivalent coursework).

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

EDUC 499 Education Abroad credit: 0 to 4 Hours.

This course will serve as a foundation for your education abroad experience. The class will center on the experience of travel as it relates to education - your own education, the education systems and policies you encounter, as well as your prospective role as a future educator. This course will introduce comparative education inquiry and provide space to consider the cultural, political, and ethical implications of engaging in education travel and research in cross-cultural, global contexts. 0 to 3 undergraduate hours. 0 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated if topics vary.

Learning and Education Studies

<http://education.illinois.edu/>

Assistant Dean for Academic Affairs: Kathy Ryan
Admissions Information: saao@education.illinois.edu

142 Education Building, 1310 South Sixth, Champaign, (217) 333-2800

For the Degree of Bachelor of Science in Learning and Education Studies

This curriculum prepares individuals for positions requiring expertise in formal and non-formal learning and educational settings that do NOT require licensure (becoming a licensed teacher). Students interested in becoming a licensed teacher should consider the licensure program in

the majors of Elementary Education, Early Childhood Education, Special Education, or Middle Grades.

A minimum of 120 semester hours is necessary for graduation in the Learning and Education Studies program. Students will spend much of the first two years with general education courses, achieving a solid preparation in the humanities, social and natural sciences, technology and mathematics. In the final two years of the major, students will take a set of core courses, as well as coursework in one of the following concentrations: 1) Applied Learning Science; 2) Educational Equality and Cultural Understanding; 3) Workplace Training and Development; or 4) Digital Environments for Learning, Teaching and Agency.

Degree Requirements

Code	Title	Hours
Orientation Seminar		
EDUC 101	Education Orientation Seminar	1

The following degree requirements also meet general education course requirements and must be selected from the campus general education (<https://courses.illinois.edu>) course list. Selections of core requirements courses should be made in consultation with the adviser.

Code	Title	Hours
Composition ¹		
Composition I		4-6
Advanced Composition		3-4
Quantitative Reasoning ¹		
EPSY 280	Elements of Statistics (or another approved basic course in statistical methods such as STAT 100, SOC 280, or PSYC 235) ²	3-4
From approved campus list		3
Natural Sciences and Technology ¹		
From approved campus list		6
Humanities and the Arts ¹		
From approved campus list		6
Social and Behavioral Sciences ¹		
From approved campus list (must include PSYC 100)		6
Cultural Studies ¹		
From Western Culture(s) approved campus list		3
From U.S. Minority Culture(s) or Non-Western Culture(s) approved campus list		3
Language other than English		
Three years of one language other than English in high school or completion of the third semester of college-level language		0-12
Core Requirements ³		
Choose 2 from the following Education Foundations:		6-7
EPS 201, Foundations of Education; EPS 202, Foundations of Education Advanced Composition; or EDUC 201, Identity and Difference in Edu		
EPSY 220	Career Theory and Practice	
EPSY 236	Child Dev in Education	
SPED 117	The Culture of Disability	
Choose 6 from the following, with at least 2 in each area:		18-20
Learning and Instruction:		

CI 210	Introduction to Digital Learning Environments
CI 415	Language Varieties, Cultures and Learning
EPOL 350	Social Learning and Knowledge
EPSY 201	Educational Psychology
EPSY 400	Psyc of Learning in Education
EPSY 401	Child Language and Education
Leadership in a Diverse Global Economy:	
EDUC 202	Social Justice Sch & Society
EPS 310	Race and Cultural Diversity
EPS 402	Asian American Education ⁴
EPS 405	Historical & Social Barriers
HRD 414	Facilitation Skills
HRD 415	Diversity in the Workplace

Concentration³

Students must complete 24 credit hours within one of the following areas of concentration: 1) Applied Learning Science, 2) Educational Equality and Cultural Understanding, 3) Workplace Training and Development, or 4) Digital Environments for Learning, Teaching and Agency. 24

Electives

Electives (including minor, if taken)	16-34
Total Hours	120

Total minimum hours include general education, language other than English, concentration and core credits.

¹ General Education Requirement. Courses must be selected from the Campus General Education Approved Course List (<https://courses.illinois.edu>).

² EPSY 280 is recommended for the AppLeS concentration.

³ Concentration and Core Requirement courses found on the General Education Approved Course List (<https://courses.illinois.edu>) may also be credited toward the General Education requirements.

⁴ Course can be counted in the Core requirement or the Concentration requirement but not both.

Applied Learning Science (AppLeS) Concentration

The undergraduate non-licensure concentration in Applied Learning Science (AppLeS) will provide a thorough grounding in the learning sciences through an innovative program that includes courses in learning, language understanding, quantitative reasoning and statistics, designing learning environments, and human performance. The program culminates in a capstone course in which the student works on a research project under the direction of one or more faculty members. Graduating students will have a solid preparation for graduate study in this emerging area of scholarship (such as the new Learning Science and Engineering Professional MS Program at Carnegie-Mellon University), as well as in education, psychology, business, law, and other more traditional areas of study. In addition, through their coursework and research experience, international and domestic students will be prepared for a wide range of current (and future) jobs that require expertise in design, analysis, and evaluation of learning environments, as teachers, policy makers, analysts, and professionals in government, healthcare, business, and nonprofit organizations.

Students in the AppLeS concentration will:

- Explore theories, phenomena, and methods in the learning sciences (i.e., the biological, cognitive, dispositional, and sociocultural underpinnings of learning).
- Identify general principles of learning, their contextual variations, and how they can be applied in the classroom, at work and home, and diverse settings of daily life.
- Acquire flexible learning and problem solving skills that can be broadly applied in diverse contexts, including research, quantitative reasoning, communication, and collaborative problem solving.

Students are encouraged to pursue a minor or a coherent set of electives from several departments as approved by their adviser. Suggested minors are: Communication, Computer Science, Informatics, Linguistics, Mathematics or Statistics.

The following courses are required for this concentration. Changes/additions to this list can be obtained from the College office. Approvals for substitution must be submitted by petition to the College office for approval by the Assistant Dean for Academic Affairs.

Code	Title	Hours
EPSY 403	Res Methods in Learning Scienc	3
Capstone Research Project		3
EPSY 398	Thesis (1 hour)	
EPSY 395	Independent Study (2 hours)	
Choose 2 from the Cognitive Science of Learning area:		6
EPSY 427	Learning from Text	
EPSY 490	Developments in Educ Psyc (Learning in Everyday Contexts section)	
EPSY 490	Developments in Educ Psyc (Multimedia Comprehension section)	
PSYC 357	Intro Cognitive Science	
Choose 1 from the Learning and Development area:		3
EPSY 407	Adult Learning and Development	
EPSY 431	Cognitive Dev in Educ Context	
EPSY 490	Developments in Educ Psyc ('Brain Training': Myths and Realities section)	
Choose 1 from the Learning and Socio-Cultural Contexts area:		3
CI 466	Lang Literacy in EC Educ II	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
Choose 1 from the Learning, Design, and Technology area:		3
CI 437	Educational Game Design	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 456	Human Performance and Cognition in Context	
HRD 472	Learning Technologies	
Choose 1 from the Data Analysis and Quantitative Reasoning area		3
EPSY 486	Principles of Measurement	
SOC 485	Intermediate Social Statistics	
Total Hours		24

Educational Equality and Cultural Understanding Concentration

This undergraduate non-licensure concentration will prepare students to better understand the role of education in enabling equality and cultural

understanding in domestic and international perspectives. Focusing on equality, diversity, and cultural understanding will give students a unique perspective on the historical place of education in both challenging inequities and helping to justify social divisions. Understanding how education as an institution operates to perpetuate social and economic stratification will give students a perspective on the challenges of creating a more equitable distribution of education. Classes will cover a wide range of disciplinary approaches, including history, social science, educational policy analysis, and theory. Students will understand the contemporary and historical barriers to the distribution of education and examine recent human rights-based demands for extending education to people of all social classes, regions, ethnicity, language groups, and genders.

Knowing how equity, social justice, and cultural understanding are enabled through education requires an in-depth understanding of domestic and international contexts. Introductory courses will cover basic definitions of educational justice and educational equality, survey international minorities in the United States or minorities in other countries in relationship to education, and explore political, economic, and social contexts for education.

Intermediary classes will invite students to apply their basic understanding of such processes to more local and detailed contexts, like shifts in the U.S. that have extended public schooling and higher education opportunities to historically marginalized populations such as people of color, immigrants, women and citizens from low socioeconomic status. Advanced classes will introduce students to the theoretical approaches to studying social justice and difference, including Critical Race Theory, transnational and global theory, and globalized critical pedagogy.

These courses will be designed to appeal to international and domestic students seeking employment in both the United States and international educational settings, including teaching English as a second language.

In addition, understanding the role of education in fostering the expansion of universal human rights will enable students interested in international business and NGOs to explore the problems and potentials of policies intent on improving conditions in the United States and abroad. As all areas of study and trade are increasingly situated in transnational networks, the concentration in Educational Equality and Cultural Understanding provides a firm grounding on key issues of rights, obligations, and new institutions that help maintain commitments for educational equity and justice under these new circumstances.

Students are encouraged to pursue a minor or a coherent set of electives from several departments as approved by their adviser. Suggested minors are: English as a Second Language, African-American Studies, Asian American Studies, Global Studies, Latina/Latino Studies, South Asian Studies, Gender and Women's Studies, or LGBT/Queer Studies.

The following courses are required for this concentration. Changes/additions to this list can be obtained from the College office. Approvals for substitution must be submitted by petition to the College office for approval by the Assistant Dean for Academic Affairs.

Code	Title	Hours
Choose 3 from the Social Foundations area:		9
EDUC 202	Social Justice Sch & Society ¹	
EPS 380	Education and Social Justice	
EPS 400	History of American Education	
EPS 411	School and Society	

Choose 2 from the following Cultural Understanding area:	6
EPS 325 Social Media and Global Change	
EPS 402 Asian American Education ¹	
EPS 421 Racial and Ethnic Families	
EPSY 202 Exploring Cultural Diversity ²	
Choose 2 from the following Educational Equality area:	6
EPS 405 Historical & Social Barriers	
EPS 412 Critical Thinking for Teachers	
EPS 420 Sociology of Education	
EPS 423 Politics of Education	
Elective class from GWS, LLS, AAS, AFRO, AIS, or GLBL	3
Total Hours	24

¹ Course can be counted in the Core requirement or the Concentration requirement but not both.

² Concentration courses found on the General Education Approved Course List may also be credited toward the General Education requirements.

Workplace Training and Development Concentration

Workplace Training and Development is a non-licensure undergraduate concentration. The concentration will provide international and domestic students with the broad sets of knowledge and skills necessary to develop, deliver, and evaluate training and development programs across workplace settings, such as businesses and industries, two-year post-secondary schools, or community and government agencies.

In addition, it will serve a growing demand for graduates who have an interest in helping adults learn about and seek to improve organizational performance. The demand comes from a range of business sectors, specifically health care, manufacturing, and logistics.

Students in this concentration will receive an overview of the human resource development field and specifically focus on the training and development aspects of the field. Students will acquire the knowledge and practical skills, in such areas as job and task analysis, training program design, and training program coordination. Students will also be introduced to learning management systems, which most organizations now use to track the learning progress of their employees.

An internship is recommended during the program, but it is not required. For internship credit, students can register in HRD 491 Professional Skill Development before the internship starts. At the end of the internship, a letter from the internship supervisor is submitted to the Workplace Training and Development departmental contact.

The concentration appeals to the following potential students:

- Individuals who wish to combine the study of organizations and learning in their academic studies;
- Individuals who currently work in a technical role, such as a lab tech or nurse in health care, and who want to become more involved in training others about their occupation;
- Individuals with an associates degree who work as information technology specialists and who are asked to develop and deliver training for others;
- Individuals who wish to work in the business and industry outreach departments of community colleges;
- Individuals who serve or wish to serve as instructors in post-secondary technical education schools;

- Individuals who wish to serve as a staff member in the human resource development department of an organization; and
- Individuals who wish to prepare for future graduate study in human resource development.

Students are encouraged to pursue a minor or a coherent set of electives from several departments as approved by their adviser. Suggested minors are: Business, Leadership, Communication, Technology and Management or Global Labor Studies.

The following courses are required for this concentration. Changes/additions to this list can be obtained from the College office. Approvals for substitution must be submitted by petition to the College office for approval by the Assistant Dean for Academic Affairs.

Code	Title	Hours
Choose 2 from the Human Resource Development Foundations area:		6
HRD 400 or HRD 401	Principles of HRE Training in Business/Industry	
HRD 402	Business Principles for HRD	
Choose 6 from the Human Resource Development Applications area:		18
HRD 400 or HRD 401	Principles of HRE Training in Business/Industry	
HRD 411	Training System Design	
HRD 412	Instructional Techniques	
HRD 414	Facilitation Skills	
HRD 415	Diversity in the Workplace	
HRD 440	Work Analysis	
HRD 470	Designing and Evaluating E-Learning Systems	
HRD 472	Learning Technologies	
HRD 475	Project Management for Human Resource Development	
HRD 480	Introduction to eLearning	
HRD 490	Issues and Developments in HRD	
Total Hours		24

Digital Environments for Learning, Teaching and Agency (DELTA) Concentration

The undergraduate non-licensure concentration in Digital Environments for Learning, Teaching, and Agency (DELTA) will provide students with a strong background in the design, development and implementation of technology for a range of learning environments. Courses will introduce students to learning theory, designing and using technology to support learning, and issues encountered when deploying technology to schools, workplaces and informal learning spaces. The program culminates in a capstone course in which students work on a design project under the direction of one or more faculty members.

Graduating students will be prepared to engage with various stakeholders interested in using technology to support learning in a range of different contexts. Examples include selecting and deploying appropriate technology to support pedagogic goals for schools, corporations, or informal learning environments such as museums and afterschool clubs, designing educational games or toys and educational application development. One of the main objectives for students in DELTA is to build new ways to support learning, and prepare them for leadership

roles in formal and informal environments, technology design and implementation strategies. They will also be prepared to pursue graduate study in a range of programs, such as educational technology, learning sciences, or instructional technology at the University of Illinois or elsewhere.

Students are encouraged to pursue a relevant minor or coherent set of electives from several related departments. Suggested minors include: computer science, communication, psychology, informatics, media and cinema studies or sociology. Students may also consider a minor in a specific content area from the arts and sciences to develop expertise in a particular field.

The DELTA concentration consists of 24 hours of course work. Students are required to take a minimum of two foundations courses, three core courses and three elective courses. The core courses are designed to ensure students leave the program with foundational knowledge and skills necessary to design, develop, implement, manage, and evaluate digital environments. The elective courses allow students to tailor the concentration to fit individual career goals and areas of interest. Students should take the foundation course *Introduction to Digital Environments* in the first semester they join DELTA. Similarly, the *Capstone Research Project* should be taken in the last semester after the majority of DELTA-related course work is complete.

The following courses are required for this concentration. Changes/additions to this list can be obtained from the College office. Approvals for substitution must be submitted by petition to the College office for approval by the Assistant Dean for Academic Affairs.

Code	Title	Hours
CI 210	Introduction to Digital Learning Environments	3
CI 489	DELTA Capstone Project	3
Choose 1 from the Learning and Psychological Issues area:		3
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 490	Developments in Educ Psyc (Learning in Everyday Contexts section)	
PSYC 357	Intro Cognitive Science	
Choose 1 from the Learning and Social Issues area:		3
CI 482	Social Learning and Multimedia	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
Choose 1 from the Learning and Equity Issues area:		3
EPS 380	Education and Social Justice	
EPS 415	Technology & Educational Reform	
SPED 312	Introduction to Educational Technology	
Choose 3 from the Learning and Technology Electives area:		9
CI 424	Child Development & Technology	
CI 437	Educational Game Design	
CI 438	Comp Prgmng and the Classroom	
CI 499	Issues and Development in Educ (Section ALT, Attention, Learning and Technology)	
CI 499	Issues and Development in Educ (Section DLS, Designing Learning Spaces)	
EPS 431	New Learning	
EPSY 408	Learning & Hum Dev w/ EdTech	

HRD 472

Learning Technologies

Total Hours

24

Middle Grades Education

For the Degree of Bachelor of Science in Middle Grades Education

<http://education.illinois.edu/ci>

Department: Curriculum and Instruction

Interim Head of Department: Sarah McCarthy

311 Education Building, 1310 South Sixth, Champaign, (217) 244-8286

This program prepares teachers for grades five through eight. A minimum of 120 semester hours is necessary for graduation¹.

Illinois law and Council on Teacher Education policy require that all candidates for admission to a teacher preparation program pass the Illinois Licensure Testing System Test of Academic Proficiency (TAP) (<http://www.icts.nesinc.com>) prior to admission. The Illinois State Board of Education has determined the ACT Plus Writing/SAT scores can be used in lieu of a passing score on the Test of Academic Proficiency (formerly known as the Illinois Test of Basic Skills). See information on the details (<http://education.illinois.edu/students/prospective-students/> ACT). (<http://education.illinois.edu/students/prospective-students/ACT>)

Students pursuing teacher licensure programs in the College of Education (COE) must meet requirements in a series of sequential gateways. Included in the gateway requirements are successful completion of specified coursework, achievement of appropriate grade point averages, requirements for clinical experiences, and appropriate tests for the licensure area. Meeting all Gateway requirements leads to degree and licensure completion.

Students are admitted to Middle Grades Education as freshmen. In order to be recommended for licensure, candidates are required to maintain University of Illinois at Urbana-Champaign, cumulative, content area, and professional grade point averages of 2.5 (A=4.0). Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade point averages. Per State rule, courses with a grade of C- or lower may not be used for State of Illinois licensure, endorsements, or approvals. For teacher education licensure applicable to all curricula, see the Council on Teacher Education.

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

Students in the Middle Grades Education licensure program must complete the Campus General Education Requirements, the courses for one or more concentration (literacy, social sciences, science or math) and the professional education coursework.

Degree Requirements

Code	Title	Hours
Orientation Seminar		
EDUC 101	Education Orientation Seminar	1
Total		1

The following degree requirements also meet general education course requirements and must be selected from the campus general education

course list. Some professional education courses and concentration courses can count towards the general education requirements.

Code	Title	Hours
Composition I		
Composition I		4
Total		4

Code	Title	Hours
Advanced Composition		
Advanced Composition		3-4
Total		3-4

Code	Title	Hours
Natural Sciences & Technology ²		
Life science		3-4
Physical science		3-4
Total		6-8

Code	Title	Hours
Cultural Studies		
Western/Comparative		3-4
Non-Western/U.S. Minority		3-4
Total		6-8

Code	Title	Hours
Social & Behavioral Sciences ³		
Social & Behavioral Sciences		6-8
Total		6-8

Code	Title	Hours
Quantitative Reasoning		
Quantitative Reasoning I		3-4
Quantitative Reasoning II		3-4
Total		6-8

Code	Title	Hours
Humanities & the Arts		
Humanities & the Arts		6
Total		6

Code	Title	Hours
	Total Hours of General Education Courses	37-46

Code	Title	Hours
Language Other Than English		
	Three years of one language other than English in high school or completion of the third semester of college level language.	0-12

Code	Title	Hours
Electives		
	Elective Hours (as needed to complete the 120 graduation requirement)	0-10

Code	Title	Hours
Concentrations		
	Students must complete 24-27 credit hours within one of the following concentrations: 1) Social Science, 2) Science, 3) Mathematics, or 4) Literacy. Subsequent tables outline the required courses to complete requirements in specific concentrations.	24-27

Code	Title	Hours
Professional Education		
CI 404	Teaching and Assessing Secondary School Students	3
CI 410	Middle School Instruction, Philosophy and Structures	3
CI 415	Language Varieties, Cultures and Learning	3
CI 467	Princ Tchg Lit to Child Youth	3
CI 471	Princ Prac Foster Indep Rdg	3
CI 476	Teaching Elementary and Middle Grade Language Arts	3
EDPR 250	School & Community Experiences (Section MG)	4
EDPR 442	Educational Practice in Secondary Education (Section MG)	12
EDUC 201 & EDUC 202	Identity and Difference in Edu and Social Justice Sch & Society (or program approved equivalent courses)	6
EPSY 201	Educational Psychology	3
EPSY 430	Early Adolescent Development	3
SPED 405	Gen Educator's Role in SPED	3
Total Hours		49

Code	Title	Hours
Total minimum hours for degree ⁴		
		120

¹ Six hours of ROTC upper level courses (300 level or above) can count toward the degree as free electives.

² If seeking the Science concentration, exclusions apply including, but not limited to: Horticulture, Dance and Urban Planning. Must be a science rubric. Consult with adviser for further information.

³ PSYC 100 is a prerequisite for EPSY 201.

⁴ The total hours required for the degree may be higher for students who have not already completed the language other than English requirement.

Concentration Requirements

Some concentration courses can count towards the general education requirements. Courses in concentrations may not be allowed to count for more than two degree requirements. If you have questions, see your adviser.

Code	Title	Hours
Science Concentration		
CI 402	Teaching Diverse Middle Grade Students (Science Section)	3
	Physical Science: Select a minimum of one course from CHEM and one from PHYS	6-9

CHEM 101 or CHEM 102/103	Introductory Chemistry General Chemistry I	
CHEM 108	Chemistry, Everyday Phenomena	
CHEM 123	Teaching Elementary & Middle School Chemistry	
PHYS 101	College Physics: Mech & Heat	
PHYS 102	College Physics: E&M & Modern	
PHYS 123	Physics Made Easy	
PHYS 140	How Things Work	
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
Life Science: Complete 6 hours with a minimum of 3 hours from the foundations list.		6-8
Foundations:		
IB 100	Biology in Today's World	
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
IB 150	Organismal & Evolutionary Biol	
MCB 100	Introductory Microbiology	
MCB 150	Molec & Cellular Basis of Life	
Applications:		
IB 105	Environmental Biology	
IB 109	Insects and People	
MCB 170	Society and the Brain	
MCB 180	Human Reproduction & Society	
Earth and Space Science: Select one from the following Atmospheric Sciences rubric and one from the following Geology rubric:		6-7
ATMS 100	Introduction to Meteorology	
ATMS 120	Severe and Hazardous Weather	
ATMS 201	General Physical Meteorology	
GEOL 107	Physical Geology	
GEOL 117	The Oceans	
GEOL 118	Natural Disasters	
Science Electives: To complete any remaining required hours, select additional courses from the courses listed above.		0-3
Total		24

Code	Title	Hours
Social Science Concentration		
CI 402	Teaching Diverse Middle Grade Students (Social Sciences Section)	3
American History: Select one from the following:		3-4
HIST 170	US Hist to 1877-ACP	
HIST 171	US Hist to 1877	
HIST 172	US Hist Since 1877	
HIST 173	US Hist Since 1877-ACP	
HIST 270	United States History to 1815	
HIST 271	Nineteenth Century America	
HIST 272	Twentieth Century America	
Global or World History: Select one from the following:		3-4
HIST 100	Global History	
HIST 140	Western Civ to 1660-ACP	

HIST 141	Western Civ to 1660	
HIST 142	Western Civ Since 1660	
HIST 143	Western Civ Since 1660-ACP	
Select from one of the following Geography courses:		3-4
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
PS 101	Intro to US Gov & Pol	3
ECON 102	Microeconomic Principles	3
Social Science Electives: To complete any remaining hours, select additional courses from the courses above or in sociology.		3-5
Total		24

Code	Title	Hours
Mathematics Concentration		
CI 401	Introductory Teaching in a Diverse Society (Math Section)	3
CI 402	Teaching Diverse Middle Grade Students (Math Section)	3
Note: Only CI 402, M (3 hours) counts toward ISBE content		
MATH 117	Elementary Mathematics	4
Theory of Numbers: Select one from the following:		3-4
MATH 103	Theory of Arithmetic	
MATH 453	Elementary Theory of Numbers	
Geometry: Select one from the following:		3-4
MATH 119	Ideas in Geometry	
MATH 402	Non Euclidean Geometry	
MATH 403	Euclidean Geometry	
Statistics: Select one from the following:		3-4
STAT 100	Statistics	
STAT 200	Statistical Analysis	
STAT 400	Statistics and Probability I	
STAT 410	Statistics and Probability II	
Calculus: Select one from the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
Math Applications: Select one from the following:		3-4
CS 101	Intro Computing: Engrg & Sci	
CS 105	Intro Computing: Non-Tech	
CS 125	Intro to Computer Science	
MATH 125	Elementary Linear Algebra	
MATH 181	A Mathematical World	
MATH 213	Basic Discrete Mathematics	
MATH 405	Teacher's Course	
MATH 406	History of Calculus	
MATH 415	Applied Linear Algebra	
Total: At least one course in the math content categories must be taken for more than the minimum hours to reach the ISBE requirement of 24 content hours.		27-31

Code	Title	Hours
Literacy Concentration		
CI 402	Teaching Diverse Middle Grade Students (Eng Lang Arts Section)	3
Composition I		minimum 3 hours
Advanced course: Select one from the following:		3
BTW 261	Principles Tech Comm	
ENGL 481	Comp Theory and Practice	
ENGL 482	Writing Technologies	
RHET 233	Adv Rhetoric & Composition	
WRIT 303	Writing Across Media	
Literature: Select one literature course at the 100 level and a second literature course at the 200 level. Must be an English or Comparative & World Literature rubric.		6
CI 467	Princ Tchg Lit to Child Youth	3
CI 471	Princ Prac Foster Indep Rdg	3
CI 476	Teaching Elementary and Middle Grade Language Arts	3
Total		24

Special Education

<http://education.illinois.edu/SPED>

Department: Special Education

Interim Head of Department: Michaelene Ostrosky

Admissions Information: saao@education.illinois.edu
288 Education Building, 1310 South Sixth, Champaign, (217) 333-0260

For the Degree of Bachelor of Science in Special Education

Curriculum Preparatory for Learning and Behavior Specialist I in Special Education

This program is designed to prepare special education teachers for students ages 3-21. An applicant must have a cumulative grade point average of at least 2.5 (A = 4.0), a minimum of 50 hours of prior experience with individuals with disabilities¹, and sophomore or higher standing upon enrollment in the program. A minimum of 125² semester hours of credit is required for graduation. To proceed to the five semester professional education sequence, students must have completed all degree requirements outside of the professional education coursework.

Council on Teacher Education policy requires all candidates for admission to a teacher education program pass an Illinois approved test of basic skills. Approved tests consist of the Illinois Test of Academic Proficiency (<http://www.icts.nesinc.com>) (TAP), ACT, or SAT with approved scores. Previously passed Illinois Test of Basic Skills (096, 300, or 400) may also be used to meet this requirement. See information on the details. (http://cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf)

Students pursuing teacher licensure programs in the College of Education (COE) must meet requirements in a series of sequential gateways. Included in the gateway requirements are successful completion of specified coursework, achievement of appropriate grade point averages, requirements for clinical experiences, and appropriate

tests for the licensure area. Meeting all Gateway requirements leads to degree and licensure completion.

In order to be recommended for licensure, candidates are required to maintain University of Illinois at Urbana-Champaign, cumulative, content area, and professional education grade-point averages of 2.5 (A = 4.0). Grades in courses of C- or lower may not be used for State of Illinois licensure, endorsements, or approvals. Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages. For teacher education licensure requirements applicable to all curricula, see the Council on Teacher Education. (<http://www.cote.illinois.edu>)

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

Degree Requirements

Code	Title	Hours
Orientation Seminar		
EDUC 101	Education Orientation Seminar	1
Composition		
Composition I		4-6
Advanced composition. Students are encouraged to select a course that will also meet a requirement in another general education area.		0-4
Language other than English		
Three years of one language other than English in high school or completion of the third semester of college-level language		0-12
Humanities/Arts		
SPED 117	The Culture of Disability	3
Cultural Studies ³		0-8
One Western/Comparative Culture(s)		
One Non-Western/US Minority Culture(s)		
Natural Sciences and Technology ³		
Life and/or Physical Sciences		6
Social/Behavioral Sciences		
Select one of the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
KIN 262	Motor Develop, Growth & Form	3
Quantitative Reasoning ³		
Quantitative Reasoning I (MATH 103 is recommended)		3-4
Quantitative Reasoning II		3
Electives		
Elective courses (if needed to complete the 125 hour graduate requirement)		0-8
Professional Education Requirements		
EDUC 201	Identity and Difference in Edu	6
& EDUC 202	and Social Justice Sch & Society	
Select one of the following:		3
PSYC 216	Child Psych	
EPSY 201	Educational Psychology	
HDFS 105	Intro to Human Development	
or other approved course		

SHS 320	Development of Spoken Language	3
SPED 312	Introduction to Educational Technology	2
EDPR 250	School & Community Experiences (LBS)	4
EDPR 420	Ed Prac Students with Sp Needs (LBE)	6
EDPR 420	Ed Prac Students with Sp Needs (LBS)	6
EDPR 420	Ed Prac Students with Sp Needs (LBT)	6
CI 431	Tchg Elementary Mathematics	4
CI 475	Teaching Elementary Reading and Language Arts I	4
Special Education Core Requirements		
SPED 317	Characteristics & Eligibility	3
SPED 424	Foundations of Assessment	3
SPED 426	Collaboration and Teaming	3
SPED 431	Assistive Tech & Phys Disab	2
SPED 438	Collaborating with Families	3
SPED 440	Instructional Strategies I	4
SPED 441	Instructional Strategies II	4
SPED 444	Career Development and Transition	3
SPED 446	Curriculum Development I	4
SPED 447	Curriculum Development II	4
SPED 448	Curriculum Development III	4
SPED 461	AAC and Literacy	3
SPED 470	Learning Environments I	3
SPED 471	Learning Environments II	3
Total Hours		125

TOTAL minimum hours include general education and professional education credits.⁴

¹ Applicants may contact the Department of Special Education for further information on the prior experience requirement.

² Six hours of ROTC upper level courses (300 level or above) can count toward the degree as free electives.

³ General Education Requirement: Courses must be selected from the Campus General Education Approved Course List.

⁴ The total hours required for the degree may be higher for students who do not complete the language other than English requirement in high school.

SPED Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SPED>)

Courses

SPED 117 The Culture of Disability credit: 3 Hours.

The purpose of this course is to provide an introduction to the culture of disability across the lifespan. The impact of disabilities on an individual across the lifespan will be explored, and the unique culture that is created by having a disability will be addressed. The historical basis for the disability movement and special education will be addressed, including legislation and litigation that has had a significant impact on the field.

Students also will learn about the characteristics of individuals with diverse abilities as well as current trends in educational services.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

SPED 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

SPED 312 Introduction to Educational Technology credit: 2 or 3 Hours.

This course provides preservice teachers with the foundation for growth in technology integration through professional preparation, student teaching, and licensure. Major areas covered include the use of productivity tools, effective integration of the internet, and enhancing instruction through the use of multimedia. Additional topics include learning theories, professional development, evaluation, and technology use across multiple disciplines. Special equipment needed includes a USB-Flash Drive and SCD-R disks.

SPED 317 Characteristics & Eligibility credit: 3 Hours.

The purpose of this course is to provide an introduction to issues associated with the identification and characteristics of students with disabilities, eligibility for special education, and placement to meet students' educational needs. Prerequisite: SPED 117 and admission into the teacher education program in special education.

SPED 322 Intro Intellectual Disability credit: 3 Hours.

Study of the history and current status of the social, emotional, physical, and learning characteristics and problems of persons with an intellectual disability; identification and diagnosis; available services and provisions; and educational programs and lifelong processes of adaptation for these individuals and their families. Same as PSYC 322 and REHB 322. Prerequisite: PSYC 100 or SPED 117; or equivalent.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

SPED 391 Thesis credit: 2 Hours.

Prerequisite: Senior standing.

SPED 395 Independent Study credit: 2 Hours.

Study of problems not considered in other courses; designed for students who excel in self-direction and intellectual curiosity. Prerequisite: Upperclassman; upper five percent of class in grade-point average; demonstrated writing competence, research potential, scholarly attitude, and interest as attested to by instructors; consent of adviser and staff member who supervises the work.

SPED 405 Gen Educator's Role in SPED credit: 3 Hours.

Examination of issues in educating students with special needs: service delivery models, roles of teachers and related service providers, student assessment, curriculum individualization, instructional strategies, management of problem behaviors, and program evaluation. 3 undergraduate hours. 3 graduate hours. Prerequisite: Must be registered in teacher licensure program.

SPED 413 New Media & Learner Differences credit: 4 Hours.

An investigation of the dimensions of learner diversity: material (class, locale), corporeal (age, race, sex and sexuality, and physical and mental characteristics) and symbolic (culture, language, gender, family, affinity and persona). Examines social-cultural theories of difference, as well as considering alternative responses to these differences in educational settings - ranging from broad, institutional responses to specific pedagogical responses within classes of students. No undergraduate credit. 4 graduate hours. Prerequisite: Acceptance into the Master of Education with an emphasis on New Learning and New Literacies program.

SPED 414 Assessment in ECSE credit: 3 Hours.

Practice in designing and applying assessment devices and procedures and in using them to make educational decisions for children with special needs, birth through kindergarten age. 3 undergraduate hours. No graduate credit. Prerequisite: Credit or concurrent registration in SPED 524 or consent of instructor.

SPED 416 Perspectives on Gifted Edu credit: 3 or 4 Hours.

Consideration of persons in society exhibiting gifted behavior; who they are, their physical, psychological, social, and educational characteristics, and society's needs and provisions for them. The major portion of the course is devoted to the consideration and evaluation of instructional and administrative adjustments that should be made for the gifted in the educational structure. 3 undergraduate hours. 3 or 4 graduate hours.

SPED 424 Foundations of Assessment credit: 3 Hours.

Course focuses on the theoretical and practical considerations in the psychological and educational assessment of individuals with disabilities. An emphasis will be placed on understanding the technical and practical aspects of current assessment procedures and their application to the education of children and youth with disabilities. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 426 Collaboration and Teaming credit: 3 or 4 Hours.

Course is designed to provide participants with the information needed for effective collaboration and interactive teaming. Participants will learn effective models of collaboration and consultation, team member roles and responsibilities, collaborative practices for participating on teams, and strategies for securing appropriate resources for students with disabilities. Emphasis is placed on skills necessary for working collaboratively with parents, teachers, and other service providers. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Requires concurrent enrollment in SPED 524 or EDPR 420, or consent of instructor.

SPED 431 Assistive Tech & Phys Disab credit: 2 Hours.

Course focuses on specialized health care needs, policies, and procedures for working with students with disabilities. An overview is provided of methods for accommodating students including task or environmental modifications, assistive technology, and adaptive equipment options. 2 undergraduate hours. 2 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 432 Multiple Disabilities credit: 3 Hours.

Focuses upon the physical and educational characteristics of individuals with multiple disabilities, particularly those with physical disabilities and other health and sensory impairments; covers educational curricula, teaching methods, and other educational considerations such as working with parents, medical personnel, and support staff, and educational adaptations. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 435 Behavior Analysis in SPED credit: 3 Hours.

Remediation of behavior problems of exceptional students and adults using applied behavior analysis techniques; includes defining, observing, recording, charting, and evaluating behavior change and application of behavioral procedures to remediate behavior problems in the classroom. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 436 Systematic Instruction in SPED credit: 4 Hours.

Elements of data-based instruction emphasizing educational planning for individuals with special needs; includes task and developmental analysis, writing instructional programs, and individualization of instruction. Covers infancy to young adults; mild to severe disabilities. 4 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in SPED 435, or consent of instructor.

SPED 437 Curriculum for Severe Disab credit: 4 Hours.

Curriculum design, development, and adaptation for students with moderate and severe disabilities; includes the following basic curriculum areas: domestic/home living, self-care, socialization, community living, leisure and recreation, and functional academics; a focus is on providing instruction in these areas in inclusive educational settings; and an emphasis throughout the course is on the evaluation of curriculum and program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 436.

SPED 438 Collaborating with Families credit: 3 or 4 Hours.

The impact of children with special needs on their families; models for the study of family systems are applied to understanding families of children with special needs; emphasis on planning family-focused interventions and exploring strategies for working with parents in a variety of settings. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Practicum experience or consent of instructor.

SPED 440 Instructional Strategies I credit: 4 Hours.

Course is designed to provide participants with information on effective instructional practices for working with students with disabilities. Participants are provided with information on generic strategies and principles of learning, instructional formats and strategies for informal assessment. Throughout this course emphasis is placed on methods and strategies for instructing individuals and groups of students. Important consideration is given to legal and ethical issues and an understanding of diverse needs in instructional design and delivery. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 317 and SPED 517 or consent of instructor.

SPED 441 Instructional Strategies II credit: 4 Hours.

Course focuses the design of instruction based on diverse student characteristics, student performance data, curriculum goals, and the community context. Emphasis is placed on application of techniques and strategies to facilitate learning and on evaluating assessment information to modify methods, materials, or environments to enhance student success. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 440 and concurrent enrollment in SPED 524 or EDPR 250, or consent of instructor.

SPED 444 Career Development and Transition credit: 1 or 3 Hours.

Course focuses on developing transition plans and activities that prepare students with disabilities for adulthood, including post school employment, independent living, and postsecondary education. Particular emphasis is placed on career development including determining job interests, career exploration, work experiences prior to graduation, job development, and job placement. 1 or 3 undergraduate hours. 1 or 3 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 446 Curriculum Development I credit: 4 Hours.

Principles and practices for teaching students with disabilities. Topics include models of curriculum development, procedures for identifying curriculum priorities across content areas, and relationships between curriculum and instructional settings. Emphasis is on development of inclusive educational programs that are outcome-driven and on evaluation of program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 447 Curriculum Development II credit: 4 Hours.

Course focus is on ensuring access for students with disabilities to the general education curriculum in English language arts, mathematics, science and social studies by considering the interaction among content area knowledge, pedagogical knowledge, and evidence-based practice. Construction of curriculum in academic content areas with a scope and sequence tailored to individual student characteristics in an area of emphasis. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 446 and admission to the Department of Special Education, or consent of instructor.

SPED 448 Curriculum Development III credit: 4 Hours.

Review and application of curriculum development and adaptation principles and strategies to life skill domain areas. Curriculum areas addressed include domestic/home-living, leisure and recreation, community living, and vocational programs and job preparation. Emphasis on designing instruction to address life skill curriculum needs in inclusive educational programs and on critically evaluating curriculum and program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 446 and admission to the Department of Special Education, or consent of instructor.

SPED 450 Introduction to ECSE credit: 2 Hours.

Overview of the history, trends, and issues of the field of Early Childhood Special Education (ECSE) with particular attention to federal and state policy, service system models, and professional roles and ethics. Emphasis is on current research, theory, and practice. 2 undergraduate hours. 2 graduate hours. Prerequisite: Junior standing.

SPED 460 Communication and Phys Disab credit: 4 Hours.

Focuses upon issues and intervention strategies that can impact the communication skills of persons with moderate or severe intellectual and/or physical disabilities. Specific assessment and intervention strategies are discussed as they relate to both verbal and augmentative communication. 4 undergraduate hours. 4 graduate hours.

SPED 461 AAC and Literacy credit: 2 or 3 Hours.

Course focuses on issues and strategies for teaching communication and literacy to individuals with significant intellectual or physical disabilities. Specific assessment and intervention strategies are discussed as they relate to alternative and augmentative communication (AAC) and the development of beginning literacy skills. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: Concurrent enrollment or prior completion of SPED 440, and admission to the Department of Special Education, or consent of instructor.

SPED 465 Curriculum and Methods in ECSE credit: 3 Hours.

Introduction to the field of early childhood special education, including its history and major issues; instructional methods used in teaching and facilitating development in young children with disabilities are covered in depth. 3 undergraduate hours. 3 graduate hours. Prerequisite: Concurrent registration in SPED 524 or consent of instructor.

SPED 470 Learning Environments I credit: 3 Hours.

Course is designed to provide participants with an introduction to theories and interventions related to school climate and classroom management. Course will focus on using positive behavioral supports to create an effective classroom and school climate. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 471 Learning Environments II credit: 3 Hours.

Course is designed to provide participants with specific information on intervention and evaluation strategies related to designing and managing effective learning environments and to becoming a discriminating consumer of the professional literature related to behavior interventions. 3 undergraduate hours. 3 graduate hours. Prerequisite: SPED 470, and admission to the Department of Special Education, or consent of instructor.

SPED 488 Ethics & Prof. Behavior credit: 3 Hours.

Designed to introduce students to ethical issues and challenges that teacher educators and other professionals, including Board Certified Behavior Analysts, may encounter in practice. The topics to be covered all revolve around ethical conduct in practice and research, as well as the decision-making foundations for resolving ethical issues. Students will obtain knowledge and skills through readings, discussion and various case scenarios, reflections, and discussion of the concepts of issues addressed in the reading and assignments. 3 undergraduate hours. 3 graduate hours. Prerequisite: Graduate standing. Undergraduate Seniors (with permission).

Teacher Education Minor in Secondary School Teaching

College of Education

Director of Teacher Education: Chris Span

142 Education Building, 1310 South Sixth, Champaign, (217) 333-2800

Liberal Arts and Sciences

Academic Adviser: Lori Davis

Admissions Information: las-teach@illinois.edu (las-teach@illinois.edu?subject=Question about the Teaching Education Minor in Secondary School Teaching)

2002 Lincoln Hall, 702 S. Wright Street, Urbana

This minor is a component of the teaching option within the following Science and Letters majors: biology (<http://catalog.illinois.edu/undergraduate/las/teach-biology>), chemistry (<http://catalog.illinois.edu/undergraduate/las/academic-units/chemistry/chemistry-teaching-concentration>), English (<http://catalog.illinois.edu/undergraduate/las/academic-units/english/english-teaching-concentration>), geology (<http://catalog.illinois.edu/undergraduate/las/academic-units/geology/earth-science-teaching-concentration>), history (<http://catalog.illinois.edu/undergraduate/las/academic-units/history/social-science-history-teaching-concentration>), mathematics (<http://catalog.illinois.edu/undergraduate/las/academic-units/math/teaching-mathematics-concentration>), and physics (p. 594). Enrollment is limited to candidates in these options. Students are admitted into the College of Liberal Arts and Sciences (<http://www.las.illinois.edu/students/programs/majors>)' major of interest and apply to enter the minor in their sophomore year.

Transfer into the teaching option within a major can be made only by students who have received approval to complete the minor in education. Approval for admission to the minor in education is gained by successful application to the Department of Curriculum and Instruction in the College of Education, upon recommendation by the joint Education/LAS content area admissions committees. Council on Teacher Education policy requires that all candidates for admission to a teacher preparation

program pass an Illinois approved test of basic skills. The Illinois test of basic skills options include the Test of Academic Proficiency (TAP) (https://www.il.nesinc.com/TestView.aspx?f=HTML_FRAG/IL400_TestPage.html) or an ACT/SAT (http://cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf) score that meets specific criteria.

Prerequisites for the minor: Students must pass one of three State approved basic skills tests (Test of Academic Proficiency; ACT Plus Writing; or SAT); be in good academic standing; and have a minimum content, UIUC, and cumulative GPA of 2.5. Additionally, each major stipulates prerequisite courses that must be completed before admission to the teaching option. Interested students should see the academic advisers in the major or the LAS Secondary Education Program Adviser for further information.

Most students will be able to complete all the prerequisite courses for transfer into the teaching option of their major by the spring of their sophomore year; those students may be able to complete the requirements for the bachelor's degree in LAS, as well as the minor in education and all other requirements for teacher licensure in four years (five years for biology majors). Students who establish eligibility to transfer into the teaching option of their major in the spring of their junior year may need more time to satisfy the requirements for teacher licensure.

In order to be recommended for licensure, candidates are required to maintain UIUC, cumulative, content area, and professional education grade point averages of 2.5 (A=4.0). Grades in courses of C- or lower may not be used for State of Illinois Licensure, Endorsements, or Approvals. Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade point averages.

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education or the Illinois General Assembly.

Code	Title	Hours
Professional Education Required Courses		
EDUC 201	Identity and Difference in Edu ¹	3
EDUC 202	Social Justice Sch & Society ¹	3
CI 401	Introductory Teaching in a Diverse Society	3
CI 403	Teaching a Diverse High School Student Population	3
CI 404	Teaching and Assessing Secondary School Students	3
CI 473	Disciplinary Literacy	3
EPSY 201	Educational Psychology ^{1,2}	3
EPSY 485	Assessing Student Performance	2
SPED 405	Gen Educator's Role in SPED	3
EDPR 442	Educational Practice in Secondary Education	12
Total Hours		38

¹ EDUC 201, EDUC 202 and EPSY 201 can be completed at any time during the degree and are not pre-requisites to apply for the minor.

² PSYC 100 is a pre-requisite for EPSY 201.

Engineering, College of

Office of Undergraduate Programs
206 Engineering Hall
1308 West Green Street
Urbana, IL 61801
PH: (217) 333-2280
<http://engineering.illinois.edu>

The College of Engineering prepares men and women for professional careers in engineering and related positions in industry, commerce, education, and government. Graduates at the bachelors level are prepared to begin the practice of engineering or to continue their formal education at a graduate school of their choice. The curricula provide a comprehensive education emphasizing analysis and problem solving and an exposure to open-ended problems and design methods. The courses are taught in a manner that fosters teamwork, communication skills, and individual professionalism, including ethics and environmental awareness. The classroom experiences, along with outside activities, prepare students for lifetimes of continued learning and leadership. Thus, the engineering programs enable graduates to make significant contributions in their chosen fields while at the same time recognizing their responsibilities to society.

Table of Contents

Curricula, Mission, Vision (p. 140)
Educational Objectives (p. 141)
Outcomes and Assessment (p. 141)
Professional Component (p. 141)
Breadth of Programs (p. 141)
Engineering Career Services (p. 142)
Departments and Programs (p. 142)
Admission to Programs in the College of Engineering (p. 143)
Special Degree Programs (p. 144)
Special Off-Campus Programs (p. 145)
Technical Grade Point Average Requirements (p. 147)
Engineering Honors Programs (p. 148)
General Education Requirements (p. 149)
Elective Course Work (p. 149)
Combined B.S.-M.S. Engineering Degree Programs (p. 149)

Curricula

- Aerospace Engineering (p. 157)
- Agricultural and Biological Engineering (p. 162)
- Bioengineering (p. 168)
- Chemical Engineering (see Chemical Engineering (p. 355) in College of LAS)
- Civil Engineering (p. 173)
- Computer Engineering (p. 186)

- Computer Science (p. 180)
- Electrical Engineering (p. 186)
- Engineering Mechanics (p. 213)
- Engineering Physics (p. 229)
- General Engineering (p. 202)
- Industrial Engineering (p. 199)
- Materials Science and Engineering (p. 205)
- Mechanical Engineering (p. 213)
- Nuclear, Plasma and Radiological Engineering (p. 223)

Mission

The University of Illinois at Urbana-Champaign was founded in 1867 as a state-supported, land-grant institution with a threefold mission of teaching, research, and public service. Based on that foundation, the mission of the College of Engineering is to meet the needs of the state and nation through excellence in education, research, and public service. The goals are to instill in students the attitudes, values, vision, and training that will prepare them for lifetimes of continued learning and leadership in engineering and other fields; to generate new knowledge for the benefit of society; and to provide special services when there are needs that the college is uniquely qualified to meet.

Vision

The vision of the College of Engineering is to be a distinguished institution, providing knowledge that focuses on the creation and management of systems and resources. This knowledge is to be shared by motivating and educating qualified students to master the most important components of science and engineering at all levels. The students are also to have an appreciation for human and ethical values and to master the skills of oral and written communication. The value of this combined knowledge is measured by its connection to effective products, processes, and services that address the needs of society.

Educational Objectives

The College of Engineering prepares men and women for professional careers in engineering and related positions in industry, commerce, education, and government. Graduates at the bachelor's level are prepared to begin the practice of engineering or to continue their formal education at a graduate school of their choice. Based on the mission and vision statement of the college, each engineering program has developed educational objectives which are broad statements that describe what graduates are expected to attain within a few years of graduation. In general, all the programs provide students with a comprehensive education that includes in-depth instruction in their chosen fields of study. The programs are designed to emphasize analysis and problem solving and to provide exposure to open-ended problems and design methods. The courses are taught in a manner that fosters teamwork, communication skills, and individual professionalism, including ethics and environmental awareness. The classroom experiences, along with outside activities, prepare students for lifetimes of continued learning and leadership. Thus, the engineering programs enable graduates to make significant contributions in their chosen fields while at the same time recognizing their responsibilities to society.

Outcomes and Assessment

To accomplish the educational objectives and to fulfill current engineering accreditation criteria, all engineering programs provide the

knowledge, experience, and opportunities necessary for students to demonstrate their attainment of the following outcomes:

- an ability to apply knowledge of mathematics, science, and engineering
- an ability to design and conduct experiments, as well as to analyze and interpret data
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- an ability to function on multidisciplinary teams
- an ability to identify, formulate, and solve engineering problems
- an understanding of professional and ethical responsibility
- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- a recognition of the need for, and an ability to engage in life-long learning
- a knowledge of contemporary issues
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

An assessment system for continuous measurement, evaluation, and improvement is in place in each academic department. In addition, the college collects college-wide data and provides coordination and assistance to the departments for the overall process.

Professional Component

Each engineering program also contains a professional component, as required for accreditation, that is consistent with the objectives of the program and the institution. The professional component includes:

- one year of a combination of college-level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.
- one and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study.
- a general education component that complements the technical content of the program and is consistent with the objectives of the program and the institution.

Students in engineering programs are prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

The paragraphs below further describe these elements of the programs and expected student outcomes and experiences.

Breadth of Programs

The college provides training in the mathematical and physical sciences and their application to a broad spectrum of technological and social requirements of society. The engineering programs, although widely varied and specialized, are built on a general foundation of scientific theory applicable to many different fields. Work in the classroom and

laboratory is brought into sharper focus by practical problems that the student solves by methods similar to those of practicing engineers. Engineering design experience is introduced early in the programs, is integrated throughout, and culminates in a major design project team-work experience in the senior year.

Although each student pursues a program chosen to meet individual career goals, all students take certain courses. Basic courses in mathematics, chemistry, physics, rhetoric, and computer science are required in the first two years. The scientific and technical portion of the majors provides the rudimentary development of technical skills, the modern engineering tools and methods for solving problems in practice, the design of experiments and associated data analysis, an understanding of values and cost, an understanding of the ethical characteristics of the engineering profession and practice, a sensitivity to the socially related technical problems that confront health and safety, and the ability and emphasis for maintaining professional competence through lifelong learning. Although the programs are progressively specialized in the third and fourth years, each student is required to take some courses outside his or her chosen field.

Non-technical courses are included in each program; they may be required or elective. Many non-technical courses satisfy the broad objectives of the humanities and social sciences requirements of the engineering programs, enabling strong, effective communications, making the student keenly aware of the urgent contemporary problems of society, and developing a deeper appreciation of human cultural achievements in a global context. The humanities and social sciences courses are usually drawn from the liberal arts and sciences, economics, and approved courses in fine and applied arts. A student who desires a broader cultural background may wish to consider a combined engineering-liberal arts and sciences program.

Illinois Engineering Freshman Experience (IEFX)

The Illinois Engineering First-Year Experience (<http://iefx.engineering.illinois.edu>) is an interdisciplinary program for all first-year engineering students. Students' aspirations are respected, supported, and fostered within program initiatives that lay a solid foundation for your collegiate career.

You have the opportunity to begin your experience by participating in Summer Scholars, a program centered on helping you transition to Illinois and increase your academic performance for the first-year. You attend the eight-week Summer Session II and take the IEFX Projects course and another class of your choice.

For the fall semester, all first-year students attend Launch, your official welcome event to Engineering at Illinois, the Saturday before classes begin. You will meet faculty, staff, and other students at this popular party event that helps you build community and get a strong start.

Your experience continues with ENG 100, a fall-semester orientation course where you will learn important skills and information regarding engineering and the University, and you connect with a peer mentor that is trained and eager to assist you for academic success. You are also encouraged to enroll in one or more of the IEFX Electives. These courses offer variety to and enhancement of the first year.

Along with the opportunities mentioned previously there are other events and sub-programs in IEFX that build community and helps students establish a strong sense of engineering identity.

For further information regarding IEFX, visit the IEFX website (<http://iefx.engineering.illinois.edu>), contact the IEFX Office (First Floor,

Engineering Hall, iefx@engineering.illinois.edu) or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Engineering Career Services

The College of Engineering is committed to your success as a student and beyond. Our Engineering Career Services (ECS) office offers support, guidance, and resources to help you with every step of your job search. Whether you are interested in gaining practical experience through a co-op position or an internship, or entering the professional world upon your graduation, ECS provides a variety of services from career planning to offer evaluation and negotiation. We encourage you to take advantage of these services both as a student and as an alum of the College.

ECS provides comprehensive services and programs designed to enable students to identify, facilitate, and negotiate successful career opportunities. ECS offers an online job system that employers use to communicate with students by posting job opportunities and promoting on-campus recruiting activities.

ECS services include:

- Workshops and seminars
- Career exploration and counseling
- Resume and cover letter reviews
- Mock interviews
- Career fairs and on-campus recruiting events
- Job shadows, internships, co-ops, and full-time job postings
- Company databases and contact information
- Salary and placement statistics
- Offer evaluation and negotiation
- Presentations for classes and student organizations
- Personal consultation appointments

To take advantage of these services and many more, students simply need to register with the Engineering Career Services office (3270 Digital Computer Lab, 217-333-1960, ecs@enr.illinois.edu), or visit the Engineering Career Services website. (<http://ecs.engineering.illinois.edu>)

Departments and Programs

The engineering degree programs offered at Illinois awarding Bachelor of Science degrees are listed in the table below. The programs accredited by an accreditation commission of ABET (<http://www.abet.org>) and the year in which first accredited are indicated. The Computer Science program is accredited by the Computing Accreditation Commission (CAC); all others are accredited by the Engineering Accreditation Commission (EAC).

Department	Engineering B.S. Degree Programs and First Year Accredited	
Aerospace Engineering	Aerospace Engineering ¹	1950
Agricultural and Biological Engineering (ACES)	Agricultural and Biological Engineering ²	1950
Bioengineering	Bioengineering	2014
Chemical and Biomolecular Engineering (LAS)	Chemical Engineering ³	1936

Civil and Environmental Engineering	Civil Engineering	1936
Computer Science ⁴	Computer Science	2002
Electrical and Computer Engineering	Computer Engineering	1978
	Electrical Engineering	1936
Industrial and Enterprise Systems Engineering	General Engineering	1936
	Industrial Engineering	1960
Materials Science and Engineering	Materials Science and Engineering	1996
Mechanical Science and Engineering	Engineering Mechanics	1960
	Mechanical Engineering	1936
Nuclear, Plasma, and Radiological Engineering	Nuclear, Plasma, and Radiological Engineering ⁵	1978
Physics ⁶	Engineering Physics	–

¹ Accredited program name was Aeronautical and Astronautical Engineering until August, 2004.

² The program in agricultural and biological engineering in the Department of Agricultural and Biological Engineering is administered jointly by the College of Agricultural, Consumer, and Environmental Sciences and the College of Engineering with the degree granted by the College of Engineering. It succeeds a program named Agricultural Engineering until August 2008 that was first accredited in 1950.

³ The program in chemical engineering is administered by the Department of Chemical and Biomolecular Engineering in the College of Liberal Arts and Sciences with the degree granted by the College of Liberal Arts and Sciences.

⁴ The Department of Computer Science also sponsors two majors administered by the College of Liberal Arts and Sciences: a Mathematics and Computer Science Major and a Statistics and Computer Science Major.

⁵ Accredited program name was Nuclear Engineering until August 2008.

⁶ The Department of Physics also offers a B.S. degree program in Physics and a Physics Major in the Science and Letters Curriculum, both administered by the College of Liberal Arts and Sciences.

Admission to Programs in the College of Engineering

Entering Freshman Admissions

Students seeking admission to the College of Engineering who are current high school students, recent high school graduates, or who have earned fewer than 12 semester hours of credit at other collegiate institutions are classified as new freshmen and must meet the entrance requirements to the College of Engineering (<http://engineering.illinois.edu/admissions/undergraduate>) that are specified for new freshmen. Students are admitted to the college on a best-qualified basis as determined by a number of factors. These include ACT and SAT scores, high school percentile rank, high school grades, high school class selections, extracurricular activities, awards, and essays by the applicant.

Placement in chemistry, mathematics, rhetoric, and foreign languages is required and is based upon ACT and SAT scores, ALEKS (<http://citl.illinois.edu/services/for-students/placement-testing/current-cutoffs/>

mathematics) math assessment results, or specific placement tests. Proficiency exams in many subjects, including chemistry, mathematics, and physics, are administered shortly after the fall semester begins. A student with advanced placement (AP or IB) credit in mathematics, chemistry, or physics will receive credit toward graduation and will be placed in advanced course work consistent with academic preparation.

All of the engineering curricula are built around a common core of courses. In addition all students in engineering curricula have 18 hours of social sciences and humanities electives and at least 6 hours of free electives; those choices are generally not prescribed by the curriculum. These common elements allow a student to transfer from one curriculum to another early in their college career with minimal loss of credit.

The following table gives an indication of the common elements in the early stages of the engineering curricula. There are math, chemistry, physics, and rhetoric courses required in all curricula. There are also several courses that are common to many curricula. When a course substitution applies (e.g., MATH 286 for MATH 285, or MATH 415 for MATH 225) the most flexible option is to take the more demanding course as it meets the requirements of the less demanding course (and generally provides a stronger education in that subject).

Subject	Core Courses Common to All Engineering Curricula	Core Courses Common to Many Engineering Curricula
Math	MATH 221 ¹ , MATH 231, MATH 241, MATH 285 ²	MATH 225, MATH 415 ³
Physics	PHYS 211, PHYS 212	PHYS 213, PHYS 214
Chemistry	CHEM 102, CHEM 103	CHEM 104, CHEM 105
Composition	RHET 105 ⁴	
Other Foundational Courses		GE 101, ME 170, ECE 110, CS 101

¹ Students with no background in calculus should take MATH 220 instead of MATH 221. Four of the five credit hours of MATH 220 apply to the degree requirements.

² MATH 286 is required in some curricula and is an acceptable substitute for MATH 285 in all curricula

³ MATH 415 is an acceptable substitute for MATH 225 in all curricula that require MATH 225. Note that MATH 415 can be used in the Mathematics Minor whereas MATH 225 cannot.

⁴ CMN 111 + CMN 112 are acceptable substitutes for RHET 105 in all curricula for those who qualify to take those courses.

Transferring into Engineering from Other Institutions

The College of Engineering admits qualified transfer students from both community and four-year colleges and has worked closely with many of these schools in Illinois to implement coordinated engineering programs.

Students may complete courses at other accredited institutions and transfer to Illinois with little or no loss of credit, provided that they follow the proper program. A suggested list of courses that should be completed before transferring may be viewed at the College of Engineering Transfer website (http://enr.illinois.edu/students/prospective/transfer_admission.php).

Students may also apply and participate in the Pathways program, a guaranteed admission program for qualifying students. To learn more, go to the Pathways website (<http://pathways.engineering.illinois.edu>).

Students may transfer to the college for the fall, spring, or summer session. Both the overall grade point average (GPA) of all transferable courses and the separate GPA of the technical courses (mathematics, physics, chemistry) must meet or exceed the competitive cutoffs. Transfer students are normally required to have also completed the basic mathematics (through calculus), physics, chemistry, and English (rhetoric and composition). Transfer students starting their studies in the fall semester are allowed to advance enroll during the preceding summer. Students are informed of this opportunity after they are admitted.

For more information, view the Office of Admissions Transfer website, (http://admissions.illinois.edu/apply/requirements_transfer.html) or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Transferring into Engineering from Other Colleges on Our Campus

Any student in good standing in a college outside Engineering is eligible to seek transfer into a curriculum offered by the College of Engineering. The likelihood of success of such an intercollege transfer (ICT) petition depends upon the qualifications of the student, primarily as evidenced by performance in U of I courses. A student with a B average or above and with demonstrated success (primarily A's and B's) in Math, Physics, and Chemistry may be a good candidate for transfer.

For much more ICT information, view the College of Engineering Changing Majors website (<https://wiki.cites.illinois.edu/wiki/pages/viewpage.action?pageId=397279242>) or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Changing Curricula within Engineering

Students enrolled in the College of Engineering may petition for transfer to another department within the college. Such a transfer is considered an interdepartmental transfer (IDT).

Approval of an IDT petition will depend upon the reasons given by the petitioner for wanting to transfer, the comments of current and prospective departments, and availability of space in the target curriculum. Each case will be considered individually on its own merits.

For much more ICT information, view the College of Engineering Changing Majors website (<https://wiki.cites.illinois.edu/wiki/pages/viewpage.action?pageId=397279242>) or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Special Degree Programs

Combined Engineering-Liberal Arts and Sciences Program

A dual degree program of study permits a student to earn a Bachelor of Science degree in a field of engineering from the College of Engineering and a Bachelor of Arts or a Bachelor of Science degree from the College of Liberal Arts and Sciences at the Urbana-Champaign campus.

This program affords the student the opportunity to prepare for a career of an interdisciplinary nature. A student who desires a broader background than can be provided in the four-year engineering programs can develop a combined program that includes a synergistic scientific education or an enhanced cultural education in addition to an engineering specialty. Each student must file an approved program with the College of Engineering's Office of the Associate Dean for Undergraduate

Programs and with the College of Liberal Arts and Sciences Academic Affairs Office.

Advisors in both colleges assist in planning a program of study to meet the needs and requirements for both degrees. Most combinations of engineering and liberal arts programs may be completed in ten semesters if the student does not have deficiencies in the entrance requirements of either college.

Most engineering programs can be combined with one of a variety of liberal arts and sciences majors, including science, languages, social sciences, humanities, speech communication, and philosophy. This combined program operates under the following conditions:

- Students entering the program must meet admission requirements for both colleges. Students planning completion of the two degrees in 8 semesters are recommended to submit the application in the fifth term of enrollment but no later than the first week of classes in the seventh term. Students planning completion in 10 semesters are recommended to submit the application in the seventh term of enrollment but no later than the first week of classes of the eighth term.
- Beginning with students who matriculated in Fall 2005, an Illinois GPA of 3.25 (or above for certain programs) will be required at the time of application for a second degree.
- Students must complete all of the requirements specified for the additional LAS degree as well as at least an additional 30 hours over and above those required for the first degree. The candidate must also complete 12 distinct advanced hours in the LAS major that are not used in meeting the requirements for any other degree program.
- All second degree candidates in LAS must be enrolled in the College of Liberal Arts and Sciences for a minimum of two semesters. Also, campus regulations on second degrees require at least 30 additional semester hours of Illinois credit that is not counted for the other degree.
- A student who starts in the program and decides to transfer from it is subject to the existing graduation requirements of the college of his or her choice.
- The degrees of Bachelor of Science in engineering and Bachelor of Arts or Bachelor of Science in liberal arts and sciences may be awarded simultaneously. If not, a student must complete the LAS degree first, having fulfilled the two-semester residency requirement in LAS, and transfer back to the College of Engineering to complete the other degree.
- Participants must satisfy the College of Liberal Arts and Sciences foreign language graduation requirement.
- Students electing advanced Reserve Officers' Training Corps and Naval ROTC programs are required to meet these commitments in addition to the combined program as outlined.
- Students with 75 or more hours of transfer credit are not advised to enter this program because they cannot ordinarily complete it in five years.
- Students transferring from other colleges and universities must plan to complete at least one year in the College of Liberal Arts and Sciences at Urbana-Champaign and one year in the College of Engineering at Urbana-Champaign to satisfy residency requirements if both degrees are to be granted here.

For further information about this program, students should contact the Office of the Associate Dean in either the College of Engineering or the College of Liberal Arts and Sciences at the Urbana-Champaign campus.

Dual-Degree Programs within the College of Engineering

Students enrolled in any department of the College of Engineering may pursue a second engineering degree if the following requirements are fulfilled:

- Students seeking a second engineering degree must apply for the program no later than the first week of classes of the term they intend to graduate with the first degree. The two engineering degrees may be awarded simultaneously or consecutively. All candidates for engineering degrees are accorded a maximum of 10 semesters of Illinois enrollment to complete their degrees. Students must petition to request an extension beyond this limit, which must be approved by the Associate Dean for Undergraduate Programs in the College of Engineering.
- The Department offering the curriculum for the second degree must approve the double-degree request. The criteria for approval are the same as the ones applied for transfer into that curriculum.
- Campus regulations on second degrees require at least 30 additional semester hours of Illinois credit that is not counted for the other degree. The candidate must also complete at least 12 distinct advanced hours in the second degree that are not used in meeting the requirements for the first degree program.

Advanced students with multidisciplinary ambitions may also consider pursuing a graduate master's degree as an alternative to a second undergraduate engineering degree, particularly if interested in research. Students should seek the advice of advisors and faculty members in the specific departments of interest to gather information on graduate programs and on available research opportunities.

Program Modification

A student can seek to modify his or her program of studies using course substitutions by submitting a Curriculum Modification form to the Office of the Associate Dean for Undergraduate Programs in the College of Engineering, 206 Engineering Hall (note that the forms can be obtained there too). The student should seek an endorsement of the change from his or her academic advisor and the Chief Advisor of the department responsible for the student's program. The Associate Dean for Undergraduate Programs is responsible for approving all curriculum modifications. No program modification is automatically granted, and each request must come through the formal process. Once approved the student is notified by return copy of the form and the program change is entered in the graduation audit.

Custom Degree Program

Some program changes do not fit the direct course substitution mode anticipated by a Program Modification. In such a case a student may seek permission to vary the program requirements of one of the standard Engineering degree programs by written petition to the Associate Dean for Undergraduate Programs. There is no standard form for this transaction. A student should submit a letter proposal outlining the nature of the request and the justification. The special program must be approved by the Associate Dean for Undergraduate Programs in the College of Engineering, who will consult with the head of the department in which the student is registered.

Affiliations with Other Liberal Arts Colleges

Through a program of affiliation between the College of Engineering and a number of liberal arts colleges, a student may enroll in a five-year program, earn a bachelor's degree from one of these colleges, and at the same time earn a bachelor's degree in engineering from Illinois. In general, students spend the first three years at the liberal arts college and the final two years at Illinois. At the time of transfer, students must meet competitive transfer admission requirements and must meet certain residency requirements to participate in this program.

The five-year program encourages a student to develop a broad understanding of the social sciences and humanities while striving for excellence in technical studies. These affiliations have the added benefit of allowing students to take core engineering studies (including mathematics, physics, and chemistry) at liberal arts schools. Students interested in this dual degree program should meet with advisors from both schools to develop an individual plan of study.

Colleges affiliated with the College of Engineering are:

- Augustana College, Rock Island, Illinois
- De Paul University, Chicago, Illinois
- Eastern Illinois University, Charleston, Illinois
- Elmhurst College, Elmhurst, Illinois
- Greenville College, Greenville, Illinois
- Illinois Benedictine College, Lisle, Illinois
- Illinois College, Jacksonville, Illinois
- Illinois State University, Normal, Illinois
- Illinois Wesleyan University, Bloomington, Illinois
- Knox College, Galesburg, Illinois
- Lewis University, Romeoville, Illinois
- Loyola University of Chicago, Chicago, Illinois
- North Central College, Naperville, Illinois
- Olivet Nazarene College, Kankakee, Illinois
- Western Illinois University, Macomb, Illinois
- Wheaton College, Wheaton, Illinois

For more information, view the Office of Admissions Transfer website (http://admissions.illinois.edu/apply/requirements_transfer.html).

Special Off-Campus Programs Experiential Learning Programs

Co-ops and internships (summer and semester) provide students with a competitive advantage when seeking full-time career opportunities in industry. These Experiential Learning Programs not only enable students to gain up to a full year of professional work experience while paying for their education, but also offer the opportunity to explore engineering-related fields in-depth, to apply what you learn in the classroom to a real situation, and to provide insight into some of the nation's leading companies.

As a Co-op, a student alternates terms of work with terms of school, working at least two semesters and one summer with the same company. Students that participate in a Co-op opportunity graduate with one year of professional work experience increasing their marketability throughout the recruiting process. Semester Interns work for a period of 4-7 months with one company (a spring or fall semester may be combined with a summer). Many students also participate in summer internships, working for one company during a summer (2-3 months).

Students may complete multiple internships, and all internships and co-ops are paid employment positions. Students find these Experiential Learning Programs valuable and rewarding for a number of reasons:

- They are able to explore opportunities within a specific field.
- They gain industry experience prior to graduation.
- They improve their overall communication and team skills.
- Time spent with an employer inspires their performance in their course work and expands their classroom experiences.
- The practical experience helps them to identify if they have really chosen the right field of interest for them and offers numerous alternative ideas.
- They earn money that can be applied to college expenses.

ECS also offers a job shadow program, which takes place each year during winter break. The Job Shadow Program is a one day program for freshmen and sophomores interested in spending time with an engineer to better understand what it means to work in a specific industry or company. This program provides students with an opportunity for a brief yet valuable introduction to the daily demands of an engineer during the course of a day. Each student is matched with an engineer in the student's field of interest and spends time at the engineer's firm. This unique interactive experience will give participants a better idea of how the professional world "feels" in their chosen field of study.

For more information regarding Experiential Learning Programs visit the Engineering Career Services website (<http://ecs.engineering.illinois.edu>), contact Engineering Career Services (3270 Digital Computer Lab, 217-333-1960, ecs@engineering.illinois.edu) or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Study Abroad Programs

Engineering students at Illinois are presented with very attractive opportunities to study overseas as part of their university experience.

Students may spend a summer, semester, or even an entire academic year abroad. Credits earned during this time may be transferred to Illinois to satisfy curricular requirements. Additionally, a student may even elect to pursue an International Minor in Engineering (<http://catalog.illinois.edu/undergraduate/engineer/international-minor-engineering>) that is focused on the country or region of the student's choice.

A variety of study abroad and international work programs are available to provide students an international experience. Currently, International Programs in Engineering (IPENG) has programs at universities in Argentina, Australia, Austria, Belgium, Brazil, Chile, China, Denmark, France, Germany, Ireland, Italy, Japan, Netherlands, Singapore, S. Korea, and the U.K. More are continually being developed in these and other countries. IPENG's membership in the Global Engineering Education Exchange (GE3) consortia provides additional overseas locations and fellowships for study abroad. Students can also participate through the main campus programs in several other countries. For information on these programs visit the International Programs in Engineering website (<http://engineering.illinois.edu/ipeng>) or the Study Abroad Office website (<http://studyabroad.illinois.edu>) or contact the Engineering Study Abroad Office (210 Engineering Hall, ipeng@illinois.edu)

To help new students gain an understanding of the importance of an international experience during their academic career at Illinois, the College of Engineering offers short programs for freshman level students to "get their feet wet". These are 10-14 day trips in either the winter break (Guatemala) or spring break (Cuba) and also one for women in

engineering at the end of the spring semester to Uruguay. Some of these programs include the opportunity to earn credit towards degree requirements.

An overseas academic experience can begin as early as the summer after the first year at Illinois. An academic semester or year exchange program provides an even greater depth to the undergraduate experience and will greatly enhance a resume when a student begins their professional job search.

The personal and academic advantages gained by participating in the program are numerous and reflect many financial incentives. These advantages can include: IPENG help with round-trip airfare for all engineering students who study or work abroad on approved programs and a reduced on campus tuition charge when studying. The result is that Illinois provides the opportunity to earn credit overseas at only **a fraction** of the cost of studying on campus.

The College of Engineering also offers scholarships for Study Abroad participants. The College of Engineering believes in this opportunity so firmly that much has been done to make this as affordable as possible for students. In addition to help with round-trip airfare and tuition incentives, newly admitted students are offered an opportunity to apply for the International Engineering Scholarship. This scholarship provides a one-time payment of \$2,000 during the Study Abroad program. Additional scholarships are also provided to students upon acceptance to a study abroad program.

For more information about study abroad, visit the International Programs in Engineering website (<http://engineering.illinois.edu/ipeng>) or contact IPENG (210 Engineering Hall, 217-244-0054, ipeng@illinois.edu).

Other International Opportunities

New Internship programs through Global Experiences and Sage Corps have been included in the College of Engineering's repertoire of programs.

These are non-paid experiential internships that will help enhance a student's resume and provide hands-on engineering related experiences.

See the International Programs in Engineering Website (<http://www.engineering.illinois.edu/studyabroad>)

Engineers Without Borders (EWB) Illinois works with disadvantaged communities to improve their quality of life through implementation of environmentally and economically sustainable engineering projects, while developing international responsible engineering students. Current international projects include biofuel electricity generation, charge controller circuit design, and wood-stove emissions control. Furthermore, EWB-Illinois holds local events to create awareness on campus of international development and environmental issues. EWB-Illinois is open to all majors and, indeed, is always in need of dedicated people from all fields. For more information, visit the Engineers Without Borders website (<http://www.ewb-usa-uiuc.org>).

Advanced ROTC Training

A student in the College of Engineering may elect to participate in the Reserve Officers' Training Corps Program and earn a commission in the U.S. Army Reserve, Air Force Reserve, or Naval Reserve. A commission is awarded simultaneously with the awarding of the bachelor of science degree in an engineering field. Participation in these programs is limited to students who apply to and are selected by the army, air force, and navy units at Illinois. Monthly stipends are paid to those selected for advanced military training.

These programs require from one to three summer camps or cruises and the earning of specified numbers of credits in advanced military courses. Credits earned appear in all academic averages computed by the College of Engineering. Basic military courses do not count toward graduation. A maximum of 6 hours of upper-level military science courses may be used as free electives. A student should plan on taking nine semesters to obtain both a bachelor's degree in engineering and a commission in the ROTC program. For further information, write directly to the professor of military science, aerospace studies, or naval science.

Technical Grade Point Average Requirements

Technical grade point average (TGPA) requirements for graduation and advanced-level course registration apply to students enrolled in certain College of Engineering curricula. These rules apply in addition to the Illinois campus-wide drop and probation rules. The table below summarizes the TGPA rules applicable.

Note: TGPA rules for the General Engineering and Industrial Engineering curricula shown in the table below are under review and subject to change. Click here (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Technical+GPA+Requirements>) for the most current information,

Curriculum	Technical Grade Point Average (TGPA) Requirements for Graduation	Technical Grade Point Average (TGPA) requirements for Advanced-Level Course Registration	
	Must earn a GPA of 2.00 (unless otherwise noted) in the following technical subset of courses:	Must earn a GPA of 2.25 (unless otherwise noted) in:	In order to register for:
Aerospace Engineering	n/a	Eng Core + Mech Core + AE 202 + ME 300	AE 311, AE 312, AE 321, AE 323, AE 352, AE 353, AE 370
Agricultural Engineering	n/a	n/a	n/a
Bioengineering	Math, Eng, and Science courses	Eng Core + Bio Core	BIOE 302, BIOE 414, BIOE 435
Chemical Engineering	n/a	GPA of 2.5: all courses excluding military training	CHBE 430, CHBE 431, CHBE 440
Civil Engineering	n/a	n/a	n/a
Computer Engineering	ECE courses	Eng Core (minus CHEM) + CompE Core	ECE 329, ECE 385, ECE 391, ECE 340
Computer Science	CS and Math courses	n/a	n/a
Electrical Engineering	ECE courses	Eng Core (minus CHEM) + EE Core	ECE 329, ECE 385, ECE 391, ECE 340

Engineering Mechanics	Required Engineering courses, 200-level and above; MATH 415, 441, and 442; secondary field classes	Eng Core + EMech Core + ECE 205 + ME 300	TAM 302, TAM 324, TAM 335, TAM 412, TAM 445, TAM 470
Engineering Physics	GPA of 2.5: required Math and Physics courses	n/a	n/a
General Engineering	n/a	n/a	n/a
Industrial Engineering	Required Eng and Tech Elect courses; MATH 415	Eng Core + Mech Core + ECE 110 + IE 300	IE 310, IE 330, IE 340, IE 430, ME 330
Materials Sci & Eng	n/a	n/a	n/a
Mechanical Engineering	Required Engineering courses, 200-level and above; MATH 415; technical elective courses	Eng Core + Mech Core + ECE 205, 206 + MCB 150 (if taken) + ME 300	ME 310, ME 330, ME 340, ME 370
Nuclear, Plasma, & Radiological Engineering	n/a	n/a	n/a

Engineering Core

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 220	Calculus	5
MATH 221	Calculus I	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
MATH 286	Intro to Differential Eq Plus	4
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
CS 101	Intro Computing: Engrg & Sci	3
SE 101	Engineering Graphics & Design	3
ME 170	Computer-Aided Design	3

(Note: These courses are included in the TGPA only if the course is required in the curriculum. Inclusion on this list does not mean you have to take them!)

Bio Core

Code	Title	Hours
BIOE 120	Introduction to Bioengineering	1
BIOE 201	Conservation Principles Bioeng	3
BIOE 202	Cell & Tissue Engineering Lab	2
MCB 150	Molec & Cellular Basis of Life	4
CHEM 232	Elementary Organic Chemistry I	4

CompE Core

Code	Title	Hours
ECE 110	Introduction to Electronics	3
ECE 120	Introduction to Computing	4
ECE 210	Analog Signal Processing	4
ECE 220	Computer Systems & Programming	4
CS 173	Discrete Structures	3
or MATH 213	Basic Discrete Mathematics	

EE Core

Code	Title	Hours
ECE 110	Introduction to Electronics	3
ECE 120	Introduction to Computing	4
ECE 210	Analog Signal Processing	4
ECE 220	Computer Systems & Programming	4

EMech Core

Code	Title	Hours
TAM 195	Mechanics in the Modern World	1
TAM 210	Introduction to Statics	2
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
TAM 252	Solid Mechanics Design	1

MechE Core

Code	Title	Hours
TAM 210	Introduction to Statics	2
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3

Math courses

Include any course offered by the Mathematics department under the MATH rubric and by the Statistics department under the STAT rubric

Engineering (Eng) courses

Means any course offered by a unit of the College of Engineering (i.e., under the rubrics AE, ABE, BIOE, CEE, etc.)

Science courses

Means any course in the basic sciences (physics, chemistry, biology, etc.)

Required

Means that the course is called out by name in the curriculum (i.e., not an elective)

Engineering Honors Programs (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Honors?src=search>)**Honors at Graduation**

Honors awarded at graduation to superior students are designated on the diploma as honors, high honors, or highest honors. A student receives honors with a cumulative Illinois grade point average of at least 3.50, and high honors with at least a 3.80 grade point average at graduation. Highest honors may be awarded to any student eligible for high honors upon recommendation of his or her department. The criteria used by departments in selecting individuals for highest honors recognition include outstanding performance in course work and in supplementary activities of an academic or professional nature. Ordinarily, such a citation requires completion of an undergraduate thesis or a special project of superior quality.

Tau Beta Pi

Tau Beta Pi is a national engineering honor society that recognizes students, alumni, and engineers for outstanding academic achievements and exemplary character. The Alpha chapter at Illinois was founded in 1897 and is the fifth oldest chapter. In addition to gaining scholastic recognition, members participate in a range of activities that serve the chapter, the College of Engineering, and the community. The scholastic requirement for membership in Tau Beta Pi is that juniors must be in the upper one-eighth of their graduating class and seniors must be in the upper one-fifth of their graduating class.

Edmund J. James Scholars

The honors program in engineering is part of the Illinois James Scholar program, which was established to recognize and develop the talents of academically outstanding students. Engineering students in this program are known as "James Scholars in Engineering." Each is assigned to an honors advisor and receives special consideration in the selection of courses to meet specific needs.

Admission for incoming freshmen is based on a holistic review of the application rather than on standardized test scores alone. Students selected as James Scholars for Fall freshman admission will be notified in late February. If you did not qualify upon freshman admission, you may still apply to be a Freshman James Scholar during the first two weeks of your second semester if you have achieved a 3.5 Grade Point Average or higher in your first semester. Upon completion of the freshman honors requirement, you will still get honors recognition for the full year on the transcripts.

Continuation in the program or joining as an upperclass student requires a minimum 3.50 GPA and the development and approval of an honors contract, which is a coherent plan of special academic work. For more information about the James Scholar Program, visit the college's James Scholar website (<https://wiki.cites.illinois.edu/wiki/display/engrjames/Home>) or contact the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Good standing in the James Scholar program at graduation requires completion of the honors contract.

Dean's List

The names of undergraduates who have achieved a grade point average in the top 20 percent of their college class for a given semester will be included on a list prepared for the dean of the college.

To be eligible for Dean's List recognition, students must successfully complete at least 12 academic semester hours taken for a letter grade. Students who are registered with the Center for Wounded Veterans (CWV) or with Disability Resources and Educational Services (DRES) who are enrolled in less than 12 but a minimum of nine graded academic semester hours who are in the top 20 percent of their college are also eligible. Such students must sign a release with CWV or DRES indicating their consent for consideration for Dean's List eligibility and have submitted to their home unit's academic affairs office no later than Reading Day in the semester in which they wish to be considered for Dean's List. These consent forms are valid only for the semester in which they are issued, and students must submit by the deadline updated consent forms for each semester in which they wish to be considered for Dean's List.

Courses must be taken for a letter grade (A-F). Credits earned during the semester through proficiency examinations or for courses taken as Credit/No Credit or Satisfactory/Unsatisfactory are not counted.

General Education Requirements

The campus General Education requirements fall into several categories.

Those in Composition I, Natural Sciences and Technology, and Quantitative Reasoning are met by courses required in engineering curricula. Beginning with the class that entered in fall 2000, students must complete a third-level college language course. Most students satisfy this requirement by completing three years of high school instruction in a single language.

The campus General Education requirements in social and behavioral sciences and in humanities and the arts can be met while satisfying the College of Engineering's liberal education course work requirements (see below). Proper choices will assure that these courses also satisfy the campus requirements in the areas of Western and non-Western cultures. Many of these courses satisfy the campus Advanced Composition requirement, which assures that students have the advanced writing skills expected of all college graduates.

Students may obtain credit from different academic sources, i.e., residential instruction, advanced placement (AP or IB) tests, and transfer credits. All course work taken to satisfy campus general education requirements must be taken for grade.

For more information about General Education course work requirements, consult the campus' General Education website (<https://courses.illinois.edu>).

Elective Course Work

Liberal Education Electives

The College of Engineering requires eighteen hours of liberal education course work. The courses are normally chosen to also satisfy the campus General Education requirements consisting of six hours of social and behavioral sciences (S&BS) and six hours of humanities and arts (H&A) course work. All twelve hours of these hours must be taken for grade. The remaining six hours of liberal education course work may include more approved General Education S&BS or H&A credit, foreign language credit beyond the basic requirement, and liberal education courses from

a list approved by the College (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Course+List?src=search>).

Credit for this course work may come from different academic sources, i.e., residential instruction, advanced placement (AP or IB) tests, and transfer credits.

For more information about College of Engineering liberal education course work requirements, consult the college's Liberal Education website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>).

Technical Electives

All technical elective courses must be selected in accordance with departmental requirements. Technical electives generally include 300- and 400-level courses in engineering, mathematics, and the natural sciences.

Free Electives

These unrestricted electives are selected at the prerogative of the student with certain exceptions as noted at the College of Engineering advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>). Every curriculum administered by the College of Engineering has at least six free elective hours. This course credit insures the required number of credit hours for the degree is earned.

Credit-No Credit Option

The credit-no credit grade option is available for students who want to explore areas of academic interest that they might otherwise avoid for fear of poor grades. All students considering this option are cautioned that many graduate and professional schools consider applicants whose transcripts bear a significant number of non-grade symbols less favorably than those whose transcripts contain none or very few. Required courses in the College of Engineering may not be taken on this basis. For more details, consult the College of Engineering advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Grades>).

Combined B.S.-M.S. Engineering Degree Programs

Computer Science (M.S.) (<http://cs.illinois.edu/academics/graduate/fifth-year-masters-programs>)

The five-year B.S.-M.S. program in Computer Science combines two degrees: a B.S. in Computer Science with an M.S. (with thesis) in Computer Science. Current Illinois Computer Science students enrolled in the College of Engineering with junior standing who maintain superior academic performance are eligible to apply for this program. Students admitted to the program will receive both degrees once all requirements for the 5-year B.S.-M.S. degree program have been successfully completed.

Course Requirements

B.S. Component (120 hours plus three 400-level courses for 9-12 graduate hours):

- Same required courses as the traditional B.S. degree with the minimum hours required – not counting technical electives taken for graduate credit (see below) – reduced from 128 to 120.
- Course work shared by the B.S. and M.S. components must include three courses and at most 12 credit hours of 400-level CS

courses required for the B.S. which also count towards the Breadth Requirement course work of the M.S. component, all of which must be taken for graduate credit. (Students must take the graduate section of the courses if offered and are strongly encouraged to take the 4-hour section if available). The CS Graduate academic advisor will assist students in mapping out this course work.

- Illinois undergraduate student minimum residence requirement satisfied
- Overall grade point average (GPA) of 3.00 maintained through completion of B.S. component of the program.

M.S. Component (minimum 16 additional credit hours plus 4 hours of CS 599):

- Identical to the traditional M.S. program with the Breadth Requirement course work satisfied while still classified as undergraduate (though held to the standards of a graduate student). A total of 32 credit hours (including the shared course work) are required.
- Satisfy Illinois' graduate student minimum residence requirement.
- Overall GPA of 3.00 must be maintained through completion of M.S. component of the program.

Admission

For deadlines and procedures, consult the department website (<http://cs.illinois.edu/current-students/graduate-students/bs-ms-5-year-program>). Current Illinois Computer Science students who are in their junior year (normally at least 90+ credit hours, including those in progress, and at least one year of undergraduate course work remaining) with an overall GPA of at least 3.50 may apply for provisional admission to the program. The 5-year program is highly competitive. Admission is based on overall academic performance, letters of reference, and statement of purpose. The GRE General Test is not required.

Students provisionally admitted to the program:

- are assigned a graduate academic advisor when admitted.
- must maintain an overall GPA of 3.00 through completion of the B.S. component of the program, to remain in the program.
- may register for graduate courses and earn graduate hours credit, with approval from their graduate academic advisor, even if they are more than 10 hours from completing the B.S. component.
- must earn at least 120 hours of undergraduate credit, 9 hours of graduate credit (in the Breadth Requirement courses), and satisfy all B.S. requirements to be officially admitted to the Graduate College.

Upon successful completion of the B.S. component (including grades of B- or better in the Breadth Requirement), and an overall GPA of at least 3.00 in all graduate course work, students:

- will be officially admitted into the Graduate College.
- will be issued letters of admission from the Office of Admissions and Records and the Computer Science Department, at which time they will be considered graduate students and assessed graduate tuition the following semester.
- may apply or be considered for graduate research or teaching assistantships, tuition waivers, as well as fellowships and scholarships available to graduate students.
- must continue to maintain a graduate GPA of 3.00 or better in order to remain in the combined program.

Withdrawal

Students may withdraw from the program at any time by notifying the Office of the Associate Dean for Undergraduate Programs and the Assistant Director of CS Graduate Programs. Students who do not complete all 5-year B.S.- M.S. degree program requirements may upon request have all graduate hours earned, including the Breadth Requirement course work converted to undergraduate hours and applied toward a traditional B.S. in Computer Science degree. Students reverted back to the B.S. degree program must earn the minimum number of hours and satisfy all degree requirements of whichever version of the B.S. curriculum is appropriate. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

Continued Graduate Study

Students in the program are eligible to apply for the Ph.D. program in Computer Science near completion of the M.S. component. If admitted, the combined degree will count as Stage 1 of the Ph.D. program, as if the student is admitted with a master's degree.

Students are strongly advised to seek faculty counsel about the 5-year program to be sure they understand the pros and cons of pursuing a master's degree via the 5-year program. If their intention is to ultimately pursue a Ph.D., then it may be preferable to avoid the rapid pace of the 5-year program and instead invest time in research as an undergraduate.

For admission to competitive Ph.D. programs, the expectation of publications and extensive research experience is higher for M.S. graduates. Therefore, as an alternative to the 5-year program, many top students may prefer to conduct research, possibly leading to a B.S. thesis, as a way to improve their admissions chances into top Ph.D. programs.

Computer Science (M.C.S.) (<http://cs.illinois.edu/current-students/graduate-students/bs-mcs-5-year-program>)

The 5-year program in Computer Science combines two degrees: a B.S. in Computer Science with an M.C.S. in Computer Science. This program is competitive and admission is based on overall academic performance, letters of recommendation, and statement of purpose.

Course Requirements

B.S. Component: 120 hours plus 3 "Breadth Requirement" courses for 9-12 graduate hours

- Same required courses as the traditional B.S. degree with the minimum hours required reduced to 120 hours.
- Must complete 3 out of the 4 "Breadth Requirement" courses: four different courses, each from a different area, from the following eight core areas with a grade of B- or higher.
- University undergraduate minimum residence requirement satisfied.
- Overall GPA of 3.0 or higher maintained through the completion of the B.S. component of the program.

M.C.S. Component: Minimum 20-23 additional coursework hours

- Program is identical to the traditional M.C.S. program with the 3 out of 4 "Breadth Requirement (<http://cs.illinois.edu/prospective-students/graduate-students/professional-masters-mcs/professional-masters-mcs-degree-requ>)" courses satisfied while still classified as an undergraduate.
- Students who take the "Breadth Requirement ([Information listed in this catalog is current as of 04/2018](http://cs.illinois.edu/prospective-students/graduate-students/professional-masters-

</div>
<div data-bbox=)

mcs/professional-masters-mcs-degree-requ)" courses for 3 credit hours instead of 4 will need to complete a minimum of 23 additional graduate level coursework hours.

- Students must satisfy the university's graduate student minimum residence requirement.
- Students must complete remaining M.C.S. degree requirements in two semesters (fall-spring, spring-summer, or spring-fall).
- Students must maintain an overall GPA of 3.0 through completion of the M.C.S. component of the program.

Admission

For deadlines and procedures, please consult the department website (<http://cs.illinois.edu/current-students/graduate-students/bs-mcs-5-year-program>). Current Illinois Computer Science students enrolled in the College of Engineering with a junior standing (must have at least one year left of their undergraduate study after admitted into the program) who maintain an excellent academic performance are eligible to apply for this program. Students admitted to this program will receive both degrees once all requirements for both degrees have been successfully completed. Transfer students entering the CS undergraduate program their junior year are also eligible to apply to this program.

Students provisionally admitted to the program:

- are assigned a graduate academic advisor.
- must maintain an overall GPA of 3.0 through completion of the B.S. component of the program to remain in the program.
- may register for graduate courses and earn graduate credit hours, with approval from their graduate academic advisor, if they have 12 hours or less to complete in their FINAL semester of their undergraduate studies. Please note that students cannot transfer more than 12 credit hours of coursework over to their M.C.S. degree, which includes the shared coursework.
- must earn at least 120 hours of undergraduate credit, 9 hours of graduate credit (this is the "Breadth Requirement (<http://cs.illinois.edu/prospective-students/graduate-students/professional-masters-mcs/professional-masters-mcs-degree-requ>)"), and satisfy all B.S. requirements to be officially recommended for admission to the Graduate College.

Upon successful completion of the B.S. component (including grades of B- or better in the "Breadth Requirement (<http://cs.illinois.edu/prospective-students/graduate-students/professional-masters-mcs/professional-masters-mcs-degree-requ>)"), and an overall GPA of at least 3.0 GPA, students

- will be officially admitted into the Graduate College, with the application fee paid by the department.
- will be issued letter of admission from the Graduate College Admission Office and the Department of Computer Science, at which time they will be considered graduate students and assessed graduate tuition the following semester. International students may be required to submit additional documentation at this time.
- must continue to maintain a graduate GPA of 3.0 or better in order to remain in the combined program.
- must complete all the remaining M.C.S. degree requirements within two semesters (fall-spring, spring-summer, or spring-fall). Please note that if you finish your B.S. requirements in less than four years, you will not be given extra time to complete the M.C.S. degree

requirements. You will just finish this joint program in less than 5-years and be able to start working sooner!

Withdrawal

Students who do not complete all 5-Year B.S.- M.C.S. degree program requirements may request by petition to have graduate hours earned, including the Breadth Requirement coursework, converted to undergraduate hours and applied toward a traditional B.S. in Computer Science degree. Students reverted back to the B.S. degree program must earn the minimum number of hours and satisfy all degree requirements of whichever version of the B.S. curriculum appropriate. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

Electrical and Computer Engineering (<https://www.ece.illinois.edu/academics/ugrad/jointbsmeng.asp>)

The joint B.S. - M.Eng. program in Electrical and Computer Engineering combines two degrees: a B.S. in EE or CompE with a M.Eng. in ECE. Current Illinois ECE students enrolled in the College of Engineering with junior standing (normally at least 90 credit hours, including those in process, and at least one year of undergraduate coursework remaining) who maintain superior academic performance are eligible to apply for this program. The program is designed to broaden a student's knowledge beyond that possible in the standard 4-year curriculum. Students admitted to the program will receive both degrees once all requirements for both the B.S. - M.Eng. degree have been successfully completed. Students may participate in the graduation ceremonies for their B.S. degree once the 120 credit-hour requirement is met. There will be no Graduate College or BOT waivers allowed for students in this program. This program is not intended for students intending to pursue the Ph.D. degree—such students should apply to the traditional M.S. (with thesis) degree program.

Course Requirements

B.S. Component (120 hours)*

- Same required courses as the traditional B.S. degree with minimum hours required reduced from 128 to 120.
- The reduction of 8 credit hours includes:
 - 6 hours in Free Electives in both EE and CompE curricula
 - 2 hours in ECE courses in EE Technical Electives or 2 hours in ECE or CS courses in CompE Technical Electives.
- Overall GPA of 3.40 must be maintained through completion of B.S. component of the program.
- Illinois undergraduate student minimum residence requirement must be satisfied.

M.Eng. Component (32 additional hours of coursework)

- Identical to stand-alone M.Eng. degree requirements:

Required Courses:	Required Hours
Coursework	32
ECE 500 registration (0 hours) every 0 term while in residence	0
500-level ECE courses (subject to Other Requirements and Conditions below)	12

Professional Development: ECE 596 4

Master's Project supervised by ECE (or affiliate) graduate faculty or course(s) in leadership, entrepreneurship, or other business-related topic from approved list or as approved by ECE Director of Graduate Studies

Elective courses (subject to Other Requirements and Conditions below) 16

Other Requirements and Conditions (may overlap)

A minimum of 12 credit hours of ECE coursework at 500-level must be applied toward the degree.

Up to 4 hours of ECE 596 and/or ECE 597 (or other individual study) may be applied toward this degree requirement.

Coursework must include at least 18 credit hours of ECE coursework; 15 of these hours must be from no more than 2 different focus areas. The ECE Graduate Committee maintains the Focus area course lists.

Credit in ECE 411, ECE 415, ECE 445, ECE 590, PHYS 404, PHYS 405, PHYS 435, PHYS 436, and STAT 400 do not count toward the degree.

No course used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

This degree option is non-thesis only.

Maintain a minimum program GPA of 3.0.

Admission to the Program

For deadlines and procedures, consult the department website. Current Illinois ECE students with at least 90 credit hours and an overall GPA of at least 3.40 may apply for provisional admission to the program. Admission decisions are based on overall academic performance, letters of reference, and statement of purpose. The GRE general test is not required.

Students provisionally admitted to the program:

- are assigned a graduate academic advisor when admitted.
- must maintain an overall GPA of 3.40 through completion of the B.S. component of the program in order to remain in the program.
- may register for graduate courses and earn graduate hour credits, with approval from their graduate academic advisor, when they have less than 12 credit hours remaining in their B.S. component.
- must earn at least 120 hours of undergraduate credit and satisfy all B.S. requirements of this program to be officially admitted to the Graduate College.

Upon successful completion of the B.S. component students:

- must apply and be officially admitted into the Graduate College.
- will be issued letters of admission from the Graduate College and the ECE Department, at which time they will be considered graduate students and assessed graduate tuition the following semester.
- must satisfy the graduate student minimum residence requirement, which is 24 graduate credit hours.
- must continue to maintain a graduate GPA of 3.00 or better in order to remain in the combined program.

Withdrawal

Students may withdraw from the program at any time by notifying the Office of the Associate Dean for Undergraduate Programs. Students who do not complete all B.S. - M.Eng. degree requirements may request by petition to have graduate hours earned converted to undergraduate hours and applied toward a traditional B.S. in Electrical Engineering or B.S. in Computer Engineering degree. Students reverting to a traditional B.S. degree program must complete 128 hours and satisfy all degree requirements. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

*The 120-hour B.S. degree from the B.S. - M.Eng. program is not ABET accredited, but would be if the student withdrew from the M.Eng. component and completed the requirements of the traditional 128-hour B.S. program.

Engineering with a Concentration in Energy Systems

The joint B.S. - M.Eng. in Engineering with a Concentration in Energy Systems program combines two degrees: a B.S. in any engineering undergraduate major with the M.Eng. in Engineering with a Concentration in Energy Systems. Current Illinois students enrolled in the College of Engineering with junior standing (normally at least 90 credit hours, including those in process, and at least one year of undergraduate coursework remaining) who maintain superior academic performance are eligible to apply for this program. The program is designed to broaden a student's knowledge beyond that possible in a standard 4-year curriculum. Students admitted to the program will receive both degrees once all requirements for both the B.S. - M.Eng. degree have been successfully completed but will be permitted to participate in the B.S. degree graduation ceremonies with their class if they have completed the equivalent number of credit hours. This program is not intended for students intending to pursue a Ph.D. degree.

Course Requirements

B.S. Component (124 hours):

- Same required courses as the traditional B.S. degree with the minimum hours required reduced from 128 to 124 hours. The reduction of 4 credit hours is based on the utilization of 4 hours in free electives in the student's undergraduate curriculum.
- Illinois undergraduate student minimum residency requirement satisfied.
- Overall grade point average (GPA) of 3.0 maintained through completion of B.S. component of the program.

M.Eng. Component (32 additional hours of coursework):

- Identical to the current M.Eng. in Engineering with a Concentration in Energy Systems. A total of 32 hours (including the shared coursework) are required.
- Satisfy Illinois' graduate student minimum residency requirement.
- Overall GPA of 3.00 must be maintained through completion of M.Eng. component of the program.

Admissions

For deadlines and procedures, consult the departmental website (<http://npres.illinois.edu>). Current Illinois Engineering students who are in their junior year (normally at least 90 credit hours, including those in progress, and at least one year of undergraduate coursework remaining) with an overall GPA of at least 3.0 and a technical GPA of 3.0 may apply for provisional admission to the program. Admission decisions are based on overall academic performance, letters of reference, and statement of purpose.

Admissions to the program will occur both in the fall and the spring term. The application deadline for the spring term will be October 2 and for fall term will be June 1. The Energy and Sustainability Engineering M.Eng. admissions committee will review applications for this program and students accepted into the program will be given "provisional admission."

Students provisionally admitted to the program:

- are assigned a graduate academic advisor when admitted.
- must maintain an overall GPA of 3.0 through completion of the B.S. component of the degree to remain in the program.
- may register for graduate courses and earn graduate hours credit, with approval from their graduate academic advisor, if they have less than 12 credit hours remaining in their B.S. component.
- must earn at least 124 hours of undergraduate credit and satisfy all B.S. requirements of this program to be officially admitted to the Graduate College.

Upon successful completion of the B.S. component, students:

- must apply and be officially admitted into the Graduate College.
- will be issued letters of admission from the Graduate College and the NPRES Department, at which time they will be considered graduate students and assessed graduate tuition the following semester.
- must satisfy the graduate student minimum residency requirement, which is 24 graduate credit hours.
- must continue to maintain a graduate GPA of 3.00 or better in order to remain in the combined program.

Withdrawal

Students may withdraw from the program at any time by notifying the Office of the Associate Dean for Undergraduate Programs. Students who do not complete both the B.S. - M.Eng. degree program requirements may request by petition to have graduate hours earned converted to undergraduate hours and applied toward the student's traditional engineering undergraduate major. Students reverting to the traditional B.S. degree program must complete 128 hours and must satisfy all degree requirements. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

The 124-hour B.S. degree from the B.S. - M. Eng. program is not ABET accredited, but would be if the student withdrew from the M.Eng. component and completed the requirements of the traditional 128-hour B.S. program. It is noted students desiring to have their B.S. degree ABET accredited should remain in their B.S. (128 hours) program and apply for the M.Eng. degree during their senior year.

Industrial Engineering

The Department offers a combined Bachelor of Science and Master of Science program in Industrial Engineering. This program allows students who wish to earn both degrees to become involved in graduate course

work and thesis research during their fourth year of study. It also offers the possibility to earn both degrees on an accelerated schedule. The educational objectives of the combined program are the same as for the individual degrees.

Course Requirements

The combined program requires 120 hours of undergraduate credit and 32 hours of graduate credit. This compares to 128 hours of undergraduate credit and 32 hours of graduate credit when the B.S. and M.S. degrees are earned separately. The undergraduate requirements are identical to the four-year B.S. program shown above, except that the following requirements are waived:

- one IE technical elective – 3 hours
- Free electives – 5 hours

In addition, independent study project courses may not be used as IE or technical electives in the B.S. portion of the combined program.

In the M.S. portion of the program, 32 hours of credit and a thesis are required. There must be at least 24 hours of formal graded course work at the 400 level or greater, eight of which must be at the 500 level, and four of the eight must be in the major field. A Master's thesis, for which at least four and no more than eight hours of IE 599 credit is required. Students must also register for the graduate seminar course (IE 590) every semester following formal admission into the graduate portion of the program.

A student in the combined program must spend at least two academic years in residence, full time in the combined degree program, and at least one of these years must be with graduate status. Students must maintain a graduate GPA of 3.00 in order to remain in the combined program.

The B.S. and M.S. degrees are granted simultaneously at the end of the program.

Admission

Formal admission to the combined program normally occurs late in the junior year or early in the senior year. Undergraduate students in IE may apply for formal admission to the combined program with the following provisions:

- Students must have a minimum Illinois GPA of 3.60 or higher, and have earned 96 credit hours towards the B.S.I.E. requirements at the time they are invited to apply.
- A special B.S.-M.S. application is provided to the student with the invitation. This application along with supporting documents must be submitted to the ISE Graduate Programs Office, Room 111 Transportation Building. There are two annual application deadlines: September 15 and January 15.
- GRE scores are not required for admission to the program. However, students are strongly encouraged to take the GRE in their senior year in order, for example, to be eligible for national fellowship competitions.
- Students in the combined program will be recommended by the department for admission to the Graduate College after they complete the 120 hours required for the B.S. portion of the combined program.
- The department will pay the application fee for these students.
- Each student is required to identify a graduate advisor and file a graduate course plan in the semester the student is granted formal admission to the graduate portion of the program.

- Once the student is admitted into the B.S.-M.S. program, the Director of Graduate Programs will act as the student's advisor until a permanent advisor is found.

Withdrawal

Students may withdraw from the program at any time by notifying the Undergraduate Programs Office. Students who do not meet the Graduate College and departmental requirements for admission to the graduate program at the time they complete the 120-hour B.S. portion of the combined program will be required to leave the program.

Students who withdraw from the program for any reason may continue in the regular four-year B.S. degree program, which currently requires 128 hours, provided they meet the normal GPA requirements of that program. Students who withdraw from the combined program after they have taken courses for graduate credit may petition to have those credits counted toward their undergraduate program requirements.

Continued Graduate Study

Students who complete the combined program may petition to continue in graduate school for a Ph.D. These students will hold the same status (post M.S.) as students entering the Ph.D. program with an M.S. degree, and will be required to take the department's qualifying examination no later than the second calendar semester after graduation from the combined program.

Materials Engineering (<http://www.matse.illinois.edu/academics/undergraduate/combined-degree-program.html>)

The five-year B.S.-M.Eng. program in Materials Science and Engineering combines two degrees: a B.S. in Materials Science and Engineering (MatSE) with an M.Eng in Materials Engineering. Current Illinois MatSE students enrolled in the College of Engineering, who maintain appropriate academic performance, are eligible to apply for this program. The program is designed to enhance the students experience in the engineering aspects of materials, broaden their knowledge beyond that possible in the standard 4-year curriculum and obtain a foundation in business, technology management, and/or entrepreneurship. Two semesters (or equivalent, a minimum of 30 weeks) of industrial co-op or internship are required; a research thesis is not required. In addition the students are expected to complete, during the combined program, at least 10 hours of courses in the areas of business, technology management and/or entrepreneurship from an approved list (available from the department). Students admitted to the program will receive both degrees once all requirements for the 5-year B.S.-M.Eng. degree program have been successfully completed but will be permitted to participate in the B.S. graduation ceremonies with their class if they have completed the equivalent number of credit hours. Once graduate student status is achieved, students in the program would be eligible for a teaching assistantship in MatSE (only).

Deadline: Completed application and reference letters must be returned to the MatSE Office, 201 MSEB, 2 months before the end of the Fall semester of the students Junior year. The application and letter of reference forms for the B.S.-M.Eng. Program are available from the MatSE department office.

Admission to the Program

Current Illinois MatSE students with Junior standing and with an overall grade point average (GPA) of at least 3.00 (A = 4.00) may apply for provisional admission to the program. Admission is based on overall

academic performance, letters of reference, and statement of purpose. The GRE General Test is not required.

Students provisionally admitted to the program:

- are assigned a graduate academic advisor when admitted.
- must maintain an overall GPA of 3.00 through completion of the B.S. component of the program, in order to remain in the program
- may register for graduate courses and earn graduate hour credits, with approval from their graduate academic advisor, even if they are more than 10 hours from completing the B.S. component
- must earn at least 120 hours of undergraduate credit and satisfy all B.S. requirements of this program to be officially admitted to the Graduate College.

Upon successful completion of the B.S. component, with grades of B or better in the advanced area coursework, and an overall GPA of at least 3.00 in all graduate coursework, students:

- will be officially admitted into the Graduate College
- will be issued letters of admission from the Office of Admissions and Records and the MatSE Department, at which time they will be considered graduate students and assessed graduate tuition the following semester
- may apply or be considered for graduate teaching assistantships and tuition waivers, as well as fellowships and scholarships (in MatSE only) available to graduate students in MatSE.
- must continue to maintain a graduate GPA of 3.00 or better in order to remain in the combined program.

Students in the program are not eligible to continue in the Ph.D. program in MatSE. Students wishing to pursue a Ph.D. must apply separately for admission to that program.

Course Requirements

B.S. Component (120 hours)¹

- Same required courses as the traditional B.S. degree with minimum hours reduced to 120 hours
- The reduction of 8 credit hours includes:
 - 5 hours of free electives.
 - 3 hours of the area specialty course in a different area (the latter becomes part of M.Eng. program requirements)
- At least one semester (or 2 summers) devoted to an industrial internship or co-op.²
- It is strongly suggested that the student take 2 courses in some aspect of business, economics, environmental studies, labor and industrial relations, technology entrepreneurship or technology and management as the elective component of their Liberal Education requirements. Partial or complete fulfillment of the Technology and Management or Business minor or the Technology Commercialization Certificate is recommended for those admitted by application if available hours permit. The students are expected to complete, during the combined program, at least 10 hours of courses in the areas of business, technology management and/or entrepreneurship from an approved list (available from the department), with additional hours recommended. It is noted that since receipt of the B.S. degree is delayed until the requirements for the M. Eng are completed, the student has the opportunity to complete the undergraduate minors while taking the M. Eng requirements.

- Overall GPA of 3.00 maintained through completion of B.S. component of the program and minimum residency requirements satisfied.

M.Eng. Component (minimum 36 additional hours of coursework)

- 36 hours course work, including at least 19 graduate hours of MatSE courses with 12 hours credit overall in 500-level courses. The course work shall include MSE 585 (two semesters or equivalent, 30 weeks total, of industrial internships or co-ops; one of the semesters can be during the B.S. program)², 6 hours of 400- or 500-level area specialty courses in the student's area, 3 hours of 400- or 500-level MSE courses from a different area, 2 hours of MSE 595, and 2 hours of MSE 529 or MSE 559. Ten hours of courses in one or more of the areas of business or technology management, and entrepreneurship are required to be included in the overall program. Completion of the requirements for the various Certificates granted by the Technology Entrepreneur Center is recommended
- MSE 492; credit does not count toward degree.

Withdrawal

Students who do not complete all of the 5-year B.S.-M.Eng. degree program requirements may request, by petition to the Graduate College after obtaining approval by their advisor, the department, and the Associate Dean for Undergraduate Programs in the College of Engineering, to have graduate hours earned converted to undergraduate hours and applied toward a traditional B.S. degree in MatSE. Students reverting to the traditional B.S. degree program must satisfy all degree requirements, including completion of the required "area specialty course(s) in a different area" and the stated credit hour requirements. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

¹ *The B.S. degree from the B.S.-M.Eng. Program is not ABET accredited, but would be if the student withdrew from the M.Eng. component and completed the requirements of the traditional B.S. program or if the student completed all of the requirements of the standard B.S. degree (8 additional hours, as specified).*

² *Students find internship companies and positions with the help of the departmental and College Placement offices. The MSE 585 internship requires approval by the departmental Director of Graduate Studies to insure that it matches the student's individual career objectives and meets the learning goals of the program. Students taking an internship as part of their undergraduate B.S program should also check with the Director of Graduate Studies; his/her approval is required if the student is already accepted in the combined B.S./M. Eng. Program. Students will be expected to present an oral report on their internship in either MSE 529 or MSE 559, as appropriate, the semester following completion of the internship.*

Materials Science and Engineering (<http://www.matse.illinois.edu/academics/undergraduate/combined-degree-program.html>)

The five-year B.S.-M.S. program in Materials Science and Engineering combines two degrees: a B.S. in MatSE with an M.S. (with thesis) in MatSE. Current Illinois MatSE students enrolled in the College of Engineering who maintain superior academic performance are eligible to apply for this program. Students admitted to the program will receive both degrees once all requirements for the 5-Year B.S.-M.S. degree program have been successfully completed but will be permitted to

participate in the Graduation Ceremonies with their class if they have completed 128 hours.

Deadline: Completed application and reference letters must be returned to the MatSE Office, 201 MSEB, two months before the end of the Fall semester of the student's Junior year. Application and letter of reference forms for the B.S.-M.S. Program are available from the MatSE department office.

Admission to the Program

Current Illinois MatSE students with Junior standing with an overall grade point average (GPA) of at least 3.50 may apply for provisional admission to the program. The 5-year program is highly competitive. Admission is based on overall academic performance, letters of reference, and statement of purpose. The GRE General Test is not required.

Students provisionally admitted to the program:

- are assigned a graduate academic advisor when admitted.
- must maintain an overall GPA of 3.50 through completion of the B.S. component of the program, in order to remain in the program.
- may register for graduate courses and earn graduate hours credit, with approval from their graduate academic advisor, even if they are more than 10 hours from completing the B.S. component.
- must earn at least 120 hours of undergraduate credit, 9 hours of graduate credit in advanced level area courses, and satisfy all B.S. requirements to be officially admitted to the Graduate College.

Upon successful completion of the B.S. component, with grades of B or better in the advanced area course work, and an overall GPA of at least 3.00 in all graduate course work, students:

- will be officially admitted into the Graduate College
- will be issued letters of admission from the Office of Admissions and Records and the MatSE Department, at which time they will be considered graduate students and assessed graduate tuition the following semester.
- may apply or be considered for graduate research or teaching assistantships, and tuition waivers, as well as fellowships and scholarships available to graduate students.
- must continue to maintain a graduate GPA of 3.00 or better in order to remain in the combined program.

Students in the program are eligible to apply for the Ph.D. program in MatSE near completion of the M.S. component. If admitted, the combined degree will count as Stage 1 of the Ph.D. program, as if the student is admitted with a master's degree.

Course Requirements¹

B.S. component (120 hours including 3 advanced (graduate level) area courses for at least 9 hours):

- Same required courses as the traditional B.S. degree with minimum hours reduced to 120 hours; except MSE 395² is dropped (i.e., 1 hour)
- Two of the required remaining four area specialty courses are to be taken at the graduate level (i.e., the students will be held to the course and grading requirements of a graduate student). The third advanced level course can be either in the specialty area or in another specialty area.
- The reduction of 8 credit hours includes:

- 5 hours of free electives.
- 3 hours of the area specialty course in a different area (becomes part of M.S. program requirements) for all concentrations.
- Senior thesis is to be taken in lieu of MSE 395² and one area specialty course (5 hours total recommended, with 1 hour being the remaining hour of free elective).
- An overall GPA of 3.50 must be maintained through completion of B.S. component of the program and minimum residency requirements satisfied.

M.S. component (minimum 24 additional hours of course work plus 8 hours of MSE 599):

- Same overall requirements as for traditional M.S. with thesis.
- At least one 400-500 level course (for the B.S. or M.S.) will be a MatSE area specialty course from a different area.
- Complete a M.S. thesis according to MatSE department requirements; research for the senior thesis will often serve as a beginning for the M.S. thesis but the student may change thesis advisors.

Withdrawal

Students that do not complete all of the 5-year B.S.-M.S. degree program requirements may request, by petition to the Graduate College with approval of their advisor, the department, and the Associate Dean for Undergraduate Programs of the College of Engineering, to have graduate hours earned, including the three advanced area courses, converted to undergraduate hours and applied toward a traditional B.S. in MatSE degree. Students reverting back to the traditional B.S. in MatSE degree program must earn a minimum of 128 hours and satisfy all traditional degree requirements, including MSE 395² and the area specialty course(s) in a different area, to receive the B.S. degree in MatSE. Graduate credit not used to fulfill the B.S. degree requirements will remain on the transcript and may, at some future point, be considered for transfer to another degree program.

¹ *The B.S. degree from the B.S.-M.S. Program is not ABET accredited.*

² *At present, students in their fourth or fifth year considering withdrawing from the M.S. portion of the program should register for MSE 395 in the Spring semester; the resulting B.S. degree would then be ABET accredited. It is anticipated that, in the near future, senior thesis will be accepted by ABET as an appropriate "design experience," when approved, and if accepted in terms of satisfying the objectives of MSE 395 by the MSE 395 instructor, it can be used for the MSE 395 design project.*

Mechanical Engineering

The department offers a combined Bachelor of Science and Master of Science program. This program allows students who wish to earn both degrees to become involved in graduate course work and thesis research during their fourth year of study. It also offers the possibility to earn both degrees on an accelerated schedule. The educational objectives of the combined program are the same as for the individual degrees.

Course Requirements

The combined program requires 120 hours of undergraduate credit and 32 hours of graduate credit. This compares with 128 hours of undergraduate credit and 32 hours of graduate credit when the B.S. and M.S. degrees are earned separately. The undergraduate requirements are identical to the four-year B.S. program, except that the following requirements are waived:

- one MechSE elective — 3 hours
- one Technical elective — 3 hours
- Free electives — 2 hours

In addition, independent study project courses may not be used as MechSE or technical electives in the B.S. portion of the combined program.

The M.S. portion of the program requires completion of 32 hours of credit. This consists of a minimum of 24 hours of formal graded course work at the 400 level or above and eight hours of thesis research credit. Additionally, the formal graded course work must include eight hours at the 500 level and eight hours in the major area of study (ME) with a minimum of four of those hours at the 500 level. A Master's thesis is required, consisting of at least four and no more than eight hours of ME 599 credit. Students must also register for the graduate seminar course (ME 590) every semester following formal admission into the graduate portion of the program and complete MSE 492. The seminar and lab safety credits will not count toward the degree. The non-thesis option is not available to students in this combined program.

A student in the combined program must spend at least two academic years in residence, full time in the combined degree program, and at least one of these years must be with graduate status. Students must maintain a graduate GPA of 3.00 in order to remain in the combined program.

The B.S. and M.S. degrees are granted simultaneously at the end of the program.

Admission

Formal admission to the combined program normally occurs late in the junior year or early in the senior year and is by invitation only with the following provisions:

- Students must have a minimum Illinois GPA of 3.80 or higher, and have earned 96 credit hours toward the B.S.M.E. requirements at the time they are invited to apply (60 of these hours must have been earned at Illinois).
- A special B.S.-M.S. application is provided to the student with the invitation. This application along with supporting documents must be submitted to the ME Graduate Programs Office, Room 164 MEB. There are two annual application deadlines: October 15 and March 15.
- GRE scores are not required for admission to the program. However, students are strongly encouraged to take the GRE in their senior year in order, for example, to be eligible for national fellowship competitions.
- Students in the combined program will be recommended by the department for admission to the Graduate College after they complete the 120 hours required for the B.S. portion of the combined program.
- The department will pay the application fee (\$60 US, \$75 International) for these students.
- Each student is required to identify a graduate advisor and provide a tentative thesis topic at the time of application to the program.

Withdrawal

Students may withdraw from the program at any time by notifying the Undergraduate Programs Office. Students who do not meet the Graduate College and departmental requirements for admission to the graduate program at the time they complete the 120-hour B.S. portion of the combined program will be required to leave the program.

Students who withdraw from the program for any reason may continue in the regular four-year B.S. degree program, which currently requires 128 hours, provided they meet the normal GPA requirements of that program. Students who withdraw from the combined program after they have taken courses for graduate credit may petition to have those credits counted toward their undergraduate program requirements.

Continued Graduate Study

Students who complete the combined program may petition to continue in graduate school for a Ph.D. These students will hold the same status (post M.S.) as students entering the Ph.D. program with an M.S. degree, and will be required to take the department's qualifying examination no later than the second calendar semester after graduation from the combined program.

- Aerospace Engineering (p. 157)
- Agricultural and Biological Engineering (p. 162)
- Bioengineering (p. 168)
- Civil Engineering (p. 173)
- Computer Engineering (p. 193)
- Computer Science (p. 180)
- Electrical Engineering (p. 195)
- Engineering Mechanics (p. 217)
- Engineering Physics (p. 229)
- Innovation, Leadership and Engineering Entrepreneurship (ILEE) (p. 238)
- Systems Engineering and Design (formerly General Engineering) (p. 202)
- Industrial Engineering (p. 199)
- Materials Science and Engineering (p. 205)
- Mechanical Engineering (p. 220)
- Nuclear, Plasma and Radiological Engineering (p. 223)

Minors Offered by the College of Engineering

Students are generally eligible to take many campus minors (<http://provost.illinois.edu/educational-innovation/advising-resources/pursuing-undergraduate-minor>). Several of those administered by the College of Engineering are described in this section. To obtain recognition for the College of Engineering minors, students must register in the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

- Bioengineering (p. 234)
- Computational Science and Engineering (p. 238)
- Computer Science (p. 235)
- Electrical and Computer Engineering (p. 235)
- International Minor in Engineering (p. 236)
- Materials Science and Engineering (p. 236)
- Physics Minor (p. 236)

- Polymer Science and Engineering (p. 237)
- Technology and Management (p. 237)

Departments

- Aerospace Engineering (p. 157)
- Agricultural and Biological Engineering (p. 162)
- Bioengineering (p. 168)
- Civil and Environmental Engineering (p. 173)
- Computer Science (p. 180)
- Electrical and Computer Engineering (p. 186)
- Industrial and Enterprise Systems Engineering (p. 197)
- Materials Science and Engineering (p. 205)
- Mechanical Science and Engineering (p. 213)
- Nuclear, Plasma and Radiological Engineering (p. 223)
- Physics (p. 229)

Aerospace Engineering

Philippe H. Geubelle

306 Talbot Laboratory, 104 South Wright Street, Urbana

PH: (217) 333-2651

<http://ae.illinois.edu>

E-mail: aerospace@illinois.edu

For the Degree of Bachelor of Science in Aerospace Engineering

The Aerospace Engineering curriculum provides a strong fundamental background in engineering, mathematics, and science, along with the ability to apply this fundamental knowledge to the analysis and design of future aircraft and spacecraft. It also prepares students for lifelong learning and the attainment of their career goals in the field of aerospace engineering and in a wide range of other areas. The concepts of system design are introduced early in the curriculum and culminate in the yearlong senior capstone design experience (AE 442, AE 443), in which students work in teams to respond to a design challenge from industry, government, or a professional engineering society. A total of 18 hours of technical and free electives allows the student to pursue an individualized program of study.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as follows.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
AE 100	Intro to Aerospace Engineering ¹	2
ENG 100	Engineering Orientation ²	0
Total Hours		0

¹ This optional course may be used to help meet free elective requirements.

² External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
Total Hours		30

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Aerospace Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of aerospace engineering.

Code	Title	Hours
AE 202	Aerospace Flight Mechanics	3
AE 311	Incompressible Flow	3
AE 312	Compressible Flow	3
AE 321	Mechs of Aerospace Structures	3
AE 323	Applied Aerospace Structures	3
AE 352	Aerospace Dynamical Systems	3
AE 353	Aerospace Control Systems	3
AE 370	Aerospace Numerical Methods	3
AE 433	Aerospace Propulsion	3
AE 442	Aerospace Systems Design I	3
AE 443	Aerospace Systems Design II	3
AE 460	Aerodynamics & Propulsion Lab	2
AE 461	Structures & Control Lab	2
AE 483	Unmanned Aerial Vehicle (UAV) Navigation and Control	3
ECE 205	Elec & Electronic Circuits	3
ECE 206	Elec & Electronic Circuits Lab	1
IE 300	Analysis of Data ¹	3
ME 300	Thermodynamics	3
MSE 280	Engineering Materials	3
TAM 210	Introduction to Statics	2
TAM 212	Introductory Dynamics	3
Total Hours		58

¹ STAT 400 may be substituted.

Technical Electives

These courses stress the rigorous analysis and design principles practiced in the major subdisciplines of aerospace engineering.

Code	Title	Hours
Selected from the departmentally approved list of Technical Electives, satisfying these distribution requirements: ¹		
Chosen from AE Technical Electives ¹		6
Chosen from AE Technical Electives or Non-AE Technical Electives ¹		6
Total Hours		12

¹ List of Technical Electives (<http://aerospace.illinois.edu/undergraduate-programs/current-students/tech-electives>).

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education Social and Behavioral Sciences list.		6
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing the sequence AE 442 + AE 443 in the Aerospace Engineering Technical Core)		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.		
		6

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

Code	Title	Hours
First Semester		
AE 100 ¹	Intro to Aerospace Engineering	2
ENG 100	Engineering Orientation	0
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221 ²	Calculus I	4
RHET 105 ⁴	Writing and Research or Liberal education elective ³	4-3
	Liberal education elective ³	3
Semester Hours		17-16
Second Semester		
	Liberal education elective or RHET 105 ^{3,4}	3-4
PHYS 211	University Physics: Mechanics	4
MATH 231	Calculus II	3
	Liberal education elective ³	3
MATH 225	Introductory Matrix Theory	2
Semester Hours		15-16

Second Year

Code	Title	Hours
First Semester		
MATH 241	Calculus III	4
PHYS 212	University Physics: Elec Mag	4
TAM 210	Introduction to Statics	2
	Liberal education elective ³	3
MSE 280	Engineering Materials	3
Semester Hours		16
Second Semester		
MATH 285	Intro Differential Equations	3
ME 300	Thermodynamics	3
PHYS 213	Univ Physics: Thermal Physics	2
TAM 212	Introductory Dynamics	3
	Liberal education elective ³	3
AE 202	Aerospace Flight Mechanics	3
Semester Hours		17

Third Year

Code	Title	Hours
First Semester		
AE 311	Incompressible Flow	3
AE 321	Mechs of Aerospace Structures	3
AE 352	Aerospace Dynamical Systems	3
ECE 205	Elec Electronic Circuits	3

Second Semester		
AE 312	Compressible Flow	3
AE 323	Applied Aerospace Structures	3
AE 353	Aerospace Control Systems	3
AE 370	Aerospace Numerical Methods	3
	Liberal education elective ³	3
ECE 206	Elec Electronic Circuits Lab	1
Semester Hours		16

Fourth Year		
First Semester		
AE 442 ⁶	Aerospace Systems Design I	3
AE 460	Aerodynamics Propulsion Lab	2
AE 483	Unmanned Aerial Vehicle (UAV) Navigation and Control	3
	Technical elective ⁷	3
	Free elective	4
AE 433	Aerospace Propulsion	3
Semester Hours		18
Second Semester		
AE 443 ⁶	Aerospace Systems Design II	3
AE 461	Structures Control Lab	2
	Technical electives ⁷	9
Semester Hours		14
Total Hours:		128

IE 300 ⁵	Analysis of Data	3
Semester Hours		15

Second Semester		
AE 312	Compressible Flow	3
AE 323	Applied Aerospace Structures	3
AE 353	Aerospace Control Systems	3
AE 370	Aerospace Numerical Methods	3
	Liberal education elective ³	3
ECE 206	Elec Electronic Circuits Lab	1
Semester Hours		16

Fourth Year		
First Semester		
AE 442 ⁶	Aerospace Systems Design I	3
AE 460	Aerodynamics Propulsion Lab	2
AE 483	Unmanned Aerial Vehicle (UAV) Navigation and Control	3
	Technical elective ⁷	3
	Free elective	4
AE 433	Aerospace Propulsion	3
Semester Hours		18

Second Semester		
AE 443 ⁶	Aerospace Systems Design II	3
AE 461	Structures Control Lab	2
	Technical electives ⁷	9
Semester Hours		14
Total Hours:		128

- ¹ Entering freshmen are expected to enroll in AE 100 in the fall of the first year. This optional course may be used to help meet free elective requirements.
- ² MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.
- ³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.
- ⁴ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is a liberal education elective.
- ⁵ STAT 400 may be substituted.
- ⁶ Sequence satisfies the General Education Advanced Composition requirement.

⁷ *Technical elective credits totaling twelve hours, selected from a departmentally approved list of Technical Electives (<http://aerospace.illinois.edu/undergraduate-programs/current-students/tech-electives>), satisfying these distribution requirements: (i) six hours of AE Technical Electives; (ii) six hours of AE Technical Electives or Non-AE Technical Electives.*

AE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AE>)

Courses

AE 100 Intro to Aerospace Engineering credit: 2 Hours.

Introduction to the Aerospace Engineering curriculum and career. Typical section topics include aircraft and rocket design and flight. Overviews of the topics are presented along with theory to be experimentally verified.

AE 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Undergraduate Open Seminar. Approved for Letter and S/U grading. May be repeated.

AE 202 Aerospace Flight Mechanics credit: 3 Hours.

Fundamental principles of aerospace flight mechanics applied to spacecraft and aircraft. Orbital mechanics, rocket propulsion, and dynamics and control applied to spacecraft design. Aerodynamics, maneuvering, stability and flight performance applied to aircraft design. MATLAB examples and assignments. Prerequisite: Credit or concurrent registration in TAM 212.

AE 298 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. See class schedule for topics and prerequisites. May be repeated if topics vary.

AE 302 Aerospace Flight Mechanics II credit: 3 Hours.

Fundamentals of aircraft and spacecraft dynamics and orbital mechanics; aircraft performance in various flight attitudes; aircraft stability and control; spacecraft attitude dynamics and control; the two-body problem of orbital mechanics; orbit transfer. Prerequisite: AE 352.

AE 311 Incompressible Flow credit: 3 Hours.

Equations of motion for incompressible flow, both inviscid and viscous; potential flow theory, inviscid airfoil theory: two- and three-dimensional, Navier-Stokes equations, laminar boundary layer and transition to turbulence. Prerequisite: Credit or concurrent registration in AE 202 and MATH 241.

AE 312 Compressible Flow credit: 3 Hours.

Dynamics of compressible fluid; conservation of mass, momentum, and energy; one-dimensional and quasi-one-dimensional flow; oblique shock waves & Prandtl-Meyer expansion fans; unsteady wave motion; linearized theory. Application to nozzles, diffusers, airfoils, shock tubes and other geometries. Prerequisite: AE 202 and MATH 285. Credit or concurrent registration in ME 300.

AE 321 Mechs of Aerospace Structures credit: 3 Hours.

Fundamental concepts in the linear theory of elasticity, including stress, strain, equilibrium, compatibility, material constitution and properties. Failure mechanisms and criteria. Application to plane stress-strain problems, beams in extension and bending, and shafts in torsion. Prerequisite: MATH 285 and TAM 210.

AE 323 Applied Aerospace Structures credit: 3 Hours.

Fundamental concepts of stress, strain, equilibrium, compatibility, material constitution and properties. Analysis of beams and shafts of monocoque and semi-monocoque construction. Energy methods. Prerequisite: AE 321, MATH 241, MATH 285, and TAM 210.

AE 352 Aerospace Dynamical Systems credit: 3 Hours.

Particle kinematics and dynamics; Lagrange's equations; vibration of multiple degree-of-freedom systems; rotational kinematics and dynamics of rigid bodies. Credit is not given for both AE 352 and TAM 412. Prerequisite: MATH 225, MATH 285, and TAM 212.

AE 353 Aerospace Control Systems credit: 3 Hours.

Modeling of linear dynamic systems; Laplace transform techniques; linear feedback control systems; stability criteria; design techniques. Credit is not given for both AE 353 and either GE 320 or ME 340. Prerequisite: MATH 225, MATH 285, and TAM 212.

AE 370 Aerospace Numerical Methods credit: 3 Hours.

Numerical methods used in aerospace engineering. Numerical integration, curve fitting, root finding, numerical solution of ODE, solution of linear systems of equations. Finite difference. Rayleigh-Ritz, and Finite element methods. Applications to simple structural mechanics and aerodynamics problems encountered in aerospace engineering. Prerequisite: Credit or concurrent registration in AE 311 or AE 312; credit or concurrent registration in AE 321 or AE 323.

AE 395 Honors Project credit: 1 to 4 Hours.

Special aerospace engineering project or reading course for James Scholars in engineering. Prerequisite: Consent of instructor.

AE 396 Honors Seminar credit: 1 to 4 Hours.

Special lecture sequences or discussion groups arranged each term to bring James Scholars in engineering into direct contact with the various aspects of engineering practices and philosophy. Prerequisite: Consent of instructor.

AE 397 Independent Study credit: 1 to 3 Hours.

Independent theoretical and experimental projects in aerospace engineering. May be repeated. Prerequisite: Consent of instructor.

AE 398 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. See class schedule for topics and prerequisites. May be repeated if topics vary.

AE 402 Orbital Mechanics credit: 3 or 4 Hours.

Analysis of orbits in an inverse-square gravitational field; elementary rocket dynamics, impulsive orbit transfer and rendezvous, and Lambert's Theorem with applications; patched-conic trajectories, planetary gravity-assist maneuvers, and linearized orbit theory with application to simplified analytical models; perturbations. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 202.

AE 403 Spacecraft Attitude Control credit: 3 or 4 Hours.

Theory and applications of spacecraft attitude dynamics and control; Euler angles, direction cosines, quaternions, and Gibbs-Rodrigues parameters; attitude sensors and control actuators; spin, three-axis active, reaction wheel, control moment gyro, and gravity gradient control systems; environmental effects. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 352 and AE 353.

AE 410 Computational Aerodynamics credit: 3 or 4 Hours.

Computational technologies as solution tools for various aerodynamic problems; modeling and solution of one- and two-dimensional, incompressible and compressible, steady and unsteady inviscid external flow fields. Computational laboratory for practical experience. Same as CSE 461. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 311; credit or concurrent enrollment in AE 312.

AE 412 Viscous Flow & Heat Transfer credit: 4 Hours.

Momentum and thermal transport in wall boundary-layer and free shear flows, solutions to the Navier-Stokes equations for heat conducting laminar and turbulent shear flows; similarity concepts; thermal boundary layers in ducts and high-speed aerodynamic boundary layers. Same as ME 411. 4 undergraduate hours. 4 graduate hours. Prerequisite: AE 311 or ME 310.

AE 416 Applied Aerodynamics credit: 3 or 4 Hours.

Two-dimensional and finite wing theory with emphasis on the mechanisms of lift and drag generation; Reynolds number and Mach number effects; drag analysis; high-lift wing systems; propeller and rotor aerodynamics; control surface design; application of V/STOL aerodynamics. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 311.

AE 419 Aircraft Flight Mechanics credit: 3 or 4 Hours.

Steady and quasi-steady aircraft flight performance; take-off and landing, climbing and diving, cruise, level turn, and energy methods; longitudinal, directional, and lateral static stability and control; longitudinal and lateral motion and dynamic stability. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 202 and AE 353.

AE 420 Finite Element Analysis credit: 3 or 4 Hours.

Same as CSE 451 and ME 471. See ME 471.

AE 427 Mechanics of Polymers credit: 3 Hours.

Same as MSE 454 and TAM 427. See TAM 427.

AE 428 Mechanics of Composites credit: 3 Hours.

Same as MSE 456 and TAM 428. See MSE 456.

AE 433 Aerospace Propulsion credit: 3 or 4 Hours.

Fundamentals of rocket and airbreathing jet propulsion devices electric propulsion; prediction of thrust, combustion reactions, specific fuel consumption, and operating performance; ramjets; turbojets; turbofans; turboprops; aerothermodynamics of inlets, combustors, and nozzles; compressors, turbines; component matching, fundamentals of electrothermal, electromagnetic elastostatic thrusters, and solar sails. 3 undergraduate hours. 4 graduate hours. Prerequisite: AE 312 and PHYS 212.

AE 434 Rocket Propulsion credit: 3 or 4 Hours.

Basic principles of chemical rocket propulsion and performance, rocket component design, liquid rockets, solid rocket motors, combustion processes, combustion instability. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 312 and AE 433.

AE 435 Electric Propulsion credit: 3 or 4 Hours.

Elements of electric propulsion as applied to near-earth and deep-space missions; impact on spacecraft design; physics of ionized gases; plasmadynamics; electrothermal, electromagnetic, and electrostatic acceleration of gases to high velocity; high-impulse thruster design and performance; the resistojet, arcjet, ion engine, Hall thruster, MPD arc thruster, and plasma gun. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 433.

AE 442 Aerospace Systems Design I credit: 3 Hours.

Principles of systems engineering as they apply to the design process for aerospace flight systems; general design methodology; application of these concepts to the initial sizing of both aircraft and spacecraft systems. Intensive technical writing. 3 undergraduate hours. No graduate credit. AE 442 and AE 443 taken in sequence fulfill the Advanced Composition Requirement. Prerequisite: Credit or concurrent registration in AE 311, AE 323, and AE 352.

AE 443 Aerospace Systems Design II credit: 3 Hours.

Continuation of AE 442. Conceptual design project of either an aircraft or spacecraft flight system to satisfy a given set of requirements. Project team organization. Emphasis on sizing, trade studies and design optimization, subsystem integration, and technical communication skills. 3 undergraduate hours. No graduate credit. To fulfill the Advanced Composition Requirement, credit must be earned for both AE 442 and AE 443. Prerequisite: AE 442.

This course satisfies the General Education Criteria for:
Advanced Composition

AE 451 Aeroelasticity credit: 3 or 4 Hours.

In-depth examination of aerodynamic and dynamic structural phenomena associated with flexible airplanes and missiles; divergence of linear and nonlinear elastic lifting surfaces; effect of elastic and inelastic deformations on lift distributions and stability; elastic flutter of straight and swept wings; equations of disturbed motion of elastic and inelastic aircraft; dynamic response to forces, gusts, and continuous atmospheric turbulence; creep divergence of lifting surfaces; flutter in the presence of creep; effect of temperature on inelastic divergence and flutter. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 352 or TAM 412; TAM 251.

AE 454 Systems Dynamics & Control credit: 3 or 4 Hours.

Examination of the common core of dynamics and control theory. Fundamental concepts of Lagrangian dynamics, state space representations, Hamiltonian and modern dynamics, stability theory, and control of dynamical systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: AE 353.

AE 456 Global Nav Satellite Systems credit: 4 Hours.

Same as ECE 456. See ECE 456.

AE 460 Aerodynamics & Propulsion Lab credit: 2 Hours.

Theory and application of experimental techniques in aerospace engineering with emphasis on fluid dynamic, aerodynamic, thermal, combustion, and propulsion phenomena. 2 undergraduate hours. No graduate credit. Prerequisite: AE 311; credit or concurrent registration in AE 433.

AE 461 Structures & Control Lab credit: 2 Hours.

Theory and application of experimental techniques in aerospace engineering with emphasis on structural mechanics, vibrations, dynamics, and control systems. 2 undergraduate hours. No graduate credit. Prerequisite: AE 321 and AE 352. Credit or concurrent registration in AE 323 and AE 353.

AE 468 Optical Remote Sensing credit: 3 Hours.

Same as ECE 468. See ECE 468.

AE 482 Introduction to Robotics credit: 4 Hours.

Same as ECE 470 and ME 445. See ECE 470.

AE 483 Unmanned Aerial Vehicle (UAV) Navigation and Control credit: 3 Hours.

Design, analysis, and application of decision algorithms to modern aerospace systems: global positioning systems, air traffic control systems, unmanned aerial vehicles, imaging and communication satellites, and planetary ground vehicles. 3 undergraduate hours. No graduate credit. Prerequisite: AE 202, AE 352, AE 353, AE 370, IE 300, and PHYS 212.

AE 497 Independent Study credit: 1 to 4 Hours.

Independent theoretical and experimental projects in aerospace engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

AE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in aerospace engineering intended to augment the existing curriculum. See Class Schedule or department course information for topics and prerequisite. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 undergraduate hours or 12 graduate hours.

Agricultural and Biological Engineering

Alan Hansen, Interim Head

338 Agricultural Engineering Sciences Building, 1304 West Pennsylvania Avenue, Urbana

PH: (217) 333-3570

<http://abe.illinois.edu>

The Department of Agricultural and Biological Engineering offers a four-year degree program in Agricultural and Biological Engineering through the College of Engineering that is described below.

The Department also offers a five-year dual degree program through both the College of Engineering and the College of ACES. Students who successfully complete this five-year academic program receive the Bachelor of Science in Agricultural and Biological Engineering degree from the College of Engineering as well as the Bachelor of Science in Agriculture degree with a major in Agricultural and Biological Engineering from the College of ACES. Both degree programs are joint between the College of Engineering and the College of ACES with students beginning as new freshmen in the College of ACES.

Curriculum in Agricultural and Biological Engineering

abe.illinois.edu/undergrad_programs (http://www.abe.illinois.edu/undergrad_programs)

Fax: (217) 244-0323

E-mail: abe@illinois.edu

For the Degree of Bachelor of Science in Agricultural and Biological Engineering

Agricultural and biological engineering is the application of mathematics, physical and biological science, and engineering to agriculture, food systems, energy, natural resources, the environment, and related biological systems. This ABET-accredited program has special emphasis on environmental protection and the biological interface of plants, animals, soils, and microorganisms with the design and performance of environments, machines, mechanisms, processes, and structures.

Concentrations

The agricultural and biological engineering program provides two concentrations: Agricultural Engineering and Biological Engineering. Each concentration has specific areas of specialization related to career interest.

Agricultural Engineering Concentration

The B.S. Degree in Agricultural and Biological Engineering provides a concentration in Agricultural Engineering. This concentration includes the integration of physical and biological sciences as a foundation for

engineering applications in agriculture, food systems, energy, natural resources, the environment, and related biological systems. Students pursuing this concentration are involved in the design of systems for renewable energy, off-road equipment, water quality, and the utilization and protection of soil and water resources. Important design constraints are economics, conservation of materials and energy, safety, and environmental quality. Within this concentration, students are strongly encouraged to select a set of coherent courses that constitutes a specialization in their area of career interest either from the following list or a customized area chosen in consultation with an advisor:

- Renewable Energy Systems
- Off-Road Equipment Engineering
- Soil and Water Resources Engineering

Biological Engineering Concentration

The B.S. Degree in Agricultural and Biological Engineering also provides a concentration in Biological Engineering. This concentration integrates biology and engineering to provide solutions to problems related to living systems (plants, animals, and microorganisms). Engineered biological systems vary widely in scale. At the molecular level, nanometer-scale devices consist of a few biomolecules inside individual cells. At the other extreme, regionally-scaled complex ecosystems depend upon multiple species of interacting living organisms. Such systems are becoming increasingly important in areas such as bioenergy, bioprocessing, nanotechnology, biosensing, bio-informatics, and bioenvironment. Within this concentration, students are strongly encouraged to select a set of coherent courses that constitutes a specialization in their area of career interest either from the following list or a customized area chosen in consultation with an advisor:

- Bioenvironmental Engineering
- Ecological Engineering
- Food and Bioprocess Engineering
- Nanoscale Biological Engineering

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation. The curriculum is organized as follows.

Orientation and Professional Development

These courses introduce the opportunities and resources that your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ABE 100	Intro Agric & Biological Engrg ¹	1
ENG 100	Engineering Orientation ¹	0
Total Hours		1

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1

CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ¹	4
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
Total Hours		34

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Agricultural and Biological Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of agricultural and biological engineering and the background for the technical courses and electives in each student's concentration.

For Both Concentrations

Code	Title	Hours
ABE 141	ABE Principles: Biological	2
ABE 223	ABE Principles: Machine Syst	2
ABE 224	ABE Principles: Soil & Water	2
ABE 225	ABE Principles: Bioenvironment	2
ABE 226	ABE Principles: Bioprocessing	2
ABE 430	Project Management	2
ABE 469	Industry-Linked Design Project	4
CS 101	Intro Computing: Engrg & Sci	3
ECE 205	Elec & Electronic Circuits	3
SE 101	Engineering Graphics & Design	3
TAM 210	Introduction to Statics ¹	2
or TAM 211	Statics	
TAM 212	Introductory Dynamics	3
Total Hours		30

Subtotal for both concentrations. See additional technical core requirements below.

¹ The extra hour of credit for this course may be used to help meet free elective requirements.

For the Agricultural Engineering Concentration

Code	Title	Hours
Select one of the following:		3
CEE 202	Engineering Risk & Uncertainty	
IE 300	Analysis of Data	
ABE 440	Applied Statistical Methods I ¹	
STAT 400	Statistics and Probability I ¹	
ECE 206	Elec & Electronic Circuits Lab	1
ME 300	Thermodynamics	3
TAM 251	Introductory Solid Mechanics	3
Select one of the following:		4

TAM 335	Introductory Fluid Mechanics	
CHBE 421	Momentum and Heat Transfer	
ME 310	Fundamentals of Fluid Dynamics	
Total Hours		14

Code	Title	Hours
Total for the Agricultural Engineering Concentration		44
Total Hours		44

¹ The extra hour of credit for this course may be used to help meet free elective requirements.

For the Biological Engineering Concentration

Code	Title	Hours
ABE 341	Transport Processes in ABE	3
CHBE 321	Thermodynamics	4
CHEM 232	Elementary Organic Chemistry I ¹	4
MCB 150	Molec & Cellular Basis of Life	4
Subtotal		14
Total Hours		44

Total for the Biological Engineering Concentration

¹ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.

Technical Electives

This elective course work must be completed to fulfill each Concentration. The subjects build upon the agricultural and biological engineering technical core.

For the Agricultural Engineering Concentration

Code	Title	Hours
Biological and natural sciences electives chosen from a departmentally approved list of Biological and Natural Sciences Electives – Group A ¹		6
Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives – Group A, and the remainder approved Other Technical Electives – Group A. ^{2,3}		15
Total Hours		21

¹ Biological and Natural Sciences Electives - Group A (<http://abe.illinois.edu/undergraduate/agricultural>)

² Agricultural and Biological Engineering Technical Electives - Group A (<http://abe.illinois.edu/undergraduate/agricultural>)

³ Other Technical Electives - Group A (<http://abe.illinois.edu/undergraduate/agricultural>)

For the Biological Engineering Concentration

Code	Title	Hours
Biological and natural sciences electives chosen from a departmentally approved list of Biological and Natural Sciences Electives – Group B ¹		6

Technical electives chosen in consultation with an advisor. At least 8 hours must be Agricultural and Biological Engineering Technical Electives - Group B, and the remainder approved Other Technical Electives – Group B ^{2,3}	15
Total Hours	21

¹ *Biological and Natural Science Electives - Group B* (<http://abe.illinois.edu/undergraduate/biological>)

² *Agricultural and Biological Engineering Technical Electives - Group B* (<http://abe.illinois.edu/undergraduate/biological>)

³ *Other Technical Electives - Group B* (<http://abe.illinois.edu/undergraduate/biological>)

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 103	Macroeconomic Principles ¹	3
	Electives from the campus General Education Social and Behavioral Sciences list.	3
	Electives from the campus General Education Humanities and the Arts list.	6
	Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
Total Hours		18

¹ *ECON 102 or ACE 100 may be substituted by petition.*

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
	Advanced Composition (satisfied by completing ABE 469 in the Agricultural and Biological Engineering Technical Core)	
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Undergrad+Advising+Home>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising website, so that there are at least 128 credit hours earned toward the degree. ¹	6

¹ *College of Engineering Advising Website* (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Undergrad+Advising+Home>)

Suggested Sequence

The schedule that follows for each concentration is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken. Refer to the appropriate sequence below for each concentration.

For the Agricultural Engineering Concentration

First Year

First Semester		Hours
ABE 100	Intro Agric Biological Engrg	1
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
ENG 100	Engineering Orientation	0
SE 101	Engineering Graphics Design	3
MATH 221	² Calculus I	4
	Liberal education elective ^{3,4}	3
Semester Hours		15

Second Semester

CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 231	Calculus II	3
ABE 141	ABE Principles: Biological	2
PHYS 211	University Physics: Mechanics	4
RHET 105	Writing and Research	3-4
	or SE 101 ¹	
Semester Hours		16-17

Second Year

First Semester

ABE 223	ABE Principles: Machine Syst	2
CS 101	Intro Computing: Engrg Sci	3
MATH 241	Calculus III	4
PHYS 212	University Physics: Elec Mag	4
TAM 210	Introduction to Statics	2
	or 211 ⁵	
ABE 224	ABE Principles: Soil Water	2
Semester Hours		17

Second Semester

ABE 225	ABE Principles: Bioenvironment	2
ABE 226	ABE Principles: Bioprocessing	2
MATH 225	Introductory Matrix Theory	2
MATH 285	Intro Differential Equations	3
PHYS 213	Univ Physics: Thermal Physics	2

TAM 212	Introductory Dynamics	3
	Biological and natural sciences elective ^{6a}	3
Semester Hours		17

Third Year**First Semester**

CEE 202,	Engineering Risk Uncertainty	3
IE 300,		
ABE 440,		
or STAT		
400 ⁵		

ECE 206	Elec Electronic Circuits Lab	1
TAM 251	Introductory Solid Mechanics	3
	Agricultural and biological engineering technical elective ^{7a}	3
	Liberal education elective ^{3,4}	3
ECE 205	Elec Electronic Circuits	3

Semester Hours		16
----------------	--	----

Second Semester

ECON 103 ³	Macroeconomic Principles	3
ME 300	Thermodynamics	3
TAM 335,	Introductory Fluid Mechanics	4
CHBE 421,		
or ME 310		
	Agricultural and biological engineering technical elective ^{7a}	3
	Liberal education elective ^{3,4}	3

Semester Hours		16
----------------	--	----

Fourth Year**First Semester**

ABE 430	Project Management	2
	Agricultural and biological engineering technical elective ^{7a}	3
	Other technical elective ^{7a}	3
	Liberal education elective ^{3,4}	3
	Free elective ⁴	3

Semester Hours		14
----------------	--	----

Second Semester

ABE 469 ⁸	Industry-Linked Design Project	4
	Biological and natural sciences elective ^{6a}	3
	Other technical elective ^{7a}	3
	Liberal education elective ^{3,4}	3
	Free elective ⁴	3

Semester Hours		16
----------------	--	----

Total Hours:		127-128
--------------	--	---------

For the Biological Engineering Concentration**First Year****First Semester**

	Hours	
ABE 100	Intro Agric Biological Engrg	1
CHEM 102	General Chemistry I	3
SE 101	Engineering Graphics Design	3
MATH 221 ²	Calculus I	4
	Liberal education elective ^{3,4}	3
CHEM 103	General Chemistry Lab I	1
ENG 100	Engineering Orientation	0
Semester Hours		15

Second Semester

MATH 231	Calculus II	3
PHYS 211	University Physics: Mechanics	4
CHEM 104	General Chemistry II	3
RHET 105	Writing and Research	4-3
or SE		
101 ¹		
CHEM 105	General Chemistry Lab II	1
ABE 141	ABE Principles: Biological	2
Semester Hours		17-16

Second Year**First Semester**

ABE 223	ABE Principles: Machine Syst	2
MATH 241	Calculus III	4
PHYS 212	University Physics: Elec Mag	4
TAM 210	Introduction to Statics	2
or 211 ⁵		
ABE 224	ABE Principles: Soil Water	2
CS 101	Intro Computing: Engrg Sci	3

Semester Hours		17
----------------	--	----

Second Semester

ABE 225	ABE Principles: Bioenvironment	2
ABE 226	ABE Principles: Bioprocessing	2
MATH 225	Introductory Matrix Theory	2
MATH 285	Intro Differential Equations	3
CHEM 232 ⁹	Elementary Organic Chemistry I	4
PHYS 213	Univ Physics: Thermal Physics	2
TAM 212	Introductory Dynamics	3
Semester Hours		18

Third Year**First Semester**

ABE 341	Transport Processes in ABE	3
	Agricultural and biological engineering technical elective ^{7b}	3
	Liberal education elective ^{3,4}	3
ECE 205	Elec Electronic Circuits	3
MCB 150	Molec Cellular Basis of Life	4

Semester Hours		16
----------------	--	----

Second Semester

CHBE 321	Thermodynamics	4
ECON 103 ³	Macroeconomic Principles	3
	Agricultural and biological engineering technical elective ^{7b}	3
	Biological and natural sciences elective ^{6b}	3
	Liberal education elective ^{3,4}	3

Semester Hours		16
----------------	--	----

Fourth Year**First Semester**

ABE 430	Project Management	2
	Agricultural and biological engineering technical elective ^{7b}	3
	Other technical elective ^{7b}	3
	Liberal education elective ^{3,4}	3
	Free elective ⁴	3

Semester Hours		14
----------------	--	----

Second Semester

ABE 469 ⁸ Industry-Linked Design Project	4
Biological and natural sciences elective ^{6b}	3
Other technical elective ^{7b}	3
Liberal education elective ^{3,4}	3
Free elective ⁴	3
Semester Hours	16
Total Hours:	129-128

¹ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is SE 101. Students may take CMN 111 and CMN 112 in place of RHET 105.

² MATH 220—Calculus may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 103 (or ECON 102 or ACE 100 by permission) must be one of the social & behavioral sciences courses, recommended to be taken early. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ One elective course must satisfy the General Education Advanced Composition requirement.

⁵ The extra hour of credit for this course may be used to help meet free elective requirements.

^{6a} Students in the Agricultural Engineering concentration must complete 6 hours from the approved list of Biological and Natural Sciences Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>).

^{6b} Students in the Biological Engineering concentration must complete 6 hours from the approved list of Biological and Natural Sciences Electives – Group B (<http://abe.illinois.edu/undergraduate/biological>).

^{7a} Students in the Agricultural Engineering concentration must complete 15 hours of technical electives chosen in consultation with an advisor. At least 8 hours must be from the approved list of Agricultural Engineering or Biological Engineering Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>), and the remainder selected from the approved list of Other Technical Electives – Group A (<http://abe.illinois.edu/undergraduate/agricultural>).

^{7b} Students in the Biological Engineering concentration must complete 15 hours of technical electives chosen in consultation with an advisor. At least 8 hours must be from the approved list of Agricultural Engineering or Biological Engineering Technical Electives – Group B (<http://abe.illinois.edu/undergraduate/biological>), and the remainder selected from the approved list of Other Technical Electives – Group B (<http://abe.illinois.edu/undergraduate/biological>).

⁸ Satisfies the General Education Advanced Composition requirement.

⁹ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.

ABE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ABE>)

Courses**ABE 100 Intro Agric & Biological Engrg credit: 1 Hour.**

Introduction to the engineering profession with career opportunities in the agricultural and biological engineering discipline. Concepts necessary for becoming a successful engineer including time management, design concepts, ethics, and teambuilding. Familiarization with laboratories, computer facilities, internships, and other opportunities. Team design experience. Emphasis on technical communication and problem-solving skills as well as career planning.

ABE 141 ABE Principles: Biological credit: 2 Hours.

Principles of biology relevant to agriculture, food, energy, and the environment, including microbiology, biochemistry, genetics, plant and animal systems, and ecosystems. Case studies of engineering applications where these biological principles have been taken into account or leveraged for the purpose of design.

ABE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours.

ABE 223 ABE Principles: Machine Syst credit: 2 Hours.

Machinery systems for off-road applications: internal combustion engines; fluid power; tractors, and traction; chemical application; grain harvesting. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 224 ABE Principles: Soil & Water credit: 2 Hours.

Engineering principles and methods of design and management of natural resources and environmental systems; watershed and hydrologic cycle; infiltration and surveying; runoff and erosion; water quality; non-point source pollution. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 225 ABE Principles: Bioenvironment credit: 2 Hours.

Principles of environmental control for biological structures: psychrometrics; mass and heat transfer through buildings; ventilation requirements. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 226 ABE Principles: Bioprocessing credit: 2 Hours.

Principles of bioprocess engineering applied to food and agricultural products: material balances; fluid flow; heat and mass transfers; drying; evaporation; fermentation; distillation; process simulation. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 341 Transport Processes in ABE credit: 3 Hours.

Principles of transport processes involving momentum, heat, and mass as applied to biological systems in agriculture, food, energy, and the environment. Credit is not given for both ABE 341 and CHBE 421. Prerequisite: ABE 223, ABE 224, ABE 225, ABE 226, and PHYS 213.

ABE 361 Off-Road Machine Design credit: 3 Hours.

Design and development concepts of agricultural and industrial machines; analysis and synthesis of tillage, planting, harvesting, chemical application, material handling mechanisms, and precision farming tools. Prerequisite: ABE 223 and TAM 212.

ABE 397 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 398 Special Topics credit: 1 to 3 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate term if topics vary to a maximum of 12 hours.

ABE 425 Engrg Measurement Systems credit: 4 Hours.

Principles of instrumentation systems, including sensing, signal conditioning, computerized data acquisition, test design, data analysis and synthesis. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 425 and ME 360. Prerequisite: ECE 205.

ABE 430 Project Management credit: 2 Hours.

Engineering team effectiveness; project definition; assessing related technologies; marketing and business planning related to engineering; budgeting and financial analyses of engineering projects; safety, ethics and environmental considerations; intellectual property; engineering proposal presentation. Same as TSM 430. 2 undergraduate hours. 2 graduate hours.

ABE 436 Renewable Energy Systems credit: 3 or 4 Hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Renewable energy's role in reducing air pollution and global climate change. Capstone project to design a system for converting renewable energy into thermal or electrical energy. 3 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 436 and TSM 438. Prerequisite: PHYS 211.

ABE 440 Applied Statistical Methods I credit: 4 Hours.

Same as ANSC 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

ABE 445 Statistical Methods credit: 4 Hours.

Same as ANSC 445 and NRES 445. See ANSC 445.

ABE 446 Biological Nanoengineering credit: 3 or 4 Hours.

Nanodevice design through organization of functional biological components; bio-molecular function and bioconjugation techniques in nanotechnology; modulation of biological systems using nanotechnology; issues related to applying biological nanotechnology in food energy, health, and the environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: MCB 150.

ABE 454 Environmental Soil Physics credit: 3 Hours.

Provides the theoretical basis for understanding and quantifying the physical, hydrological, geotechnical, and thermal properties of soil in relation to environmental processes. Topics include general soil properties as a porous media, particle size, soil structure and aggregation, water retention and potential, flow in saturated soil, flow in an unsaturated soil, soil temperature and heat flow, soil mechanics, infiltration, and soil-plant-water relations. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335 or NRES 201 or consent of instructor.

ABE 455 Erosion and Sediment Control credit: 2 Hours.

Processes, estimation, and control of soil erosion by water, wind and resultant sedimentation. Upland, in-channel, urban, agricultural, disturbed (both military training and mining), and forested environments. Capstone experience in site planning and design. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 350 or NRES 401; CEE 380 or NRES 201.

ABE 456 Land & Water Resources Engrg credit: 3 or 4 Hours.

Hydrology, hydraulics, design, construction and cost estimating of structures for the conservation and quality control of soil and water resources; relationship of topography, soils, crops, climate, and cultural practices in conservation and quality control of soil and water for agriculture. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 457 NPS Pollution Processes credit: 2 Hours.

Principles, concepts, and analysis of processes for nonpoint source pollution involving sediment, inorganic and organic chemicals, and microbial pathogens; hydrologic and pollutant interactions, pollutant fate and transport processes from storm water runoff and percolation; impact of pollutant transport on receiving water and ecosystems. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 224 or CEE 350.

ABE 458 NPS Pollution Modeling credit: 2 Hours.

Concepts, principles, and application of modeling for assessment and management of agricultural nonpoint source pollution. Modeling of agroecosystems and land use impacts on hydrologic and water quality response of upland catchments. Model selection, calibration, validation, and application for comparative analysis. Case studies in current watershed management issues, with a focus on agricultural waste and nutrient management, using existing field and watershed nonpoint source pollution models. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 457.

ABE 459 Drainage and Water Management credit: 3 or 4 Hours.

Design, construction, performance, and maintenance of agricultural drainage systems to meet both production and water quality objectives. Modeling drainage systems. Principles of conservation drainage. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 463 Electrohydraulic Systems credit: 3 Hours.

Engineering principles of electrohydraulic control systems related to off-road vehicles. Basics of fluid power systems, concepts of electrohydraulic systems and controls, analysis and design of electrohydraulic control systems, and applications of electrohydraulic control. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 110 or both ECE 205 and ECE 206; ME 310 or TAM 335.

ABE 466 Engineering Off-Road Vehicles credit: 3 Hours.

Design and application of off-road vehicles for farm and construction use; thermodynamics of engines; measurement of power and efficiencies; power transmission and traction; chassis mechanics; operator environment. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ABE 466 and TSM 464. Prerequisite: ME 300.

ABE 469 Industry-Linked Design Project credit: 4 Hours.

Industry-submitted and sponsored design projects which utilize principles of design, engineering analysis and functional operation of engineering systems. Design teams develop concepts, evaluate alternatives, model and analyze solutions, and build and test a final product. Emphases on communication skills, technical writing, and interaction with industry representatives. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of ABE 361, CHBE 421, TAM 335; or credit or concurrent registration in ME 370.

This course satisfies the General Education Criteria for:
Advanced Composition

ABE 474 Indoor Environmental Control credit: 3 or 4 Hours.

Analysis of indoor environments and relationship with humans, animals and plants. Interactions between facilities operation and both human comfort and animal plant production. Psychrometrics, occupant health and comfort, structural heat transfer, heating and cooling loads, and energy and mass balances as related to indoor environment, air properties, and ventilation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 335, and ME 300 or CHBE 321, or consent of instructor.

ABE 476 Indoor Air Quality Engineering credit: 4 Hours.

Principles and applications of indoor air quality. Particle mechanics, gas kinetics, air quality sampling principles and techniques, air cleaning technologies such as filters, cyclones, electrostatic precipitation for indoor environments; ventilation effectiveness for pollutant control. Research or design project. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213, MATH 285, and TAM 335.

ABE 482 Package Engineering credit: 3 Hours.

Same as FSHN 469. See FSHN 469.

ABE 483 Engrg Properties of Food Matls credit: 3 Hours.

Physical properties of foods and biological materials; properties relating to equipment design and the sensing and control of food processes; thermal, electromagnetic radiation, rheological, and other mechanical properties. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 251; either CHBE 421 or both ME 330 and TAM 335.

ABE 488 Bioprocessing Biomass for Fuel credit: 3 Hours.

Engineering and scientific principles governing bioprocessing of biomass for production of ethanol and other fermentation products. Process unit operations; conventional and alternative feed stock materials; recovery of value-added coproducts and other variables involved in producing fuel ethanol; process simulation; economic analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 321 and TAM 335.

ABE 497 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 16 hours.

Bioengineering

Rashid Bashir

1270 Digital Computer Lab, 1304 West Springfield Avenue

PH: (217) 333-1867

<http://bioengineering.illinois.edu>

For the Degree of Bachelor of Science in Bioengineering

Bioengineers use tools from biology, chemistry, physics and math to solve engineering problems that arise in biological systems related to biomaterials, biomechanics and prosthetics, tissue engineering, molecular modeling, imaging, bioinformatics, nanomedicine, synthetic biology, and drug delivery. The goal of research and education in bioengineering is to advance fundamental understanding of how human

biological systems function, and to develop effective technology-based solutions to the wide spectrum of societal needs in human development and disease diagnosis, treatment, and prevention.

The Bioengineering department (BIOE) aims to graduate students who:

- Enter into industry jobs in prominent companies as engineers who work in the areas of:
 - Medical device design
 - Manufacturing
 - Quality control
 - Marketing
 - And work toward the advancement of medicine
- Pursue graduate studies in bioengineering-related fields such as:
 - Imaging and Sensing
 - Therapeutics
 - Tissue Engineering
 - Computational and Systems Biology
 - Biomechanics
- Broaden their education by attending professional school in areas of medicine, law, and business
- Maintain professional development through societal memberships and industry workshops

The curriculum includes integration of principles of biology and engineering in coursework such as biomechanics, modeling of human physiology, bioinstrumentation, and cell and tissue engineering. The curriculum is project-based and has a strong emphasis on systems-thinking as an approach to large-scale bioengineering problems. During the first and second years, students take fundamental courses introducing them to bioengineering as a field and introducing clinically relevant projects as learning experiences. The program also features hands-on laboratory courses for real-world experience throughout the curriculum. The final two years allow students to focus on a particular track of Bioengineering for further study. A year-long senior capstone design course provides experience in applying engineering fundamentals to biological problems submitted by faculty, clinicians, and industrial firms.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Undergrad+Advising+Home>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
BIOE 199	Undergraduate Open Seminar	1
ENG 100	Engineering Orientation	0

BIOE 120	Introduction to Bioengineering	1
Total Hours		2

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
Total Hours		30

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Bioengineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of bioengineering.

Code	Title	Hours
BIOE 201	Conservation Principles Bioeng	3
BIOE 202	Cell & Tissue Engineering Lab	2
BIOE 205	Signals & Systems in Bioengr	3
BIOE 206	Cellular Bioengineering	3
BIOE 220	Bioenergetics	4
BIOE 302	Modeling Human Physiology	3
BIOE 298	Special Topics (Analytical Tools for BIOE)	3
BIOE 303	Quantitative Physiology Lab	2
BIOE 310	Comp Tools Bio Data	3
BIOE 360	Transport & Flow in Bioengr	3
BIOE 414	Biomedical Instrumentation	3
BIOE 415	Biomedical Instrumentation Lab	2
BIOE 420	Intro Bio Control Systems	3
BIOE 435	Senior Design I	2
BIOE 436	Senior Design II	2
BIOE 476	Tissue Engineering	3
CHEM 232	Elementary Organic Chemistry I ¹	3
CS 101	Intro Computing: Engrg & Sci	3
MCB 150	Molec & Cellular Basis of Life	4
Total Hours		54

¹ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.

Track Electives

Students must complete 15 hours of study which show coherence, focus, and purpose within a bioengineering context. Students may choose from among the following pre-approved tracks:

- Biomechanics
- Cell and Tissue Engineering
- Computational and Systems Biology
- Imaging and Sensing
- Therapeutics Engineering

Alternately a student may devise a special track and set of courses which must be approved by the Bioengineering Department. In either case, overage hours in required courses may be counted toward the 15-hour minimum.

Code	Title	Hours
Track electives selected from a departmentally approved list of track elective courses. ¹		15

¹ List of track elective courses. (<http://bioengineering.illinois.edu/undergraduate-programs/track-electives>)

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education Social and Behavioral Sciences list.		6
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition. May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/>)

wiki/display/ugadvise/Free+Electives?src=search), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.	6

¹ *College of Engineering Advising Website.* (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>)

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

Code	Title	Hours
First Semester		
ENG 100	Engineering Orientation	0
BIOE 199	Undergraduate Open Seminar	1
MATH 221	Calculus I	4
RHET 105	Writing and Research or MCB 150 ²	4
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
	Liberal education elective ³	3
Semester Hours		16

Second Semester

BIOE 120	Introduction to Bioengineering	1
MATH 231	Calculus II	3
MCB 150	Molec Cellular Basis of Life or RHET 105 ²	4
PHYS 211	University Physics: Mechanics	4
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
	Liberal education elective ³	3
Semester Hours		19

Second Year

Code	Title	Hours
First Semester		
BIOE 201	Conservation Principles Bioeng	3
BIOE 206	Cellular Bioengineering	3
MATH 241	Calculus III	4
PHYS 212	University Physics: Elec Mag	4
CS 101	Intro Computing: Engrg Sci	3
Semester Hours		17

Second Semester

BIOE 202	Cell Tissue Engineering Lab	2
BIOE 205	Signals Systems in Bioengrg	3

BIOE 298	Special Topics (Analytical Tools for BIOE)	3
CHEM 232	Elementary Organic Chemistry I	3
MATH 285	Intro Differential Equations	3
Semester Hours		14

Third Year

First Semester

BIOE 476	Tissue Engineering	3
BIOE 220	Bioenergetics	4
BIOE 302	Modeling Human Physiology	3
BIOE 303	Quantitative Physiology Lab	2
	Track elective ⁵	3
	Liberal education elective ³	3
Semester Hours		18

Second Semester

BIOE 310	Comp Tools Bio Data	3
BIOE 360	Transport Flow in Bioengrg	3
BIOE 414	Biomedical Instrumentation	3
BIOE 415	Biomedical Instrumentation Lab	2
	Track elective ⁵	3
	Liberal education elective ³	3
Semester Hours		17

Fourth Year

First Semester

BIOE 435	Senior Design I	2
	Track electives ⁵	6
	Liberal education elective ³	6
Semester Hours		14

Second Semester

BIOE 436	Senior Design II	2
BIOE 420	Intro Bio Control Systems	3
	Track elective ⁵	3
	Liberal education elective ³	3
	Free electives	3
Semester Hours		14

Total Hours: 129

¹ *MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.*

² *RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is MCB 150.*

- ³ *Liberal education electives* (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.
- ⁴ May be taken for 4 credit hours; the extra hour may be used to help meet free elective requirements.
- ⁵ To be selected from a departmentally approved list of track elective courses (<http://bioengineering.illinois.edu/undergraduate-programs/track-electives>) if a pre-approved track is chosen. Alternately a student may devise a special track which must be approved by the Bioengineering Department.

BIOE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOE>)

Courses

BIOE 100 Bioengineering Freshman Seminar credit: 0 Hours.

Seminar surveying a broad range of Bioengineering topics. Approved for S/U grading only. Prerequisite: Bioengineering Freshmen Only.

BIOE 120 Introduction to Bioengineering credit: 1 Hour.

Lectures and discussions of recent trends in bioengineering; topics typically include biological interaction with ultrasound and microwave radiation, modeling, instrumentation, biomaterials, biomechanics, biological heat and mass transfer, and medical imaging techniques.

BIOE 198 Special Topics credit: 1 to 3 Hours.

Subject offerings related to Bioengineering intended to augment the Bioengineering curriculum. Offerings will be at the freshman level. See class schedule or course information websites for topics and prerequisites. May be repeated if topics vary. Prerequisite: Majors only.

BIOE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

BIOE 200 Bioengineering Career Immersion credit: 1 Hour.

This course provides exposure to Bioengineering careers through experiences in medicine, industry, and research. Students will observe professional practices to facilitate problem-based discoveries and technology design. Prerequisite: BIOE 120. Majors only.

BIOE 201 Conservation Principles Bioeng credit: 3 Hours.

Material, energy, charge, and momentum balances in biological problems. Steady-state and transient conservation equations for mass, energy, charge, and momentum will be derived and applied to mathematically analyze physiological systems using basic mathematical principles, physical laws, stoichiometry, and thermodynamic properties. Prerequisite: CHEM 104, MCB 150, and PHYS 211.

BIOE 202 Cell & Tissue Engineering Lab credit: 2 Hours.

Principles of cell biology inherent in tissue engineering design. Lab experience in safely and skillfully manipulating cells of the four tissue types and performing various quantitative analyses on products produced by cells that have differentiated. Prerequisite: MCB 150, and credit or concurrent enrollment in BIOE 206.

BIOE 205 Signals & Systems in Bioengr credit: 3 Hours.

Introduction to signals and linear systems with examples from biology and medicine. Linear systems and mathematical models of systems, including differential equations, convolution, Laplace transforms, Fourier series and transforms, and discrete representations. Class examples and coursework apply general techniques to problems in biological signal analysis, including circuits, enzyme kinematics, and physiological system analysis. Use of Matlab and Simulink software to understand more complex systems. Prerequisite: CS 101, MATH 285, and PHYS 212.

BIOE 206 Cellular Bioengineering credit: 3 Hours.

Molecular and cellular biology focusing on instrumentation and measurement techniques: gene expression, translation, and regulation; cellular energetics and enzyme kinetics; membrane transport and cell signaling; cytoskeleton and the cell cycle; cell biology fundamentals emphasizing modern imaging and measurement systems to quantify cellular function. Credit is not given for both BIOE 206 and MCB 252. Prerequisite: MCB 150.

BIOE 220 Bioenergetics credit: 4 Hours.

An integrative view of functional organization and energy transfer in biological systems. Emphasis on dynamics and kinetics of quantum, sub-molecular, and molecular interactions for metabolism. Topics include biomolecules of life, laws of thermodynamics, enzyme kinetics, protein-ligand binding, DNA binding, and modeling of molecular systems. Credit is not given for both BIOE 220 and ME 300, PHYS 214, or CHBE 321. Prerequisites: BIOE 201 and BIOE 206.

BIOE 297 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 298 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 8 hours.

BIOE 301 Introductory Biomechanics credit: 3 Hours.

Structure and mechanics of biological systems. Statics, dynamics, stress-strain analysis, Newtonian mechanics, and continuum mechanics. Applications to bone, soft tissue, and cells. Prerequisite: PHYS 211.

BIOE 302 Modeling Human Physiology credit: 3 Hours.

Description, quantification, and modeling of human physiological systems, based on systems fundamentals. Components, relationships, and homeostatic controls of neural, musculoskeletal, respiratory, cardiovascular, endocrine, digestion, and renal-filtration systems. Application of mathematical modeling and MATLAB simulation to further understanding of the systems and relate physiological consequences to changes in environment or component function. Prerequisite: CS 101, BIOE 205, MATH 285, and MCB 252 or BIOE 206.

BIOE 303 Quantitative Physiology Lab credit: 2 Hours.

Experiments involving the modeling and measurement of animal and human physiology systems. Use of computer simulations to provide mathematical descriptions of physiology behavior. Calibration and validation of models through hands-on experiments. Focus on quantitative measurement of neural, cardiovascular, respiratory, muscular, and endocrine system functions. Prerequisite: BIOE 302.

BIOE 306 Biofabrication Lab credit: 3 Hours.

Experiments involving design of bioreactors and microfluidic systems, advanced cell culture, and quantitative analysis techniques such as polymerase chain reaction and atomic force microscopy. Laboratory techniques relating to current literature and state of the art in the field of bioengineering. Prerequisite: BIOE 202. Departmental approval required for non-majors.

BIOE 310 Comp Tools Bio Data credit: 3 Hours.

Fundamental and applied statistics, including probability distributions, parameter estimation, descriptive statistics, hypothesis testing, and linear regression. Statistical methods in genomics including sequence analysis, gene expression data analysis, human genomic variation, regulatory genomics, and cancer genomics. Credit is not given for both BIOE 310 and IE 300. Prerequisites: BIOE 205 and BIOE 206.

BIOE 360 Transport & Flow in Bioengr credit: 3 Hours.

Fundamentals of fluid dynamics and mass transport applied to analysis of biological systems. Quantitative understanding of microscopic to macroscopic phenomena in biological systems related to their sensing by imaging techniques. Molecular phenomena in both healthy tissue and disease using examples from cardiovascular problems and cancer using ultrasound, optical and MRI techniques. Credit is not given for both BIOE 360 and any of CHBE 421, CHBE 451, or TAM 335. Prerequisites: BIOE 201 and BIOE 301.

BIOE 380 Biomedical Imaging credit: 3 Hours.

Same as ECE 380. See ECE 380.

BIOE 397 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. May be repeated up to 8 hours in a term to a maximum of 12 total hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 8 hours.

BIOE 410 Computational Cancer Biology credit: 3 Hours.

Mathematical modeling of the process of carcinogenesis as somatic cell evolution. Focus on current research topics in cancer biology using data from next-generation sequencing technologies. Overview of database resources and algorithmic and modeling methods relating to biological problems. 3 undergraduate hours. No graduate credit. Prerequisite: BIOE 206, CS 101, MATH 285.

BIOE 414 Biomedical Instrumentation credit: 3 Hours.

Engineering aspects of the detection, acquisition, processing, and display of signals from living systems; biomedical sensors for measurements of biopotentials, ions and gases in aqueous solution, force, displacement, blood pressure, blood flow, heart sounds, respiration, and temperature; therapeutic and prosthetic devices; medical imaging instrumentation. Same as ECE 414. 3 undergraduate hours. 3 graduate hours. Prerequisite: BIOE 205, ECE 205 or ECE 210.

BIOE 415 Biomedical Instrumentation Lab credit: 2 Hours.

Laboratory to accompany BIOE 414. use of sensors and medical instrumentation for static and dynamic biological inputs. Measurement of biomedical signals. 2 undergraduate hours. 2 graduate hours. Same as ECE 415. Prerequisite: Credit or concurrent registration in BIOE 414.

BIOE 416 Biosensors credit: 3 Hours.

Same as ECE 416. See ECE 416.

BIOE 420 Intro Bio Control Systems credit: 3 Hours.

Systems engineering approach to modeling physiological systems to examine natural biological control systems, homeostasis, and control through external medical devices. Introduces open loop and closed loop feedback control; Laplace and Fourier analysis of system behavior; impulse and steady state responses; physiological modeling and system identification; and stability. Includes biological systems for endocrine function, muscle position, neuronal circuits, and cardiovascular function. Mathematical modeling, Matlab and Simulink simulation, and physiological measurements to relate control systems to maintenance of internal environment. 3 undergraduate hours. No graduate credit. Credit is not given for BIOE 420 if credit for AE 353, ECE 486, GE 320, or ME 340 has been earned. Prerequisites: BIOE 205, BIOE 302, BIOE 303, BIOE 414, BIOE 415.

BIOE 430 Intro Synthetic Biology credit: 3 or 4 Hours.

Introduction to the field of synthetic biology. Engineering applications of biomolecular systems and cellular capabilities for a variety of application biological background of gene regulation, experimental methods for circuit engineering, and mathematical basis for circuit modeling. Examples in biofuels, biomedicine, and other areas will be discussed. 3 undergraduate hours. 4 graduate hours. Prerequisite: BIOE 206 or MCB 252; and MATH 285.

BIOE 435 Senior Design I credit: 2 Hours.

Capstone bioengineering design activity to develop solutions to projects provided by academia, industry, or clinical settings, utilizing principles of design, engineering analysis, and functional operation of engineering systems. Concept-design, safety, human-factors, quality, and Six-Sigma considerations. Initial solution proposals meeting professional technical-writing and communication standards. Concluded in BIOE 436. 2 undergraduate hours. No graduate credit. Prerequisite: BIOE 301, BIOE 414, and BIOE 415.

BIOE 436 Senior Design II credit: 2 Hours.

Continuation of BIOE 435. Design teams finalize concepts, evaluate alternatives, model and analyze solutions, build and test a final product, and present the results professionally to project sponsors. 2 undergraduate hours. No graduate credit. Prerequisite: BIOE 435.

BIOE 461 Cellular Biomechanics credit: 4 Hours.

Same as TAM 461. See TAM 461.

BIOE 467 Biophotonics credit: 3 Hours.

Same as ECE 467. See ECE 467.

BIOE 473 Biomaterials Laboratory credit: 3 Hours.

Same as MSE 472. See MSE 472.

BIOE 474 Metabolic Engineering credit: 3 or 4 Hours.

Same as CHBE 474. See CHBE 474.

BIOE 476 Tissue Engineering credit: 3 Hours.

Tissue engineering therapies for cell-based, material-based, and therapeutic-based solutions. Stem cells, immunology, and clinical applications. 3 undergraduate hours. 3 graduate hours. Prerequisite: BIOE 301.

BIOE 479 Cancer Nanotechnology credit: 3 Hours.

Applications in Cancer and Mechanobiology will provide an introduction to basic concepts in applications of nanotechnology in mechanobiology and in cancer. This is a highly interdisciplinary field of research where knowledge from various disciplines need to be presented and integrated. The course will be a team taught course by faculty from Engineering and LAS. There will be 4 main sections of the course; (i) biological concepts and cancer biology, (ii) introduction to bottom nanotechnology and nanomedicine, (iii) Microfluidics, Lab on Chip, and Top Down Nanotechnology, and (iv) applications in cellular mechanics, i.e. mechanobiology and nanotechnology. The course will be targeted for first year graduate students and senior undergraduate students. 3 undergraduate hours. 3 graduate hours. Approved for letter and S/U grading. Prerequisite: BIOE 206, CHEM 232.

BIOE 480 Magnetic Resonance Imaging credit: 3 or 4 Hours.

Same as ECE 480. See ECE 480.

BIOE 481 Whole-Body Musculoskel Biomech credit: 3 or 4 Hours.

Same as ME 481. See ME 481.

BIOE 482 Musculoskel Tissue Mechanics credit: 3 Hours.

Same as ME 482. See ME 482.

BIOE 497 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours in a term to a maximum of 12 total hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours, but no more than 8 in any one term.

BIOE 499 Senior Thesis credit: 1 to 5 Hours.

Limited in general to seniors in the curriculum in bioengineering. Any others must have the consent of the head of the department. Each student taking the course must register in a minimum of 5 hours either in one term or divided over two terms. A maximum registration of 10 hours in two terms is permitted. 1 to 5 undergraduate hours. No graduate credit. May be repeated, if topics vary. Prerequisite: Majors only, senior standing.

Civil and Environmental Engineering

Benito Marinas

1114 Newmark Civil Engineering Laboratory, 205 North Mathews Avenue, Urbana

PH: (217) 333-8038

<http://cee.illinois.edu>

For the Degree of Bachelor of Science in Civil Engineering

Civil engineering is a profession that applies the basic principles of science in conjunction with mathematical and computational tools to solve problems associated with developing and sustaining civilized life on our planet. Civil engineering works are generally one-of-a-kind projects; they are often grand in scale; and they usually require cooperation among professionals of many different disciplines. The completion of a civil engineering project involves the solution of technical problems in which uncertainty of information and myriad non-technical factors

often play a significant role. Some of the most common examples of civil engineering works include bridges, buildings, dams, airports, highways, tunnels, and water distribution systems. Civil engineers are concerned with flood control, landslides, air and water pollution, and the design of facilities to withstand earthquakes and other natural hazards, in addition to protecting our environment for a sustainable future.

The civil engineering program comprises seven areas (construction engineering and management, construction materials engineering, environmental engineering, geotechnical engineering, environmental hydrology and hydraulics, structural engineering, and transportation engineering) and three interdisciplinary programs (sustainable and resilient infrastructure systems; energy, water, and environmental sustainability; and societal risk management). Although each area has its own special body of knowledge and engineering tools, they all rely on the same fundamental core principles. Civil engineering projects often draw expertise from many of these areas and programs.

CEE's Program Education Objectives are to educate CEE students to:

1. Successfully enter the civil and environmental engineering profession as practicing engineers and consultants with prominent companies and organizations in diverse areas that include structural, transportation, geotechnical, materials, environmental, and hydrologic engineering; construction management; or other related or emerging fields.
2. Pursue graduate education and research at major research universities in civil and environmental engineering, and related fields.
3. Pursue professional licensure.
4. Advance to leadership positions in the profession.
5. Engage in continued learning through professional development.
6. Participate in and contribute to professional societies and community services.

Program Review and Approval

To qualify for the degree of Bachelor of Science in Civil Engineering, each student's academic program plan must be reviewed by a standing committee of the faculty (the Program Review Committee) and approved by the Associate Head of Civil and Environmental Engineering in charge of undergraduate programs. This review and approval process ensures that individual programs satisfy the educational objectives and all of the requirements of the civil engineering program, that those programs do not abuse the substantial degree of flexibility that is present in the curriculum, and that the career interests of each student are cultivated and served.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as follows.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
CEE 195	About Civil Engineering	1
CEE 495	Professional Practice	0

ENG 100	Engineering Orientation ¹	0
Total Hours		1

¹ External transfer students take ENG 300.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ¹	4
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
Total Hours		34

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Civil Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of civil engineering.

Code	Title	Hours
CEE 201	Systems Engrg & Economics	3
CEE 202	Engineering Risk & Uncertainty	3
CS 101	Intro Computing: Engrg & Sci	3
SE 101	Engineering Graphics & Design	3
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
TAM 335	Introductory Fluid Mechanics	4
Total Hours		25

Science Elective

This elective allows the student to gain additional depth in science. The course should be selected according to the requirements and recommendations for the selected area of study, which is subject to approval by the faculty Program Review Committee.

Code	Title	Hours
	Science elective, selected in accord with recommendations for the chosen primary field in civil engineering as outlined in the Civil Engineering Undergraduate Handbook. ¹	3

¹ Civil Engineering Undergraduate Handbook (<http://cee.illinois.edu/handbooks>).

Civil Engineering Technical Electives

This course work is designed to give each student a broad background in the areas of civil engineering through the core courses and to allow each student to develop a focused program through advanced technical electives in chosen primary and secondary fields. There are seven areas of study which include:

- Construction Engineering and Management
- Construction Materials Engineering
- Environmental Engineering
- Environmental Hydrology and Hydraulic Engineering
- Geotechnical Engineering
- Structural Engineering
- Transportation Engineering

In addition to the areas of study, three interdisciplinary programs can be chosen by students. They include:

- Sustainable and Resilient Infrastructure Systems
- Energy-Water-Environment Sustainability
- Societal Risk Management

The fundamental principles of civil engineering design and the behavior of civil engineering systems are emphasized throughout the course work. The specific choices of courses in this category are made through the submission of the Plan of Study, which is subject to approval by the faculty Program Review Committee.

Code	Title	Hours
Civil engineering technical courses, selected as follows, to at least include:		34
Civil Engineering Core Courses		
The courses that are required and recommended for the primary and secondary fields are listed in the Civil Engineering Undergraduate Handbook. Select at least 5 courses from the following list: ¹		15-16
CEE 300	Behavior of Materials	4
CEE 310	Transportation Engineering	3
CEE 320	Construction Engineering	3
CEE 330	Environmental Engineering	3
CEE 340	Energy and Global Environment	3
CEE 350	Water Resources Engineering	3
CEE 360	Structural Engineering	3
CEE 380	Geotechnical Engineering	3
Primary Field Advanced Technical Electives. Select courses from approved lists for appropriate programs of study within the seven areas or three interdisciplinary programs of civil engineering. Design experience is distributed in 200-level, 300-level, and 400-level CEE courses including integrated design courses. Course lists can be found in the Civil Engineering Undergraduate Handbook. ¹		12-13
Secondary Field Advanced Technical Electives. Select courses from approved lists to complement the primary area and add breadth to the program of study. Course lists can be found in the Civil Engineering Undergraduate Handbook. ¹		6

¹ *Civil Engineering Undergraduate Handbook* (<http://cee.illinois.edu/handbooks/>).

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 102	Microeconomic Principles (Recommended)	3
or ECON 103	Macroeconomic Principles	
	Electives from the campus General Education Social and Behavioral Sciences list.	3
	Electives from the campus General Education Humanities and the Arts list.	6
	Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
BTW 261	Principles Tech Comm (satisfies the Advanced Composition requirement)	3
Total Hours		7

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.	6

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours	
CEE 195 ¹ About Civil Engineering	1	
CHEM 102 General Chemistry I	3	
CHEM 103 General Chemistry Lab I	1	
ENG 100 Engineering Orientation	0	
SE 101 Engineering Graphics Design	3	
MATH 221 ³ Calculus I	4	
Liberal education elective ⁴	3	
Semester Hours		15

Second Semester

CHEM 104 General Chemistry II	3	
CHEM 105 General Chemistry Lab II	1	
MATH 225 Introductory Matrix Theory	2	
MATH 231 Calculus II	3	
PHYS 211 University Physics: Mechanics	4	
RHET 105 Writing and Research or SE 101 ²	4-3	
Semester Hours		17-16

Second Year

First Semester

CEE 201 Systems Engrg Economics	3	
MATH 241 Calculus III	4	
PHYS 212 University Physics: Elec Mag	4	
TAM 211 Statics	3	
Free elective	3	
Semester Hours		17

Second Semester

CEE 202 Engineering Risk Uncertainty	3	
CS 101 Intro Computing: Engrg Sci	3	
PHYS 213 Univ Physics: Thermal Physics	2	
TAM 212 Introductory Dynamics	3	
TAM 251 Introductory Solid Mechanics	3	
Liberal education elective ⁴	3	
Semester Hours		17

Third Year

First Semester

MATH 285 Intro Differential Equations	3	
TAM 335 Introductory Fluid Mechanics	4	
Civil engineering technical courses ⁵	6	
Science elective ⁶	3	
Semester Hours		16

Second Semester

BTW 261 Principles Tech Comm	3	
Civil engineering technical courses ⁵	10	
Liberal education elective ⁴	3	
Semester Hours		16

Fourth Year

First Semester

CEE 495 Professional Practice	0
Civil engineering technical courses ⁵	9

Liberal education electives ⁴	6
Semester Hours	15
Second Semester	
Civil engineering technical courses ⁵	9
Liberal education elective ⁴	3
Free elective	3
Semester Hours	15
Total Hours:	128-127

¹ Offered in the fall semester should be taken in the first or second semester of enrollment in Civil Engineering.

² RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is SE 101.

³ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

⁴ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 102 or ECON 103 must be one of the social & behavioral sciences courses. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁵ Civil engineering technical courses are defined as core courses and advanced technical electives and must total 34 hours of credit. Five courses and a minimum of fifteen hours must be core courses as outlined in the Civil Engineering Undergraduate Handbook. (<http://cee.illinois.edu/handbooks>) Advanced technical electives are selected to correspond with chosen primary and secondary areas of emphasis in civil engineering as outlined in the Civil Engineering Undergraduate Handbook. (<http://cee.illinois.edu/handbooks>) A minimum of twelve and six hours must be taken for the primary and secondary areas, respectively.

⁶ The science elective is selected in accord with recommendations for the chosen primary area of emphasis in civil engineering as outlined in the Civil Engineering Undergraduate Handbook (<http://cee.illinois.edu/handbooks>).

CEE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CEE>)

Courses

CEE 195 About Civil Engineering credit: 1 Hour.

Civil engineering orientation including historical developments, education requirements, relation to science, professional practice, and specialties within the profession.

CEE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CEE 201 Systems Engrg & Economics credit: 3 Hours.

Introduction to the formulation and solution of civil engineering problems. Major topics: engineering economy, mathematical modeling, and optimization. Application of techniques, including classical optimization, linear and nonlinear programming, network theory, critical path methods, simulation, decision theory, and dynamic programming to a variety of civil engineering problems. Credit is not given for both CEE 201 and IE 310. Prerequisite: MATH 231; credit or concurrent registration in MATH 225.

CEE 202 Engineering Risk & Uncertainty credit: 3 Hours.

Identification and modeling of non-deterministic problems in civil engineering design and decision making. Development of stochastic concepts and simulation models, and their relevance to real design and decision problems in various areas of civil engineering. Credit is not given for both CEE 202 and IE 300. Prerequisite: Recommended: Credit or concurrent registration in MATH 241.

CEE 300 Behavior of Materials credit: 4 Hours.

Macroscopic mechanical behavior in terms of phenomena at the nanometer and micrometer levels for the three types of engineering materials (metals, ceramics, and polymers) with emphasis on specific materials used in civil engineering – steel, rocks, clay, portland cement concrete, asphaltic concrete, and wood. Same as TAM 324. Credit is not given for both CEE 300 and either ME 330 or MSE 280. Prerequisite: Completion of Composition I general education requirement; CHEM 104; TAM 251.

CEE 310 Transportation Engineering credit: 3 Hours.

Design, planning, operation, management, and maintenance of transportation systems; integrated multi-modal transportation systems (highways, air, rail, etc.); layout of highways, airports, and railroads with traffic flow models, capacity analysis, and safety. Design of facilities and systems with life cycle costing procedures and criteria for optimization. Prerequisite: TAM 251; credit or concurrent registration in CEE 202.

CEE 320 Construction Engineering credit: 3 Hours.

Construction engineering processes: contracting and bonding, planning and scheduling, estimating and project control, productivity models, and construction econometrics. Prerequisite: CEE 201; credit or concurrent registration in CS 101 and CEE 202.

CEE 330 Environmental Engineering credit: 3 Hours.

Sources, characteristics, transport, and effects of air and water contaminants; biological, chemical, and physical processes in water; atmospheric structure and composition; unit operations for air and water quality control; solid waste management; environmental quality standards. Prerequisite: CHEM 104.

CEE 340 Energy and Global Environment credit: 3 Hours.

Introduction to evaluating multiple impacts of engineering decisions. Topics include mass and chemical balances; effects of engineered systems on local and global environment, health, and risk; economic, consumer, and social considerations; provision of conventional and renewable energy; and future projections. Design projects emphasize making appropriate decisions by quantifying total impact and evaluating social environment. Approved for both letter and S/U grading. Prerequisite: PHYS 211; PHSY 213; CEE 201 or IE 310; CEE 202, IE 300, or STAT 200; or permission of instructor. CEE students only.

CEE 350 Water Resources Engineering credit: 3 Hours.

Quantitative aspects of water in the earth's environment and its engineering implications, including design and analysis of systems directly concerned with use and control of water; quantitative introduction to hydrology, hydraulic engineering, and water resources planning. Prerequisite: CEE 202; credit or concurrent registration in CEE 201.

CEE 360 Structural Engineering credit: 3 Hours.

Analysis, behavior, and design of trusses and framed structures under static loads; member forces in trusses, shear and moment diagrams, deflections, simple applications of the force method and slope-deflection; computer applications. Prerequisite: TAM 251.

CEE 380 Geotechnical Engineering credit: 3 Hours.

Classification of soils, compaction in the laboratory and in the field, soil exploration, boring and sampling, permeability of soils, one-dimensional settlement analyses, strength of soil, and foundations. Prerequisite: TAM 251.

CEE 398 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in civil and environmental engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. Approved for letter and S/U grading. May be repeated in the same or separate terms if topics vary.

CEE 401 Concrete Materials credit: 4 Hours.

Examination of the influence of constituent materials (cements, water, aggregates and admixtures) on the properties of fresh and hardened concrete, concrete mix design, handling and placement of concrete, and behavior of concrete under various types of loading and environment. Laboratory exercises utilize standard concrete test methods. Field trips are held during some scheduled laboratory sessions. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 300.

CEE 405 Asphalt Materials I credit: 3 or 4 Hours.

Properties and control testing of bituminous materials, aggregates for bituminous mixtures, and analysis and design of asphalt concrete and liquid asphalt cold mixtures; structural properties of bituminous mixes; surface treatment design; recycling of mixtures. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 406 Pavement Design I credit: 3 or 4 Hours.

Analysis, behavior, performance, and structural design of highway flexible and rigid pavements; climate factors, drainage, traffic loading analysis, and life cycle cost analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 407 Airport Design credit: 3 or 4 Hours.

Basic principles of airport facilities design to include aircraft operational characteristics, noise, site selection, land use compatibility, operational area, ground access and egress, terminals, ground service areas, airport capacity, and special types of airports. 3 undergraduate hours. 3 or 4 graduate hours.

CEE 408 Railroad Transportation Engrg credit: 3 or 4 Hours.

Principles and analysis of railroad transportation efficiency, economics, energy, and engineering; effect on production and markets. Railroad infrastructure; locomotive and rolling stock design, function, and operation. Computation of train speed, power, and acceleration requirements; railway traffic control and signaling. Quantitative analytical tools for rail-transportation decision-making and optimization. Field trip to observe railroad infrastructure, equipment and operations. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 409 Railroad Track Engineering credit: 3 or 4 Hours.

Railroad track engineering concepts including track component and system design, construction, evaluation, maintenance, load distribution, and wheel-rail interaction. Design and analysis tools for railroad track engineering and maintenance. Field trip to observe railroad track system and components. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 410 Railway Signaling & Control credit: 3 or 4 Hours.

Railway traffic control and signaling systems; train performance and scheduling tools; analysis of temporal and spatial separation of trains for safety and efficiency; train movement authority and operating rules, track circuit and wireless train position monitoring technology; interlocking design; railroad capacity modeling tools; economic analysis of traffic control system design, optimization, and selection. Field trip to observe signal system infrastructure and railway traffic operations control center. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 411 RR Project Design & Constr credit: 3 or 4 Hours.

Critical elements in the development and planning of railroad construction projects; project economic justification; route alternative analysis procedures; cost estimation; site civil design; computer-aided track design; surveying; construction management; construction procedures for typical railroad projects. Design project covering a typical railroad capital construction projects. Field trip to observe the construction of a railroad capital project. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 412 High-Speed Rail Engineering credit: 3 or 4 Hours.

Development, engineering, design and construction of high-speed rail (HSR) passenger transport systems with particular emphasis on the unique engineering elements of HSR technology. Key elements of HSR systems and subsystems including: core systems (trains, power, signal, communication and control), track system and civil infrastructure (earthwork, bridges, viaducts and tunnels). Also covered are basic design and construction of HSR stations and rolling stock maintenance facilities. 3 undergraduate hours. 4 graduate hours.

CEE 415 Geometric Design of Roads credit: 4 Hours.

Highway classification; analysis of factors in developing a transportation facility; highway geometrics design and safety standards; roadway design element; human factors in roadway design; roadway location principles; intersection, interchange, and ramp design; drainage factors. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 310.

CEE 416 Traffic Capacity Analysis credit: 3 or 4 Hours.

Fundamentals of traffic engineering; analysis of traffic stream characteristics; capacity of urban and rural highways; design and analysis of traffic signals and intersections; traffic control; traffic impact studies; traffic accidents. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 417 Urban Transportation Planning credit: 4 Hours.

Same as UP 430. See UP 430.

CEE 418 Public Transportation Systems credit: 3 or 4 Hours.

Transit systems basics, demand issues, design standards, economic and sustainability implications. Transit service planning for shuttle, corridor, and network systems, hybrid hierarchical systems, paratransit and demand-responsive services. Management of transit systems, fleet operations, and crew scheduling. Operational issues, vehicle movement, headway and schedule control. 3 undergraduate hours. 4 graduate hours. Prerequisite: CEE 310 or equivalent.

CEE 420 Construction Productivity credit: 3 or 4 Hours.

Application of scientific principles to the measurement and forecasting of productivity in construction engineering. Conceptual and mathematical formulation of labor, equipment, and material factors affecting productivity. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 421 Construction Planning credit: 3 or 4 Hours.

Project definition; scheduling and control models; material, labor, and equipment allocation; optimal schedules; project organization; documentation and reporting systems; management and control. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 422 Construction Cost Analysis credit: 3 or 4 Hours.

Application of scientific principles to costs and estimates of costs in construction engineering; concepts and statistical measurements of the factors involved in direct costs, general overhead costs, cost markups, and profits; the fundamentals of cost recording for construction cost accounts and cost controls. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 424 Sustainable Const Methods credit: 4 Hours.

Identification of cutting edge sustainable construction materials, technologies, and project management strategies for use in the construction industry and evaluation of their potential to reduce the negative environmental impacts of construction activity. Examination of the current LEED for New Construction rating system, and case study analysis of highly successful recent "green construction projects" through student team assignments and presentations. Preparation for the LEED Green Associate professional licensing exam. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 320; two of CEE 420, CEE 421, or CEE 422.

CEE 430 Ecological Quality Engineering credit: 2 Hours.

Characteristics of rivers and lakes which affect the management of domestic and industrial wastewaters; chemical hazards assessment, surveillance and biomonitoring, and review of regulations governing effluents. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 330.

CEE 432 Stream Ecology credit: 3 or 4 Hours.

Description of physical, chemical, and biological characteristics in streams and rivers including an integrated treatment of the environmental factors affecting the composition and distribution of biota; emphasizes the application of ecological principles in aquatic ecosystem protection and management. Same as IB 450. 3 undergraduate hours. 3 or 4 graduate hours.

CEE 433 Water Technology and Policy credit: 3 or 4 Hours.

This course will cover technical and social concepts of water and wastewater treatment; water resources; water law, policy, and economics; and water in integrated systems. Emphasis will be on the intersection between engineering and policy. Communication is an important element of this course: engineers will learn to "speak" policy via writing assignments, multimedia presentation, and briefings. Course activities include lecture, discussion, presentations, and field trips. 3 undergraduate hours. 4 graduate hours. Prerequisite: CEE 340 or CEE 350.

CEE 434 Environmental Systems I credit: 3 Hours.

Introduction to the concepts and applications of environmental systems analysis. Application of mathematical programming and modeling to the design, planning, and management of engineered environmental systems, regional environmental systems, and environmental policy. Economic analysis, including benefit-cost analysis and management strategies. Concepts of tradeoff, non-inferior sets, single- and multi-objective optimization. Practical application to case studies to convey an understanding of the complexity and data collection challenges of actual design practice. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 201 and CEE 330.

CEE 437 Water Quality Engineering credit: 3 Hours.

Fundamental theory underlying the unit processes utilized in the treatment of water for domestic and industrial usage, and in the treatment of domestic and industrial wastewaters. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 330; credit or concurrent registration in TAM 335.

CEE 438 Science & Environmental Policy credit: 3 Hours.

Environmental treaties, the role of science and scientists in managing the national and global environment, effective science communication, scientific assessments, and the use of quantitative tools to inform policy decisions. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 202 or IE 300, STAT 400, or equivalent introductory probability and statistics course. Senior and Graduate students.

CEE 440 Fate Cleanup Environ Pollutant credit: 4 Hours.

Investigation of the regulatory and technical issues affecting solid and hazardous waste management, with an emphasis on the principles governing the transport, fate, and remediation of solid and hazardous waste in the subsurface, including advection, dispersion, sorption, interphase mass transfer, and transformation reactions. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330.

CEE 442 Environmental Engineering Principles, Physical credit: 4 Hours.

Analysis of the physical principles which form the basis of many water and air quality-control operations; sedimentation, filtration, inertial separations, flocculation, mixing, and principles of reactor design; energy flows, thermal pollution, earth's energy balance. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 437.

CEE 443 Env Eng Principles, Chemical credit: 4 Hours.

Application of principles of chemical equilibrium and chemical kinetics to air and water quality. Thermodynamics, kinetics, acid-base chemistry, complexation, precipitation, dissolution, and oxidation-reduction. Applications. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 437.

CEE 444 Env Eng Principles, Biological credit: 4 Hours.

Application of principles of biochemistry and microbiology to air and water quality, wastes, and their engineering management; biological mediated changes in water and in domestic and industrial wastewater. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 443.

CEE 445 Air Quality Modeling credit: 4 Hours.

Practical and advanced approaches to pollutant transport and fate in the environment with emphasis on air pollution modeling, including aspects of pollutant dispersion, chemical transformation, and loss. Gaussian plume, chemical mass balance, chemical reaction, grid and trajectory models. Evaluation of models and the development of efficient air quality management strategies. Applications with use of regulatory USEPA air quality models. Same as ATMS 425. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330 and credit or concurrent registration in TAM 335; or ATMS 302.

CEE 446 Air Quality Engineering credit: 4 Hours.

Description and application of chemical and physical principles related to air pollutants, aerosol mechanics, attenuation of light in the atmosphere, air quality regulation, generation of air pollutants, methods to remove gaseous and particulate pollutants from gas streams, and atmospheric dispersion. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330; credit or concurrent registration in TAM 335.

CEE 447 Atmospheric Chemistry credit: 4 Hours.

Same as ATMS 420. See ATMS 420.

CEE 449 Environmental Engineering Lab credit: 3 Hours.

Traditional analysis tools and techniques in analysis, control, and design of natural and engineered environmental systems including air, water, wastewater, solid and hazardous waste, and ecological systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 437 or CEE 446.

CEE 450 Surface Hydrology credit: 3 Hours.

Descriptive and quantitative hydrology dealing with the distribution, circulation, and storage of water on the earth's surface; principles of hydrologic processes; methods of analysis and their applications to engineering and environmental problems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 350.

CEE 451 Environmental Fluid Mechanics credit: 3 Hours.

Incompressible fluid mechanics with particular emphasis on topics in analysis and applications in civil engineering areas; principles of continuity, momentum and energy, kinematics of flow and stream functions, potential flow, laminar motion, turbulence, and boundary-layer theory. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335.

CEE 452 Hydraulic Analysis and Design credit: 3 Hours.

Hydraulic analysis and design of engineering systems: closed conduits and pipe networks; hydraulic structures, including spillways, stilling basins, and embankment seepage; selection and installation of hydraulic machinery. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335.

CEE 453 Urban Hydrology and Hydraulics credit: 4 Hours.

Hydraulic analysis and design of urban, highway, airport, and small rural watershed drainage problems; discussion of overland and drainage channel flows; hydraulics of storm-drain systems and culverts; determination of design flow; runoff for highways, airports, and urban areas; design of drainage gutters, channels, sewer networks, and culverts. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 350.

CEE 457 Groundwater credit: 3 Hours.

Physical properties of groundwater and aquifers, principles and fundamental equations of porous media flow and mass transport, well hydraulics and pumping test analysis, role of groundwater in the hydrologic cycle, groundwater quality and contamination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 350 and TAM 335.

CEE 458 Water Resources Field Methods credit: 4 Hours.

Scientific principles of measurement technologies and protocols used for water-resources measurements and experimental design of field-scale water-resources and environmental studies. Planning field studies; instruments and protocols for surface-water, and water-quality sampling; description of data quality. One-half-day laboratory field trips to streamflow monitoring stations and groundwater monitoring wells nearby. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 350.

CEE 460 Steel Structures I credit: 3 Hours.

Introduction to the design of metal structures; behavior of members and their connections; theoretical, experimental, and practical bases for proportioning members and their connections. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 360.

CEE 461 Reinforced Concrete I credit: 3 Hours.

Strength, behavior, and design of reinforced concrete members subjected to moments, shear, and axial forces; emphasis on the influence of the material properties on behavior. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 360.

CEE 462 Steel Structures II credit: 3 or 4 Hours.

Metal members under combined loads; connections, welded and bolted; moment-resistant connections; plate girders, conventional behavior, and tension field action. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 460.

CEE 463 Reinforced Concrete II credit: 3 or 4 Hours.

Strength, behavior, and design of indeterminate reinforced concrete structures, with primary emphasis on slab systems; emphasis on the strength of slabs and on the available methods of design of slabs spanning in two directions, with or without supporting beams. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 465 Design of Structural Systems credit: 3 Hours.

Examination of the whole structural design process including definition of functional requirements, selection of structural scheme, formulation of design criteria, preliminary and computer-aided proportioning, and analysis of response, cost, and value. 3 undergraduate hours. No graduate credit. Prerequisite: Credit in either CEE 460 or CEE 461 with concurrent registration in the other.

CEE 467 Masonry Structures credit: 3 or 4 Hours.

Analysis, design, and construction of masonry structures. Mechanical properties of clay and concrete masonry units, mortar, and grout. Compressive, tensile, flexural, and shear behavior of masonry structural components. Strength and behavior of unreinforced bearing walls. Detailed design of reinforced masonry beams, columns, structural walls with and without openings, and complete lateral-force resisting building systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 468 Prestressed Concrete credit: 3 or 4 Hours.

Strength, behavior, and design of prestressed reinforced concrete members and structures, with primary emphasis on pretensioned, precast construction; emphasis on the necessary coordination between design and construction techniques in prestressing. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 469 Wood Structures credit: 3 or 4 Hours.

Mechanical properties of wood, stress grades, and working stresses; effects of strength-reducing characteristics, moisture content, and duration of loading and causes of wood deterioration; glued-laminated timber and plywood; behavior and design of connections, beams, and beam-columns; design of buildings and bridges; other structural applications: trusses, rigid frames, arches, and pole-type buildings; prismatic plates and hyperbolic paraboloids. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 460 or CEE 461.

CEE 470 Structural Analysis credit: 4 Hours.

Direct stiffness method of structural analysis; fundamentals and algorithms; numerical analysis of plane trusses, grids and frames; virtual work and energy principles; finite element method for plane stress and plane strain. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CEE 470 and ME 471. Prerequisite: CEE 360.

CEE 471 Structural Mechanics credit: 3 or 4 Hours.

Beams under lateral load and thrust; beams on elastic foundations; virtual work and energy principles; principles of solid mechanics, stress and strain in three dimensions; static stability theory; torsion; computational methods. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 and TAM 251.

CEE 472 Structural Dynamics I credit: 3 or 4 Hours.

Analysis of the dynamic response of structures and structural components to transient loads and foundation excitation; single-degree-of-freedom and multi-degree-of-freedom systems; response spectrum concepts; simple inelastic structural systems; systems with distributed mass and flexibility. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 360, MATH 285, and TAM 212.

CEE 480 Foundation Engineering credit: 3 Hours.

Analysis and design of foundations, bearing capacity and settlement of foundations; stability of excavations and slopes; ground movements due to construction; analysis and design of excavations, retaining walls, slopes, and underground structures in soil and rock. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 380.

CEE 483 Soil Mechanics and Behavior credit: 4 Hours.

Composition and structure of soil; water flow and hydraulic properties; stress in soil; compressibility behavior and properties of soils; consolidation and settlement analysis; shear strength of soils; compaction and unsaturated soils; experimental measurements. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 380.

CEE 484 Applied Soil Mechanics credit: 4 Hours.

Application of soil mechanics to earth pressures and retaining walls, stability of slopes, foundations for structures, excavations; construction considerations; instrumentation. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 483.

CEE 491 Decision and Risk Analysis credit: 3 or 4 Hours.

Development of modern statistical decision theory and risk analysis, and application of these concepts in civil engineering design and decision making; Bayesian statistical decision theory, decision tree, utility concepts, and multi-objective decision problems; modeling and analysis of uncertainties, practical risk evaluation, and formulation of risk-based design criteria, risk benefit trade-offs, and optimal decisions. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 202.

CEE 493 Sustainable Design Eng Tech credit: 4 Hours.

Quantitative sustainable design (QSD) and how to navigate engineering decision-making. Economic (life cycle costing, techno-economic assessment) and environmental (life cycle assessment, LCA) sustainability assessments, and how to link these tools to design decisions under uncertainty. Design of engineered technologies individually and in teams, with special attention to water infrastructure and bioenergy production. Semester-long design project that includes components from two of the following three CEE sub-disciplines: environmental, hydraulic, geotechnical. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 340 or Graduate Standing.

CEE 495 Professional Practice credit: 0 Hours.

Series of lectures by outstanding authorities on the practice of civil engineering and its relations to economics, sociology, and other fields of human endeavor. 0 undergraduate hours. 0 graduate hours. Approved for S/U grading only.

CEE 497 Independent Study credit: 1 to 16 Hours.

Individual investigations or studies of any phase of civil engineering selected by the student and approved by the department. 1 to 4 undergraduate hours. 1 to 16 graduate hours. May be repeated. Prerequisite: Consent of instructor.

CEE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in civil and environmental engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

Computer Science

<http://cs.illinois.edu>

Head of Department: Rob A. Rutenbar

Department Office: 2232 Siebel Center, 201 N. Goodwin Avenue, Urbana, (217) 333-3373

For the Degree of Bachelor of Science in Computer Science

The computer science curriculum provides both a broad and deep knowledge of the theory, design, and application of computer systems, with an emphasis on software systems. Because computing is ubiquitous, application areas involve virtually any field imaginable - from developing gene sequencing algorithms via techniques in computational biology, to designing user interfaces for mobile applications; from designing methods for high frequency trading, to creating computer generated graphics and special effects in the gaming industry; and from creating embedded real time systems to be deployed in medical devices, to analyzing social data from internet communication patterns. During the first two years the curriculum provides a strong foundation in mathematics, science, and computation. Advanced coursework in areas of the student's choosing follows in the second two years, which include either a senior thesis or a senior project. Graduates may go on to graduate study or leading positions in industry.

A combined B.S.-M.S. Computer Science degree program is available. Its admission and course requirements are described in the College of Engineering program information section (p. 140).

A Software Engineering Certificate (<https://wiki.cites.illinois.edu/wiki/display/undergradProg/Degree+Requirements/#DegreeRequirements-softengcert>) is also available to all students in the computer science curriculum interested in a career in software engineering. It provides the depth and breadth necessary for satisfying possible future software engineering accreditation requirements.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

A technical grade point average requirement for graduation applies to students in this curriculum. This rule is summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
CS 100	Freshman Orientation ^{1,2}	1
CS 210	Ethical & Professional Issues	2
ENG 100	Engineering Orientation ²	0
Total Hours		3

¹ This optional course is highly recommended and may be used to help meet free elective requirements.

² External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 415	Applied Linear Algebra	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
Science elective, from departmentally approved list		3
Total Hours		25

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Computer Science Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of computer science.

Code	Title	Hours
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
CS 361	Probability & Statistics for Computer Science	3
CS 357	Numerical Methods I	3
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
Total Hours		35

Technical Electives

These courses stress the rigorous analysis and design principles practiced in major subdisciplines of computer science. Students select

eight courses, at least six of which must be advanced CS courses. Three courses must be selected from one area of CS and at least one course should satisfy the *team project requirement*.

Code	Title	Hours
Technical electives to be chosen from departmentally approved list. Refer to department website.		24

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education Social and Behavioral Sciences list.		6
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition. May be satisfied by taking any course in either the liberal education or free elective categories which has the Advanced Composition designation.		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Free+Electives>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives.		19

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year			Liberal education elective ⁴	3
First Semester		Hours	Free electives	4
Science elective		3	Semester Hours	16
CS 100 ¹ Freshman Orientation		1	Second Semester	
CS 125 Intro to Computer Science		4	CS Technical electives ⁵	6
ENG 100 Engineering Orientation		0	Free electives	9
MATH 221 ² Calculus I		4	Semester Hours	15
RHET 105 Writing and Research (or Liberal education elective) ^{3,4}		3-4	Total Hours:	128
Semester Hours		15-16		
Second Semester				
CS 126 Software Design Studio		3		
CS 173 Discrete Structures		3		
MATH 231 Calculus II		3		
PHYS 211 University Physics: Mechanics		4		
RHET 105 Writing and Research (or Liberal education elective) ^{3,4}		4-3		
Semester Hours		17-16		
Second Year				
First Semester				
CS 225 Data Structures		4		
CS 233 Computer Architecture		4		
MATH 241 Calculus III		4		
PHYS 212 University Physics: Elec Mag		4		
Semester Hours		16		
Second Semester				
CS 241 System Programming		4		
CS 361 Probability Statistics for Computer Science		3		
MATH 415 Applied Linear Algebra		3		
Liberal education electives ⁴		6		
Semester Hours		16		
Third Year				
First Semester				
CS 357 Numerical Methods I		3		
CS 374 Introduction to Algorithms Models of Computation		4		
CS Technical elective ⁵		3		
Liberal education elective ⁴		3		
Free elective		3		
Semester Hours		16		
Second Semester				
CS Technical electives ⁵		9		
CS 210 Ethical Professional Issues		2		
Liberal education elective ⁴		3		
Free elective		3		
Semester Hours		17		
Fourth Year				
First Semester				
CS 421 Progrmg Languages Compilers		3		
CS Technical electives ⁵		6		

¹ This optional course is highly recommended for freshmen, who may use it to help meet free elective requirements.

² MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ RHET 105 should be taken in the first or second semester of the first year as authorized. The alternative is a social sciences or humanities elective.

⁴ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁵ To be chosen from a departmentally approved list, and to include at least three courses from a single focus area.

CS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CS>)

Courses

CS 100 Freshman Orientation credit: 1 Hour.

Introduction to Computer Science as a field and career for computer science majors. Overview of the field and specific examples of problem areas and methods of solution.

CS 101 Intro Computing: Engrg & Sci credit: 3 Hours.

Fundamental principles, concepts, and methods of computing, with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; fundamental algorithms and data structures; use of computers in solving engineering and scientific problems. Intended for engineering and science majors. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 102 Little Bits to Big Ideas credit: 4 Hours.

Same as INFO 102. See INFO 102.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 105 Intro Computing: Non-Tech credit: 3 Hours.

Computing as an essential tool of academic and professional activities. Functions and interrelationships of computer system components: hardware, systems and applications software, and networks. Widely used application packages such as spreadsheets and databases. Concepts and practice of programming for the solution of simple problems in different application areas. Intended for non-science and non-engineering majors. Prerequisite: MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 125 Intro to Computer Science credit: 4 Hours.

Basic concepts in computing and fundamental techniques for solving computational problems. Intended as a first course for computer science majors and others with a deep interest in computing. Prerequisite: Three years of high school mathematics or MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 126 Software Design Studio credit: 3 Hours.

Fundamental principles and techniques of software development. Design, documentation, testing, and debugging software, with a significant emphasis on code review. Credit is not given for both CS 242 and CS 126. Prerequisite: CS 125. For majors only.

CS 173 Discrete Structures credit: 3 Hours.

Discrete mathematical structures frequently encountered in the study of Computer Science. Sets, propositions, Boolean algebra, induction, recursion, relations, functions, and graphs. Credit is not given for both CS 173 and MATH 213. Prerequisite: One of CS 125, ECE 220; one of MATH 220, MATH 221.

CS 196 Freshman Honors credit: 1 Hour.

Offered for honors credit in conjunction with other 100-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 100-level computer science course (see Schedule).

CS 199 Undergraduate Open Seminar in Computer Science credit: 0 to 5 Hours.

Topics vary. Approved for Letter and S/U grading. May be repeated.

CS 210 Ethical & Professional Issues credit: 2 Hours.

Ethics for the computing profession. Ethical decision-making; licensing; intellectual property, freedom of information, and privacy. Credit is not given for both CS 210 and ECE 316. Prerequisite: CS 225. Junior standing required.

CS 225 Data Structures credit: 4 Hours.

Data abstractions: elementary data structures (lists, stacks, queues, and trees) and their implementation using an object-oriented programming language. Solutions to a variety of computational problems such as search on graphs and trees. Elementary analysis of algorithms. Prerequisite: CS 125 or ECE 220; CS 173 or MATH 213.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 233 Computer Architecture credit: 4 Hours.

Fundamentals of computer architecture: digital logic design, working up from the logic gate level to understand the function of a simple computer; machine-level programming to understand implementation of high-level languages; performance models of modern computer architectures to enable performance optimization of software; hardware primitives for parallelism and security. Prerequisite: CS 125 and CS 173; credit or concurrent enrollment in CS 225.

CS 241 System Programming credit: 4 Hours.

Basics of system programming, including POSIX processes, process control, inter-process communication, synchronization, signals, simple memory management, file I/O and directories, shell programming, socket network programming, RPC programming in distributed systems, basic security mechanisms, and standard tools for systems programming such as debugging tools. Credit is not given for both CS 241 and ECE 391.

Prerequisite: CS 225; credit or concurrent registration in CS 233.

CS 242 Programming Studio credit: 3 Hours.

Intensive programming lab intended to strengthen skills in programming. Prerequisite: CS 241.

CS 296 Honors Course credit: 1 Hour.

Group projects for honors credit in computer science. Sections of this course are offered in conjunction with other 200-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 200-level computer science course (see Schedule).

CS 357 Numerical Methods I credit: 3 Hours.

Fundamentals of numerical methods for students in science and engineering; floating-point computation, systems of linear equations, approximation of functions and integrals, the single nonlinear equation, and the numerical solution of ordinary differential equations; various applications in science and engineering; programming exercises and use of high quality mathematical library routines. Same as MATH 357. Credit is not given for CS 357 if credit for CS 450 has been earned. (Counts for advanced hours in LAS). Prerequisite: A 100-level computer science course; MATH 225 or MATH 415; MATH 241.

CS 361 Probability & Statistics for Computer Science credit: 3 Hours.

Introduction to probability theory and statistics with applications to computer science. Topics include: visualizing datasets, summarizing data, basic descriptive statistics, conditional probability, independence, Bayes theorem, random variables, joint and conditional distributions, expectation, variance and covariance, central limit theorem. Markov inequality, Chebyshev inequality, law of large numbers, Markov chains, simulation, the PageRank algorithm, populations and sampling, sample mean, standard error, maximum likelihood estimation, Bayes estimation, hypothesis testing, confidence intervals, linear regression, principal component analysis, classification, and decision trees. Same as STAT 361. Credit is not given for both CS 361 and ECE 313. Prerequisite: MATH 220 or 221; credit or concurrent registration in MATH 225. For majors only.

CS 374 Introduction to Algorithms & Models of Computation credit: 4 Hours.

Analysis of algorithms, major paradigms of algorithm design including recursive algorithms, divide-and-conquer algorithms, dynamic programming, greedy algorithms, and graph algorithms. Formal models of computation including finite automata and Turing machines. Limitations of computation arising from fundamental notions of algorithm and from complexity-theoretic constraints. Reductions, undecidability and NP-completeness. Same as ECE 374. Prerequisite: CS 225; MATH 225 or MATH 415.

CS 397 Individual Study credit: 1 to 3 Hours.

May be repeated. Prerequisite: Consent of instructor.

CS 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

CS 410 Text Information Systems credit: 3 or 4 Hours.

Theory, design, and implementation of text-based information systems. Text analysis, retrieval models (e.g., Boolean, vector space, probabilistic), text categorization, text filtering, clustering, retrieval system design and implementation, and applications to web information management. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 411 Database Systems credit: 3 or 4 Hours.

Examination of the logical organization of databases: the entity-relationship model; the hierarchical, network, and relational data models and their languages. Functional dependencies and normal forms. Design, implementation, and optimization of query languages; security and integrity; concurrency control, and distributed database systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 412 Introduction to Data Mining credit: 3 or 4 Hours.

Concepts, techniques, and systems of data warehousing and data mining. Design and implementation of data warehouse and on-line analytical processing (OLAP) systems; data mining concepts, methods, systems, implementations, and applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 413 Intro to Combinatorics credit: 3 or 4 Hours.

Same as MATH 413. See MATH 413.

CS 414 Multimedia Systems credit: 3 or 4 Hours.

Organization and structure of modern multimedia systems; audio and video encoding; quality of service concepts; scheduling algorithms for multimedia within OS and networks multimedia protocols over high-speed networks; synchronization schemes, user-interface design; multimedia teleservices. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 418 Interactive Computer Graphics credit: 3 Hours.

Basic mathematical tools and computational techniques for modeling, rendering, and animating 3-D scenes. Same as CSE 427. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; MATH 225 or MATH 415; MATH 241.

CS 419 Production Computer Graphics credit: 3 or 4 Hours.

Advanced methods for representing, displaying, and rendering two-, three-, and four-dimensional scenes. General algebraic curves and surfaces, splines, Gaussian and bump-function representation, fractals, particle systems, constructive solid geometry methods, lighting models, radiosity, advanced ray-tracing methods, surface texturing animation techniques, data visualization methods. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 418.

CS 420 Parallel Progrmg: Sci & Engrg credit: 3 or 4 Hours.

Fundamental issues in design and development of parallel programs for various types of parallel computers. Various programming models according to both machine type and application area. Cost models, debugging, and performance evaluation of parallel programs with actual application examples. Same as CSE 402 and ECE 492. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 421 Progrmg Languages & Compilers credit: 3 or 4 Hours.

Structure of programming languages and their implementation. Basic language design principles; abstract data types; functional languages; type systems; object-oriented languages. Basics of lexing, parsing, syntax-directed translation, semantic analysis, and code generation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233 and CS 373.

CS 422 Programming Language Design credit: 3 or 4 Hours.

Exploration of major language design paradigms using imperative and functional programming as unifying themes. Tools include both practical language processor construction and theoretical models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 423 Operating Systems Design credit: 3 or 4 Hours.

Organization and structure of modern operating systems and concurrent programming concepts. Deadlock, virtual memory, processor scheduling, and disk systems. Performance, security, and protection. Same as CSE 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 424 Real-Time Systems credit: 3 or 4 Hours.

Supervisory control aspects of Cyber Physical Systems (CPS): fundamentals of reliability analysis, real-time scheduling, simple feedback control, software fault tolerance architecture, wireless networking and energy saving, principles of safety critical system engineering. Student groups design and demonstrate supervisory control architecture for a robot. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 425 Distributed Systems credit: 3 or 4 Hours.

Protocols, specification techniques, global states and their determination, reliable broadcast, transactions and commitment, security, and real-time systems. Same as ECE 428. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 426 Compiler Construction credit: 3 or 4 Hours.

Compiler structure, syntax analysis, syntax-directed translation, automatically constructed recognizers, semantic analysis, code generation, intermediate language, optimization techniques. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 427 Software Engineering I credit: 3 or 4 Hours.

Software process, analysis and design. Software development paradigms, system engineering, function-based analysis and design, and object-oriented analysis and design. Course will use team-projects for hands-on exercises. Same as CSE 426. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 and CS 373.

CS 428 Software Engineering II credit: 3 or 4 Hours.

Continuation of CS 427. Software development, management, and maintenance. Project and configuration management, collaborative development models, software quality assurance, interoperability domain engineering and software reuse, and software re-engineering. Same as CSE 429. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 427.

CS 429 Software Engineering II, ACP credit: 3 Hours.

Continuation of CS 427. Identical to CS 428 except for the additional writing component. See CS 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: CS 427.

This course satisfies the General Education Criteria for:
Advanced Composition

CS 431 Embedded Systems credit: 3 Hours.

A survey of sampled data systems and embedded architecture; key concepts in common embedded system applications; signal processing and control; embedded microprocessor and device interface; time-critical I/O handling; data communications; real-time operating systems and techniques for the development and analysis of embedded real-time software; hands-on laboratory projects. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 433 Computer System Organization credit: 3 or 4 Hours.

Computer system analysis and design. Organizational dependence on computations to be performed; speed and cost of parts and overall machines; instruction set design; pipeline and vector machines; memory hierarchy design. Same as CSE 422. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233.

CS 436 Computer Networking Laboratory credit: 3 or 4 Hours.

Same as ECE 435. See ECE 435.

CS 438 Communication Networks credit: 3 or 4 Hours.

Layered architectures and the OSI Reference Model; design issues and protocols in the transport, network, and data link layers; architectures and control algorithms of local-area, point-to-point, and satellite networks; standards in networks access protocols; models of network interconnection; overview of networking and communication software. Same as ECE 438. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391; one of ECE 313, MATH 461, MATH 463.

CS 439 Wireless Networks credit: 3 or 4 Hours.

Same as ECE 439. See ECE 439.

CS 440 Artificial Intelligence credit: 3 or 4 Hours.

Major topics in and directions of research in artificial intelligence: AI languages (LISP and PROLOG), basic problem solving techniques, knowledge representation and computer inference, machine learning, natural language understanding, computer vision, robotics, and societal impacts. Same as ECE 448. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or ECE 391.

CS 445 Computational Photography credit: 3 or 4 Hours.

Computer vision techniques to enhance, manipulate, and create media from photo collections, such as panoramic stitching, face morphing, texture synthesis, blending, and 3D reconstruction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225, MATH 225, and MATH 231.

CS 446 Machine Learning credit: 3 or 4 Hours.

Theory and basic techniques in machine learning. Major theoretical paradigms and key concepts developed in machine learning in the context of applications such as natural language and text processing, computer vision, data mining, adaptive computer systems and others. Review of several supervised and unsupervised learning approaches: methods for learning linear representations; on-line learning, Bayesian methods; decision-trees; features and kernels; clustering and dimensionality reduction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373 and CS 440.

CS 447 Natural Language Processing credit: 3 or 4 Hours.

Part-of-speech tagging, parsing, semantic analysis and machine translation. Relevant linguistics concepts from morphology (word formation) and lexical semantics (the meaning of words) to syntax (sentence structure) and compositional semantics (the meaning of sentences). 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 447 and LING 406. Prerequisite: CS 374.

CS 450 Numerical Analysis credit: 3 Hours.

Linear system solvers, optimization techniques, interpolation and approximation of functions, solving systems of nonlinear equations, eigenvalue problems, least squares, and quadrature; numerical handling of ordinary and partial differential equations. Same as CSE 401, ECE 491, and MATH 450. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 450 and CS 457. Prerequisite: CS 101 or CS 125; CS 357 or MATH 415; MATH 285.

CS 457 Numerical Methods II credit: 3 Hours.

Continuation of CS 357. Orthogonalization methods for least squares, Krylov subspace methods, non-linear equations and optimization in multiple dimensions, initial and boundary value problems for ordinary and partial differential equations. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 457 and CS 450. Prerequisite: CS 357.

CS 460 Security Laboratory credit: 3 Hours.

Operating systems security: access control, least privilege mechanism and malware techniques. Network security: firewalls, sniffing, tunnels, intrusion detection, AAA and worm structure. System security: forensics security architectures, and attack/defend exercises. Complements CS 461 via hands-on project. Same as ECE 419. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461.

CS 461 Computer Security I credit: 4 Hours.

Fundamental principles of computer and communications security and information assurance: ethics, privacy, notions of threat, vulnerabilities, and risk in systems, information warfare, malicious software, data secrecy and integrity issues, network security, trusted computing, mandatory and discretionary access controls, certification and accreditation of systems against security standards. Security mechanisms: authentication, auditing, intrusion detection, access control, cryptography, security protocols, key distribution. Same as ECE 422. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 463 Computer Security II credit: 3 or 4 Hours.

Program security, trusted base, privacy, anonymity, non-interference, information flow, confinement, advanced auditing, forensics, intrusion detection, key management and distribution, policy composition and analysis, formal approaches to specification and verification of secure systems and protocols, and topics in applied cryptography. Same as ECE 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461. Recommended: CS 475.

CS 465 User Interface Design credit: 3 Hours.

A project-focused course covering fundamental principles of user interface design, implementation, and evaluation. Small teams work on a term-long project that involves: analysis of the problem domain, user skills, and tasks; iterative prototyping of interfaces to address user needs; conducting several forms of evaluation such as cognitive walkthroughs and usability tests; implementation of the final prototype. Non-technical majors may enroll as non-programmers who participate in all aspects of the projects with the possible exception of implementation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 466 Introduction to Bioinformatics credit: 3 or 4 Hours.

Algorithmic approaches in bioinformatics: (i) biological problems that can be solved computationally (e.g., discovering genes, and interactions among different genes and proteins); (ii) algorithmic techniques with wide applicability in solving these problems (e.g., dynamic programming and probabilistic methods); (iii) practical issues in translating the basic algorithmic ideas into accurate and efficient tools that biologists may use. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 467 Social Visualization credit: 3 or 4 Hours.

Visualizing social interaction in networked spaces: investigation of patterns in networked communications systems such as messaging (email, instant messaging), social networking sites and collaborative sites; social network theory and visualizations; exploration of how to move beyond existing visualization techniques; visualizing the network identity over compilations of online data. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 468 Tech and Advertising Campaigns credit: 3 Hours.

Same as ADV 492. See ADV 492.

CS 473 Algorithms credit: 4 Hours.

Design and analysis techniques, approximation algorithms, randomized algorithms and amortized analysis, and advanced topics such as network flow, linear programming, and dynamic data structures, among others. Same as CSE 414 and MATH 473. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 374, and one of CS 361, MATH 461, or STAT 400.

CS 475 Formal Models of Computation credit: 3 or 4 Hours.

Finite automata and regular languages; pushdown automata and context-free languages; Turing machines and recursively enumerable sets; linear-bounded automata and context-sensitive languages; computability and the halting problem; undecidable problems; recursive functions; Chomsky hierarchy; computational complexity. Same as MATH 475. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373.

CS 476 Program Verification credit: 3 or 4 Hours.

Formal methods for demonstrating correctness and other properties of programs. Invariant assertions; Hoare axiomatics; well-founded orderings for proving termination; structural induction; computational induction; data structures; parallel programs; overview of predicate calculus. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 374 or MATH 414.

CS 477 Formal Software Devel Methods credit: 3 or 4 Hours.

Mathematical models, languages, and methods for software specification, development, and verification. Same as ECE 478. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 373 or MATH 414.

CS 481 Stochastic Processes & Applic credit: 3 or 4 Hours.

Same as IE 410. See IE 410.

CS 482 Simulation credit: 3 Hours.

Same as IE 413. See IE 413.

CS 483 Applied Parallel Programming credit: 4 Hours.

Same as CSE 408 and ECE 408. See ECE 408.

CS 484 Parallel Programming credit: 3 or 4 Hours.

Techniques for the programming of all classes of parallel computers and devices including shared memory and distributed memory multiprocessors, SIMD processors and co-processors, and special purpose devices. Key concepts in parallel programming such as reactive and transformational programming, speculation, speedup, isoefficiency, and load balancing. Synchronization primitives, libraries and languages for parallel programming such as OpenMP and MPI, performance monitoring, program tuning, analysis and programming of numerical and symbolic parallel algorithms. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 491 Seminar credit: 0 to 4 Hours.

Seminar on topics of current interest as announced in the Class Schedule. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for S/U grading only. May be repeated in the same or separate terms if topics vary to a maximum of 4 hours. Prerequisite: As specified for each topic offering, see Class Schedule or departmental course description.

CS 492 Senior Project I credit: 3 Hours.

First part of a project course in computer science. Students work in teams to solve typical commercial or industrial problems. Work involves planning, design, and implementation. Extensive oral and written work is required both on-campus and possibly off-campus at sponsors' locations. CS 492 must be taken as a sequence with either CS 493 or CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 492 and a project course in another engineering department for the same project. Prerequisite: For Computer Science majors with senior standing.

CS 493 Senior Project II, ACP credit: 3 Hours.

Continuation of CS 492. Identical to CS 494 except for an additional writing component. See CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 493 and a project course in another engineering department for the same project. Prerequisite: CS 492. This course satisfies the General Education Criteria for: Advanced Composition

CS 494 Senior Project II credit: 3 Hours.

Continuation of CS 492. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 494 and a project course in another engineering department for the same project. Prerequisite: CS 492.

CS 497 CS Team Project credit: 1 to 3 Hours.

Student teams work with CS faculty to complete a significant project requiring advanced knowledge of CS principles. Project topics vary. 1 to 3 undergraduate hours. No graduate credit. May be repeated in the same term up to 6 hours, if topics vary; may be repeated in separate terms. Prerequisite: For majors only; junior or senior standing required.

CS 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

CS 499 Senior Thesis credit: 3 Hours.

Research and thesis development experience in computer science underguidance of a faculty member. Literature search, oral presentation, analysis and implementation, paper preparation, and completion of a written thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

Electrical and Computer Engineering

William Sanders

155 Everitt Laboratory, 1406 West Green, Urbana

PH: (217) 333-2300

<http://ece.illinois.edu>

Head of the Department: William Sanders

Department office: 155 Everitt Laboratory, 1406 West Green Street, Urbana

Phone: (217) 333-2300

Department web site: <http://ece.illinois.edu>

For the Degree of Bachelor of Science in Computer Engineering

Computer Engineering at Illinois focuses on the development of vital computing technologies, ranging from chips to computers to networks to programming tools to key algorithms for building exciting applications. Fundamentally, Computer Engineering addresses the problem of building scalable, trustworthy computing systems, and the faculty's interests span a broad spectrum of issues pertinent to this theme. Computer engineering has taken the lead in revolutionizing many science and engineering disciplines with parallel computing, from chips to clouds to planet-scale critical infrastructures, and has defined new standards of security, privacy, and dependability for systems ranging from small circuits to the electric power grids of many nations. Students need a broad and sound set of mathematical and computing skills, and are well-served by a flexible curriculum that enables them to pursue topics of interest among the many subdisciplines in computing.

The computer engineering core curriculum focuses on fundamental computer engineering knowledge: circuits, systems, electromagnetics, computer systems, electronics for information processing and communication, and computer science. The rich set of ECE elective courses permits students to concentrate in any sub-discipline of computer engineering including: hardware systems; cyberphysical systems; foundations and theory; software and languages; algorithms and mathematical tools; trust, reliability, security; networking, mobile and distributed computing; big data analytics and systems; artificial intelligence, robotics, cybernetics.

For the Degree of Bachelor of Science in Electrical Engineering

Electrical engineering is a multifaceted discipline that over the last century has produced an astounding progression of technological innovations that have shaped virtually every aspect of modern life. Electrical engineers need a broad and solid foundation in mathematics and physics to support their education in the engineering principles of analysis, synthesis, design, implementation, and testing of the devices and systems that provide the bedrock of modern energy, communication, sensing, computing, medical, security, and defense infrastructures. Within each subdiscipline one can find application domains that strongly rely on hands-on experimental work or that are based on theoretical, mathematical and computational approaches. The multidisciplinary nature of the electrical engineering education addresses the growing demand for the innovation and design of sensing, communication, computing, and decision-making systems of increasing complexity in consumer, defense, and medical applications.

The curriculum starts with a core of fundamental courses on circuits, electromagnetics, solid-state electronics, and computer systems, leading to a comprehensive array of specialized courses and laboratories in all of the important areas of modern electrical engineering. These range from power and energy systems to electronic, opto-electronic, and photonic devices; integrated circuits; telecommunications and remote sensing; control systems; robotics; signal processing; and bio-medical instrumentation and sensing.

- Major in Computer Engineering (p. 193)
- Major in Electrical Engineering (p. 195)

ECE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ECE>)

Courses

ECE 101 Exploring Digital Info Technol credit: 3 Hours.

Principles and processes for the development of information technologies: digital music, digital images, digital logic, data compression, error correction, information security, and communication networks. Laboratory for design of hardware and software, and experiments in audio and image processing. Intended for students outside the College of Engineering. Credit is not given to Computer or Electrical Engineering majors. This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences Quantitative Reasoning II

ECE 110 Introduction to Electronics credit: 1 to 3 Hours.

Introduction to selected fundamental concepts and principles in electrical engineering. Emphasis on measurement, modeling, and analysis of circuits and electronics while introducing numerous applications. Includes sub-discipline topics of electrical and computer engineering, for example, electromagnetics, control, signal processing, microelectronics, communications, and scientific computing basics. Lab work incorporates sensors and motors into an autonomous moving vehicle, designed and constructed to perform tasks jointly determined by the instructors and students.

ECE 120 Introduction to Computing credit: 4 Hours.

Introduction to digital logic, computer systems, and computer languages. Topics include representation of information, combinational and sequential logic analysis and design, finite state machines, the von Neumann model, basic computer organization, and machine language programming. Laboratory assignments provide hands-on experience with design, simulation, implementation, and programming of digital systems. Prerequisite: Restricted to Computer Engineering or Electrical Engineering majors or transfer students with ECE Department consent.

ECE 198 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. May be repeated in the same or separate terms for unlimited hours if topics vary. See class schedule for topics and prerequisites.

ECE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

ECE 200 Seminar credit: 0 Hours.

Discussions of educational programs, career opportunities, and other topics in electrical and computer engineering. Approved for Letter and S/U grading. May be repeated. For Computer Engineering and Electrical Engineering majors only.

ECE 205 Elec & Electronic Circuits credit: 3 Hours.

Basic principles of circuit analysis; transient analysis; AC steady-state analysis; introduction to semiconductor devices and fabrication; digital logic circuits; op-amps; A/D and D/A conversion. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: PHYS 212.

ECE 206 Elec & Electronic Circuits Lab credit: 1 Hour.

Laboratory instruments and basic measurement techniques; electric circuits; CMOS logic circuits; DTL and TTL circuits; op-amps. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: PHYS 212; concurrent registration in ECE 205.

ECE 210 Analog Signal Processing credit: 4 Hours.

Analog signal processing, with an emphasis on underlying concepts from circuit and system analysis: linear systems; review of elementary circuit analysis; differential equation models of linear circuits and systems; Laplace transform; convolution; stability; phasors; frequency response; Fourier series; Fourier transform; active filters; AM radio. Credit is not given for both ECE 210 and ECE 211. Prerequisite: ECE 110 and PHYS 212; credit or concurrent registration in MATH 285 or MATH 286.

ECE 211 Analog Circuits & Systems credit: 2 Hours.

Concepts from circuit and system analysis: linear systems; review of elementary circuit analysis; op amps; transient analysis; differential equation models of linear circuits and systems; Laplace transform. Credit is not given for both ECE 211 and ECE 210. Prerequisite: ECE 110 and PHYS 212; credit or concurrent registration in MATH 285 or MATH 286.

ECE 220 Computer Systems & Programming credit: 4 Hours.

Advanced use of LC-3 assembly language for I/O and function calling convention. C programming, covering basic programming concepts, functions, arrays, pointers, I/O, recursion, simple data structures, linked lists, dynamic memory management, and basic algorithms. Information hiding and object-oriented design as commonly implemented in modern software and computer systems programming. Prerequisite: ECE 120. Restricted to Computer Engineering or Electrical Engineering majors or transfer students with ECE Department consent.

ECE 297 Individual Study credit: 1 Hour.

Individual projects. Approved written application to department as specified by department or instructors is required. Approved for both letter and S/U grading. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Consent of instructor.

ECE 298 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. May be repeated in the same or separate terms for unlimited hours if topics vary. See class schedule for topics and prerequisites.

ECE 304 Photonic Devices credit: 3 Hours.

Introduction to active and passive photonic devices and applications; optical processes in semiconductor and dielectric materials including electrical junctions, light emission and absorption, and waveguide confinement; photonic components such as light emitting diodes, lasers, photodetectors, solar cells, liquid crystals, and optical fiber; optical information distribution networks and display applications. Prerequisite: PHYS 214.

ECE 307 Techniques for Engrg Decisions credit: 3 Hours.

Modeling of decisions in engineering work and the analysis of models to develop a systematic approach to making decisions. Fundamental concepts in linear and dynamic programming; probability theory; and statistics. Resource allocation; logistics; scheduling; sequential decision making; siting of facilities; investment decisions; application of financial derivatives; other problems for decision making under uncertainty. Case studies from actual industrial applications illustrate real-world decisions. Prerequisite: ECE 210; credit or concurrent registration in ECE 313.

ECE 310 Digital Signal Processing credit: 3 Hours.

Introduction to discrete-time systems and discrete-time signal processing with an emphasis on causal systems; discrete-time linear systems, difference equations, z-transforms, discrete convolution, stability, discrete-time Fourier transforms, analog-to-digital and digital-to-analog conversion, digital filter design, discrete Fourier transforms, fast Fourier transforms, spectral analysis, and applications of digital signal processing. Prerequisite: ECE 210.

ECE 311 Digital Signal Processing Lab credit: 1 Hour.

Companion laboratory for ECE 310. Prerequisite: Credit or concurrent registration in ECE 310.

ECE 313 Probability with Engrg Applic credit: 3 Hours.

Probability theory with applications to engineering problems such as the reliability of circuits and systems to statistical methods for hypothesis testing, decision making under uncertainty, and parameter estimation. Same as MATH 362. Credit is not given for both ECE 313 and MATH 461. Prerequisite: MATH 286 or MATH 415.

ECE 314 Probability in Engineering Lab credit: 1 Hour.

Designed to be taken concurrently with ECE 313, Probability in Engineering Systems, to strengthen the students' understanding of the concepts in ECE 313 and their applications, through computer simulation and computation using the Python programming language. Topics include sequential hypothesis testing, parameter estimation, confidence intervals, Bloom filters, min hashing, load balancing, inference for Markov chains, PageRank algorithm, vector Gaussian distribution, contagion in networks, principle component method and linear regression for data analysis, investment portfolio analysis. Prerequisite: Concurrent enrollment in ECE 313 or one of: ECE 313, IE 300, STAT 410.

ECE 316 Ethics and Engineering credit: 3 Hours.

Ethical issues in the practice of engineering: safety and liability, professional responsibility to clients and employers, whistle-blowing, codes of ethics, career choice, and legal obligations. Philosophical analysis of normative ethical theories. Case studies. Same as PHIL 316. Credit is not given for both ECE 316 and CS 210. Junior standing is required. Prerequisite: RHET 105.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

ECE 317 ECE Technology & Management credit: 3 Hours.

Basic understanding of electrical and computer engineering concepts applicable to technology management. Circuit components; dc fundamentals; ac fundamentals; semiconductors; operational amplifiers; device fabrication; power distribution; digital devices; computer architecture (including microprocessors). Intended for the Business Majors in the Technology and Management program. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ECE 329 Fields and Waves I credit: 3 Hours.

Electromagnetic fields and waves fundamentals and their engineering applications: static electric and magnetic fields; energy storage; Maxwell's equations for time-varying fields; wave solutions in free space, dielectrics and conducting media, transmission line systems; time- and frequency-domain analysis of transmission line circuits and Smith chart applications. Prerequisite: ECE 210.

ECE 330 Power Ckts & Electromechanics credit: 3 Hours.

Network equivalents; power and energy fundamentals, resonance, mutual inductance; three-phase power concepts, forces and torques of electric origin in electromagnetic and electrostatic systems; energy conversion cycles; principles of electric machines; transducers; relays; laboratory demonstration. Prerequisite: ECE 210.

ECE 333 Green Electric Energy credit: 3 Hours.

Electric power grid structure and policy; analysis of wind, solar, and fuels as raw resources; wind turbines and parks; solar cells, modules, arrays and systems; fuel cell power plants; energy and financial performance of green energy projects; integration of green energy into power grid; energy project report and presentation. Prerequisite: ECE 205 or ECE 210.

ECE 340 Semiconductor Electronics credit: 3 Hours.

Modern device electronics: semiconductor fundamentals including crystals and energy bands, charge carriers (electrons and holes), doping, and transport, (drift and diffusion); unipolar devices with the MOS field effect transistor as a logic device and circuit considerations; basic concepts of generation-recombination and the P-N junction as capacitors and current rectifier with applications in photonics; bipolar transistors as amplifiers and switching three-terminal devices. Prerequisite: ECE 210; PHYS 214; credit or concurrent registration in ECE 329.

ECE 342 Electronic Circuits credit: 3 Hours.

Analysis and design of analog and digital electronic circuits using MOS field effect transistors and bipolar junction transistors, with emphasis on amplifiers in integrated circuits. Credit is not given for both ECE 342 and PHYS 404. Prerequisite: ECE 210.

ECE 343 Electronic Circuits Laboratory credit: 1 Hour.

Companion laboratory for ECE 342. Credit is not given for both ECE 343 and PHYS 404. Prerequisite: Credit or concurrent registration in ECE 342.

ECE 345 Design and Innovation credit: 2 Hours.

Students identify a suitable project, build a team, and explore the feasibility and potential solution space for the selected project area. The intellectual structure of the engineering design process is studied in detail in order to encapsulate the ideation and problem identification aspects of engineering senior design and facilitate student innovation. Same as TE 345. May be repeated in separate terms to a maximum of 4 hours.

ECE 350 Fields and Waves II credit: 3 Hours.

Continuation of ECE 329: radiation theory; antennas, radiation fields, radiation resistance and gain; transmitting arrays; plane-wave approximation of radiation fields; plane-wave propagation, reflection, and transmission; Doppler effect, evanescent waves and tunneling, dispersion, phase and group velocities; waveguides and resonant cavities; antenna reception and link budgets. Prerequisite: ECE 329.

ECE 361 Digital Communications credit: 3 Hours.

Reliable communication of one bit of information over three types of channels: additive Gaussian noise, wireline, and wireless. Emphasis on the impact of bandwidth and power on the data rate and reliability, using discrete-time models. Technological examples used as case studies. Prerequisite: ECE 210 and ECE 313.

ECE 374 Introduction to Algorithms & Models of Computation credit: 4 Hours.

Same as CS 374. See CS 374.

ECE 380 Biomedical Imaging credit: 3 Hours.

Physics and engineering principles associated with x-ray, computed tomography, nuclear, ultrasound, magnetic resonance, and optical imaging, including human visualization and perception of image data. Same as BIOE 380. Prerequisite: MATH 285 or MATH 286.

ECE 385 Digital Systems Laboratory credit: 3 Hours.

Design, build, and test digital systems using transistor-transistor logic (TTL), SystemVerilog, and field-programmable gate arrays (FPGAs). Topics include combinational and sequential logic, storage elements, input/output and display, timing analysis, design tradeoffs, synchronous and asynchronous design methods, datapath and controller, microprocessor design, software/hardware co-design, and system-on-a-chip. Prerequisite: ECE 110 and ECE 220.

ECE 391 Computer Systems Engineering credit: 4 Hours.

Concepts and abstractions central to the development of modern computing systems, with an emphasis on the systems software that controls interaction between devices and other hardware and application programs. Input-output semantics; synchronization; interrupts; multitasking; virtualization of abstractions. Term-based projects. Credit is not given for both ECE 391 and CS 241. Prerequisite: ECE 220 or CS 233.

ECE 395 Advanced Digital Projects Lab credit: 2 or 3 Hours.

Planning, designing, executing, and documenting a microcomputer-based project. Emphasis on hardware but special projects may require an equal emphasis on software. Prerequisite: ECE 385.

ECE 396 Honors Project credit: 1 to 4 Hours.

Special project or reading course for James Scholars in engineering. May be repeated. Prerequisite: Consent of instructor.

ECE 397 Individual Study in ECE credit: 0 to 4 Hours.

Individual Projects. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor. Approved written application to department as specified by department or instructor is required.

ECE 398 Special Topics in ECE credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ECE 399 Honors Seminar credit: 1 to 4 Hours.

Special lecture sequences or discussion groups arranged each term to bring James Scholars in engineering into direct contact with the various aspects of engineering practices and philosophy. For Computer Engineering and Electrical Engineering majors with senior standing. Prerequisite: Consent of instructor.

ECE 401 Signal and Image Analysis credit: 4 Hours.

An introduction to signal analysis and processing methods for advanced undergraduates or graduate students in the biological, physical, social, engineering and computer sciences. Signal analysis methods and their capabilities, weaknesses, and artifacts with an emphasis on their practical application. Significant hands-on processing and interpretation of real data using MATLAB. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ECE 310 and ECE 401. Prerequisite: MATH 220.

ECE 402 Electronic Music Synthesis credit: 3 Hours.

Historical survey of electronic and computer music technology; parameters of musical expression and their codification; analysis and synthesis of fixed sound spectra; time-variant spectrum analysis/synthesis of musical sounds; algorithms for dynamic sound synthesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 310.

ECE 403 Audio Engineering credit: 3 Hours.

Resonance and wave phenomena; Acoustics of rooms and transmission lines (e.g., horns); How loudspeakers work: A lab component has been added to measure and model real loudspeakers and enclosures; Topics in digital audio, including AD and DA (Sigma-Delta) audio converters. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 210 and ECE 310.

ECE 408 Applied Parallel Programming credit: 4 Hours.

Parallel programming with emphasis on developing applications for processors with many computation cores. Computational thinking, forms of parallelism, programming models, mapping computations to parallel hardware, efficient data structures, paradigms for efficient parallel algorithms, and application case studies. Same as CS 483 and CSE 408. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 220.

ECE 411 Computer Organization & Design credit: 4 Hours.

Basic computer organization and design: integer and floating-point computer arithmetic; control unit design; pipelining; system interconnect; memory organization; I/O design; reliability and performance evaluation. Laboratory for computer design implementation, simulation, and layout. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 391 or CS 241.

ECE 412 Microcomputer Laboratory credit: 3 Hours.

Design, construction, and use of a small general-purpose computer with a micro-processor CPU; MSI and LSI circuits used extensively; control panel, peripheral controllers, control logic, central processor, and programming experiments. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 385; ECE 391 or CS 233. Recommended: Credit or concurrent registration in ECE 411.

ECE 414 Biomedical Instrumentation credit: 3 Hours.

Same as BIOE 414. See BIOE 414.

ECE 415 Biomedical Instrumentation Lab credit: 2 Hours.

Same as BIOE 415. See BIOE 415.

ECE 416 Biosensors credit: 3 Hours.

Underlying engineering principles used to detect small molecules, DNA, proteins, and cells in the context of applications in diagnostic testing, pharmaceutical research, and environmental monitoring. Biosensor approaches including electrochemistry, fluorescence, acoustics, and optics; aspects of selective surface chemistry including methods for biomolecule attachment to transducer surfaces; characterization of biosensor performance; blood glucose detection; fluorescent DNA microarrays; label-free biochips; bead-based assay methods. Case studies and analysis of commercial biosensor. Same as BIOE 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 417 Multimedia Signal Processing credit: 4 Hours.

Characteristics of speech and image signals; important analysis and synthesis tools for multimedia signal processing including subspace methods, Bayesian networks, hidden Markov models, and factor graphs; applications to biometrics (person identification), human-computer interaction (face and gesture recognition and synthesis), and audio-visual databases (indexing and retrieval). Emphasis on a set of MATLAB machine problems providing hands-on experience. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310 and ECE 313.

ECE 418 Image & Video Processing credit: 4 Hours.

Concepts and applications in image and video processing; introduction to multidimensional signal processing: sampling, Fourier transform, filtering, interpolation, and decimation; human visual perception; scanning and display of images and video; image enhancement, restoration and segmentation; digital image and video compression; image analysis. Laboratory exercises promote experience with topics and development of C and MATLAB programs. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310; credit or concurrent registration in one of ECE 313, STAT 400, IE 300, MATH 461; MATH 415; experience with C programming language.

ECE 419 Security Laboratory credit: 3 Hours.

Same as CS 460. See CS 460.

ECE 420 Embedded DSP Laboratory credit: 2 Hours.

Development of real-time digital signal processing (DSP) systems using a DSP microprocessor; several structured laboratory exercises, such as sampling and digital filtering; followed by an extensive DSP project of the student's choice. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 310.

ECE 422 Computer Security I credit: 4 Hours.

Same as CS 461. See CS 461.

ECE 424 Computer Security II credit: 3 or 4 Hours.

Same as CS 463. See CS 463.

ECE 425 Intro to VLSI System Design credit: 3 Hours.

Complementary Metal-Oxide Semiconductor (CMOS) technology and theory; CMOS circuit and logic design; layout rules and techniques; circuit characterization and performance estimation; CMOS subsystem design; Very-Large-Scale Integrated (VLSI) systems design methods; VLSI Computer Aided Design (CAD) tools; workstation-based custom VLSI chip design using concepts of cell hierarchy; final project involving specification, design, and evaluation of a VLSI chip or VLSI CAD program; written report and oral presentation on the final project. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 385 and ECE 411; or CS 233.

ECE 428 Distributed Systems credit: 3 or 4 Hours.

Same as CS 425. See CS 425.

ECE 431 Electric Machinery credit: 4 Hours.

Theory and laboratory experimentation with three-phase power, power-factor correction, single- and three-phase transformers, induction machines, DC machines, and synchronous machines; project work on energy control systems; digital simulation of machine dynamics. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 330.

ECE 432 Advanced Electric Machinery credit: 3 Hours.

Advanced rotating machine theory and practice: dynamic analysis of machines using reference frame transformations; tests for parameter determination; reduced order modeling of machines; mechanical subsystems including governors, prime movers and excitation systems; digital simulation of inter-connected machines. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 431.

ECE 435 Computer Networking Laboratory credit: 3 or 4 Hours.

Design, application, analysis, and evaluation of communication network protocols under both Linux and Windows NT operating systems. Emphasis on identifying problems, proposing alternative solutions, implementing prototypes using available network protocols and evaluating results. Multiple programming team projects. Same as CS 436. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 438.

ECE 437 Sensors and Instrumentation credit: 3 Hours.

Hands-on exposure to fundamental technology and practical application of sensors. Capacitive, inductive, optical, electromagnetic, and other sensing methods are examined. Instrumentation techniques incorporating computer control, sampling, and data collection and analysis are reviewed in the context of real-world scenarios. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 438 Communication Networks credit: 3 or 4 Hours.

Same as CS 438. See CS 438.

ECE 439 Wireless Networks credit: 3 or 4 Hours.

Overview of wireless network architectures including cellular networks, local area networks, multi-hop wireless networks such as ad hoc networks, mesh networks, and sensor networks; capacity of wireless networks; medium access control, routing protocols, and transport protocols for wireless networks; mechanisms to improve performance and security in wireless networks; energy-efficient protocols for sensor networks. Same as CS 439. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391; one of MATH 461, MATH 463, ECE 313.

ECE 441 Physcs & Modeling Semicond Dev credit: 3 Hours.

Advanced concepts including generation-recombination, hot electron effects, and breakdown mechanisms; essential features of small ac characteristics, switching and transient behavior of p-n junctions, and bipolar and MOS transistors; fundamental issues for device modeling; perspective and limitations of Si-devices. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

ECE 444 IC Device Theory & Fabrication credit: 4 Hours.

Fabrication lab emphasizing physical theory and design of devices suitable for integrated circuitry; electrical properties of semiconductors and techniques (epitaxial growth, oxidation, photolithography diffusion, ion implantation, metallization, and characterization) for fabricating integrated circuit devices such as p-n junction diodes, bipolar transistors, and field effect transistors. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 340.

ECE 445 Senior Design Project Lab credit: 4 Hours.

Individual design projects in various areas of electrical and computer engineering; projects are chosen by students with approval of instructor. A professionally kept lab notebook, a written report, prepared to journal publication standards, and an oral presentation required. 4 undergraduate hours. No graduate credit.

This course satisfies the General Education Criteria for:
Advanced Composition

ECE 446 Principles of Experimental Research in Electrical Engineering credit: 4 Hours.

Interdisciplinary approach to learning principles of experimental research. Focuses on: 1) experimental design 2) prevalent experimental techniques 3) data organization, analysis, and presentation and 4) scientific computing. Presentation methods explored include poster session, conference talk, and journal paper. Open-ended labs and a project reinforce concepts discussed in class. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310, ECE 313, ECE 329, and MATH 415.

ECE 447 Active Microwave Ckt Design credit: 3 Hours.

Microwave circuit design of amplifiers, oscillators, and mixers. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350 and ECE 453.

ECE 448 Artificial Intelligence credit: 3 or 4 Hours.

Same as CS 440. See CS 440.

ECE 451 Adv Microwave Measurements credit: 3 Hours.

Manual- and computer-controlled laboratory analysis of circuits at microwave frequencies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 452 Electromagnetic Fields credit: 3 Hours.

Plane waves at oblique incidence; wave polarization; anisotropic media; radiation; space communications; waveguides. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 453 Wireless Communication Systems credit: 4 Hours.

Design of a radio system for transmission of information; modulation, receivers, impedance matching, oscillators, two-port network analysis, receiver and antenna noise, nonlinear effects, mixers, phase-locked loops. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329, credit or concurrent registration in ECE 342.

ECE 454 Antennas credit: 3 Hours.

Antenna parameters; polarization of electromagnetic waves; basic antenna types; antenna arrays; broadband antenna design; antenna measurements. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 455 Optical Electronics credit: 3 or 4 Hours.

Optical beams and cavities; semiclassical theory of gain; characteristics of typical lasers (gas, solid state, and semiconductor); application of optical devices. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECE 350 or PHYS 436.

ECE 456 Global Nav Satellite Systems credit: 4 Hours.

Engineering aspects of space-based navigation systems, such as the Global Positioning System (GPS). Engineering and physical principles on which GPS operates, including orbital dynamics, electromagnetic wave propagation in a plasma, signal encoding, receiver design, error analysis, and numerical methods for obtaining a navigation solution. GPS as a case study for performing an end-to-end analysis of a complex engineering system. Laboratory exercises focus on understanding receiver design and developing a MATLAB-based GPS receiver. Same as AE 456. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329 and ECE 310 or AE 352 and AE 353.

ECE 457 Microwave Devices & Circuits credit: 3 Hours.

Electromagnetic wave propagation, microwave transmission systems, passive components, microwave tubes, solid state microwave devices, microwave integrated circuits, S-parameter analysis, and microstrip transmission lines. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340 and ECE 350.

ECE 458 Applic of Radio Wave Propag credit: 3 Hours.

Terrestrial atmosphere, radio wave propagation, and applications to radio sensing and radio communication. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 459 Communications Systems credit: 3 Hours.

Analog underpinning of analog and digital communication systems: representation of signals and systems in the time and frequency domains; analog modulation schemes; random processes; prediction and noise analysis using random processes; noise sensitivity and bandwidth requirements of modulation schemes. Brief introduction to digital communications. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 313.

ECE 460 Optical Imaging credit: 4 Hours.

Scalar fields, geometrical optics, wave optics, Gaussian beams, Fourier optics, spatial and temporal coherence, microscopy, interference chromatic and geometric aberrations, Jones matrices, waveplates, electromagnetic fields, and electro-optic and acousto-optic effects. Laboratory covers numerical signal processing, spectroscopy, ray optics, diffraction, Fourier optics, microscopy, spatial coherence, temporal coherence, polarimetry, fiber optics, electro-optic modulation and acousto-optic modulation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329; credit or concurrent registration in ECE 313.

ECE 461 Digital Communications credit: 3 Hours.

Reliable communication of one bit of information over three types of channels: additive Gaussian noise, wireline, and wireless. Emphasis on the impact of bandwidth and power on the data rate and reliability, using discrete-time models. Technological examples used as case studies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 210 and ECE 313.

ECE 462 Logic Synthesis credit: 3 Hours.

Unate function theory, unate recursive paradigm, synthesis of two-level logic, synthesis of incompletely specified combinational logic, multi-level logic synthesis, binary decision diagrams, finite state machine synthesis, automatic test pattern generation and design for test, equivalence checking and reachability analysis of finite machines, and technology mapping. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 220 or CS 233.

ECE 463 Digital Communications Lab credit: 2 Hours.

Hands-on experience in the configuration and performance evaluation of digital communication systems employing both radio and optical signals. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 361 or ECE 459.

ECE 464 Power Electronics credit: 3 Hours.

Switching functions and methods of control such as pulse-width modulation, phase control, and phase modulation; dc-dc, ac-dc, dc-ac, and ac-ac power converters; power components, including magnetic components and power semiconductor switching devices. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 465 Optical Communications Systems credit: 3 Hours.

Fundamentals of lightwave systems: characterization of lightwave channels, optical transmitters, receivers, and amplifiers; quantum and thermal noise processes; design of optical receivers; multimode and single-mode link analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 313 and ECE 350. Recommended: credit or concurrent registration in ECE 459 and ECE 466.

ECE 466 Optical Communications Lab credit: 1 Hour.

Fiber components and measurements, transmitters and detectors, fiber amplifiers, multimode fiber links, and wavelength division multiplexing. 1 undergraduate hour. 1 graduate hour. Prerequisite: Credit or concurrent registration in ECE 465.

ECE 467 Biophotonics credit: 3 Hours.

Overview of the field of biophotonics, in three segments: (1) fundamental principles of light, optics, lasers, biology, and medicine; (2) diagnostic biophotonics including imaging, spectroscopy, and optical biosensors; (3) therapeutic applications of biophotonics including laser ablation and photodynamic therapies. Reviews and presentations of current scientific literature by students. Tours of microscopy facilities. Same as BIOE 467. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of ECE 455, ECE 460, PHYS 402.

ECE 468 Optical Remote Sensing credit: 3 Hours.

Optical sensors including single element and area arrays (CCDs); optical systems including imagers, spectrometers, interferometers, and lidar; optical principles and light gathering power; electromagnetics of atomic and molecular emission and scattering with applications to the atmosphere the prime example; applications to ground and spacecraft platforms. Four laboratory sessions (4.5 hours each) arranged during term in lieu of four lectures. Same as AE 468. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329, ECE 313.

ECE 469 Power Electronics Laboratory credit: 2 Hours.

Circuits and devices used for switching power converters, solid-state motor drives, and power controllers; dc-dc, ac-dc, and dc-ac converters and applications; high-power transistors and magnetic components; design considerations including heat transfer. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 343; credit or concurrent registration in ECE 464.

ECE 470 Introduction to Robotics credit: 4 Hours.

Fundamentals of robotics including rigid motions; homogeneous transformations; forward and inverse kinematics; velocity kinematics; motion planning; trajectory generation; sensing, vision; control. Same as AE 482 and ME 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of MATH 225, MATH 286, MATH 415, MATH 418.

ECE 472 Biomedical Ultrasound Imaging credit: 3 Hours.

Theoretical and engineering foundations of ultrasonic imaging for medical diagnostics. Conventional, Doppler, and advanced ultrasonic imaging techniques; medical applications of different ultrasonic imaging techniques; engineering problems related to characterization of ultrasonic sources and arrays, image production, image quality, the role of contrast agents in ultrasonic imaging, and system design. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 473 Fund of Engrg Acoustics credit: 3 or 4 Hours.

Development of the basic theoretical concepts of acoustical systems; mechanical vibration, plane and spherical wave phenomena in fluid media, lumped and distributed resonant systems, and absorption phenomena and hearing. Same as TAM 413. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 or MATH 286.

ECE 476 Power System Analysis credit: 3 Hours.

Development of power system equivalents by phase network analysis, load flow, symmetrical components, sequence networks, fault analysis, and digital simulation. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 330.

ECE 478 Formal Software Devel Methods credit: 3 or 4 Hours.

Same as CS 477. See CS 477.

ECE 480 Magnetic Resonance Imaging credit: 3 or 4 Hours.

Fundamental physical, mathematical, and computational principles governing the data acquisition and image reconstruction of magnetic resonance imaging. Same as BIOE 480. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Recommended: ECE 310.

ECE 481 Nanotechnology credit: 4 Hours.

Fundamental physical properties of nanoscale systems. Nanofabrication techniques, semiconductor nanotechnology, molecular and biomolecular nanotechnology, carbon nanotechnology (nanotubes and graphene), nanowires, and nanoscale architectures and systems. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of CHEM 442, CHBE 457, ME 485, MSE 401, PHYS 460.

ECE 482 Digital IC Design credit: 3 Hours.

Bipolar and MOS field effect transistor characteristics; VLSI fabrication techniques for MOS and bipolar circuits; calculation of circuit parameters from the process parameters; design of VLSI circuits such as logic, memories, charge-coupled devices, and A/D and D/A converters. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 483 Analog IC Design credit: 3 Hours.

Basic linear integrated circuit design techniques using bi-polar, JFET, and MOS technologies; operational amplifiers; wide-band feedback amplifiers; sinusoidal and relaxation oscillators; electric circuit noise; application of linear integrated circuits. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 484 Prin Adv Microelec Processing credit: 3 Hours.

Principles of advanced methods of pattern delineation, pattern transfer, and modern material growth; how these are applied to produce novel and high performance devices and circuits in various electronic materials with special emphasis on semiconductors. Computer simulation of processes and the manufacturing of devices and circuits. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 444.

ECE 485 MEMS Devices & Systems credit: 3 Hours.

Introduction to principles, fabrication techniques, and applications of microelectromechanical systems (MEMS). In-depth analysis of sensors, actuator principles, and integrated microfabrication techniques for MEMS. Comprehensive investigation of state-of-the-art MEMS devices and systems. Same as ME 485. 3 undergraduate hours. 3 graduate hours.

ECE 486 Control Systems credit: 4 Hours.

Analysis and design of control systems with emphasis on modeling, state variable representation, computer solutions, modern design principles, and laboratory techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 210.

ECE 487 Intro Quantum Electr for EEs credit: 3 Hours.

Application of quantum mechanical concepts to electronics problems; detailed analysis of a calculable two-state laser system; incidental quantum ideas bearing on electronics. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 485.

ECE 488 Compound Semicond & Devices credit: 3 Hours.

Advanced semiconductor materials and devices; elementary band theory; heterostructures; transport issues; three-terminal devices; two-terminal devices; including lasers and light modulators. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340 and ECE 350.

ECE 489 Robot Dynamics and Control credit: 4 Hours.

Same as ME 446 and SE 422. See SE 422.

ECE 490 Introduction to Optimization credit: 3 or 4 Hours.

Basic theory and methods for the solution of optimization problems; iterative techniques for unconstrained minimization; linear and nonlinear programming with engineering applications. Same as CSE 441. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECE 220 and MATH 415.

ECE 491 Numerical Analysis credit: 3 Hours.

Same as CS 450, CSE 401 and MATH 450. See CS 450.

ECE 492 Parallel Progrmg: Sci & Engrg credit: 3 or 4 Hours.

Same as CS 420 and CSE 402. See CS 420.

ECE 493 Advanced Engineering Math credit: 3 or 4 Hours.

Same as MATH 487. See MATH 487.

ECE 495 Photonic Device Laboratory credit: 3 Hours.

Active photonic devices and lightwave technology. Hands-on experience with several classes of lasers (HeNe laser, semiconductor edge emitting lasers, vertical cavity surface emitting lasers), photodetectors, and photonic systems. Familiarization with experimental optical characterization techniques and equipment. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 487 recommended.

ECE 496 Senior Research Project credit: 2 Hours.

Individual research project under the guidance of a faculty member: for example, mathematical analysis, laboratory experiments, computer simulations, software development, circuit design, or device fabrication. Preparation of a written research proposal, including preliminary results. 2 undergraduate hours. No graduate credit. May be repeated. ECE 496 and ECE 499 taken in sequence fulfill the Advanced Composition Requirement. Prerequisite: RHET 105; consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

ECE 498 Special Topics in ECE credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 0 to 4 undergraduate hours. 0 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

ECE 499 Senior Thesis credit: 2 Hours.

Completion of the research project begun under ECE 496. Preparation and oral presentation of a written thesis that reports the results of the project. 2 undergraduate hours. No graduate credit. To fulfill the Advanced Composition Requirement, credit must be earned for both ECE 496 and ECE 499. Prerequisite: ECE 496 and consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

Computer Engineering

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's undergraduate advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
Total Hours		0

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4

MATH 286	Intro to Differential Eq Plus	4
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		31

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Computer Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of computer engineering.

Code	Title	Hours
ECE 110	Introduction to Electronics ¹	3
ECE 120	Introduction to Computing	4
ECE 210	Analog Signal Processing	4
ECE 220	Computer Systems & Programming	4
CS 173	Discrete Structures ²	3
CS 225	Data Structures	4
ECE 313	Probability with Engrg Applic ³	3
ECE 374	Introduction to Algorithms & Models of Computation	4
ECE 385	Digital Systems Laboratory	3
ECE 391	Computer Systems Engineering	4
Total Hours		36

¹ Freshmen take ECE 110 for 3 credit hours. Lab-only version taken by transfer students (with special permission) is 1 credit hour.

² MATH 213 may be substituted.

³ STAT 410 may be substituted.

Technical Electives

These courses stress the rigorous analysis and design principles practiced in the major disciplines of computer engineering.

Code	Title	Hours
27 hours to be selected from departmentally approved List of Technical Electives		
One course from departmentally approved list of EE Foundations Courses		
Three courses from departmentally approved list of Advanced Computing Electives		
One of: ECE 411, ECE 445, or both ECE 496 AND ECE 499		

¹ List of Technical Electives (<http://www.ece.illinois.edu/academics/ugrad/curriculum/tech-electives-06.asp>).

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education Social and Behavioral Sciences list.		6
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition. May be satisfied by completing ECE 445 or ECE 496 AND ECE 499 or a course within either the liberal education or free elective categories which has the Advanced Composition designation.		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree. At least seven hours must be taken for a grade.		12

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year	Hours
First Semester	
RHET 105 Writing and Research	4
OR	
CHEM 102 & CHEM 103	
MATH 221 ¹ Calculus I	4
ECE 120 Introduction to Computing	4

Liberal Education elective ³	3
ENG 100 Engineering Orientation	0
Semester Hours	15

Second Semester

CHEM 102 General Chemistry I & CHEM 103	4
OR	
RHET 105	
PHYS 211 University Physics: Mechanics	4
MATH 231 Calculus II	3
ECE 110 ² Introduction to Electronics	3
Liberal Education elective ³	3
Semester Hours	17

Second Year

First Semester

MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
ECE 220 Computer Systems Programming	4
Liberal Education elective ³	3
Semester Hours	15

Second Semester

MATH 286 Intro to Differential Eq Plus	4
ECE 210 Analog Signal Processing	4
CS 225 Data Structures	4
CS 173 ⁴ Discrete Structures	3
Semester Hours	15

Third Year

First Semester

PHYS 213 Univ Physics: Thermal Physics	2
PHYS 214 Univ Physics: Quantum Physics	2
ECE 313 ⁶ Probability with Engrg Applic	3
ECE 385 Digital Systems Laboratory	3
Technical elective ⁵	4
Liberal education elective ³	3
Semester Hours	17

Second Semester

ECE 391 Computer Systems Engineering	4
ECE 374 Introduction to Algorithms Models of Computation	4
Technical elective ⁵	3
Liberal education elective ³	3
Free elective	3
Semester Hours	17

Fourth Year

First Semester

ECE 411 ⁷ Computer Organization Design	4
Technical electives ⁵	6
Liberal education elective ³	3
Free elective	4
Semester Hours	17

Second Semester

Technical electives ⁵	10
----------------------------------	----

Free elective	5
Semester Hours	15
Total Hours:	128

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² Freshmen take ECE 110 for 3 credit hours. Lab-only version taken by transfer students (with special permission) is 1 credit hour.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ MATH 213 may be substituted.

⁵ All are to be chosen from the departmentally approved List of Technical Electives (<http://www.ece.illinois.edu/academics/ugrad/curriculum/tech-electives-06.asp>).

⁶ STAT 410 may be substituted.

⁷ ECE 445 or ECE 496 AND ECE 499 may be substituted

Electrical Engineering Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's undergraduate advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Technical+GPA+Requirements>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
Total Hours		0

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 286	Intro to Differential Eq Plus	4
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		31

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Electrical Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of electrical engineering.

Code	Title	Hours
ECE 110	Introduction to Electronics ¹	3
ECE 120	Introduction to Computing	4
ECE 220	Computer Systems & Programming	4
ECE 210	Analog Signal Processing	4
ECE 313	Probability with Engrg Applic ²	3
ECE 329	Fields and Waves I	3
ECE 340	Semiconductor Electronics	3
ECE 385	Digital Systems Laboratory	3
ECE 445	Senior Design Project Lab ³	4
Total Hours		31

¹ Freshmen take ECE 110 for 3 credit hours. Lab-only version of ECE 110 taken by transfer students (with special permission) is 1 credit hour.

² STAT 410 may be substituted.

³ ECE 496 AND ECE 499 may be substituted.

Technical Electives

This elective requirement gives each student freedom to define a technical course of study in electrical engineering of considerable breadth and focus. The Advanced Core ECE Electives are introductory to major subdisciplines of electrical engineering (<http://www.ece.illinois.edu/academics/ugrad/subdisciplines>).

Code	Title	Hours
32 hours, to include: ⁵		
Non-ECE courses ⁵		6
ECE Courses to include:		20
Select three from the following list of Advanced Core ECE electives:		
ECE 391	Computer Systems Engineering	
or CS 225	Data Structures	
ECE 310	Digital Signal Processing	

ECE 330	Power Ckts & Electromechanics
ECE 342	Electronic Circuits
ECE 350	Fields and Waves II
Select three ECE labs identified in the List of Technical Electives ⁵	

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education Social and Behavioral Sciences list.		6
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing ECE 445 in the Electrical Engineering Technical Core). May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation.		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering advising website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors. At least seven hours must be taken for a grade.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.		12

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year	
First Semester	
RHET 105 Writing and Research OR CHEM 102 & CHEM 103 MATH 221 ¹ Calculus I ECE 110 ² Introduction to Electronics Liberal Education elective ³ ENG 100 Engineering Orientation	4 4 4 3 4 0
Semester Hours	15
Second Semester	
CHEM 102 General Chemistry I & CHEM 103 OR RHET 105 PHYS 211 University Physics: Mechanics MATH 231 Calculus II ECE 120 Introduction to Computing	4 4 4 3 4
Semester Hours	15
Second Year	
First Semester	
MATH 241 Calculus III PHYS 212 University Physics: Elec Mag ECE 220 Computer Systems Programming Liberal Education elective ³	4 4 4 4
Semester Hours	16
Second Semester	
PHYS 213 Univ Physics: Thermal Physics PHYS 214 Univ Physics: Quantum Physics MATH 286 Intro to Differential Eq Plus ECE 210 Analog Signal Processing Free elective	2 2 4 4 4
Semester Hours	16
Third Year	
First Semester	
ECE 313 ⁴ Probability with Engrg Applic ECE 329 Fields and Waves I Technical elective ⁵ Liberal education elective ³	3 3 7 4
Semester Hours	17
Second Semester	
ECE 385 Digital Systems Laboratory ECE 340 Semiconductor Electronics Technical electives ⁵ Liberal education elective ³	3 3 8 3
Semester Hours	17
Fourth Year	
First Semester	
ECE 445 ⁶ Senior Design Project Lab Technical electives ⁵ Free electives	4 5 4

Liberal Education elective ³	3
Semester Hours	16
Second Semester	
Technical electives ⁵ Free electives	12 4
Semester Hours	16
Total Hours:	128

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² Freshmen take ECE 110 for 3 credit hours. Lab only version of ECE 110 taken by transfer students (with special permission) is 1 credit hour.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ STAT 410 may be substituted

⁵ A minimum of 32 hours chosen from the departmentally approved list of Technical Electives (<http://www.ece.illinois.edu/academics/ugrad/curriculum/tech-electives-06.asp>). Of these, at least three courses are to be chosen from the ECE advanced core electives and three courses from the list of ECE laboratory electives; 20 hours must be ECE course work, six hours non-ECE course work, and the remaining hours may be chosen from the entire List.

⁶ Advanced Composition. May be satisfied by completing ECE 445 or ECE 496 AND ECE 499 or a course within either the liberal education or free elective categories which has the Advanced Composition designation.

Industrial and Enterprise Systems Engineering

Undergraduate Program Office: 104 Transportation Building
Fax: (217) 244-5705

Part of a nationally top-ranked engineering college on a premier Big Ten university campus, the Department of Industrial & Enterprise Systems Engineering offers students a blend of intellectual challenge, excitement, and energy that is transformational—this is a campus where you can learn from a world-renowned faculty, study in the most technologically advanced engineering library in the nation, and contribute to research that has real impact. The University attracts the best students from across the country and around the world. You can choose from about 4,000 courses as well as a variety of sports, the arts, and student activities—you'll never lack amazing things to do.

You can explore your personal interests and goals in more than 50 professional and honor engineering societies, or the more than 1,000 other organizations across campus. These student-run groups offer opportunities to develop leadership skills, test technical competence, and serve society through volunteer projects.

Many students choose a study-abroad experience to gain a better understanding of other cultures, while also developing skills that make them more marketable in the global workplace. The Office of International Programs in Engineering coordinates travel and fellowships to countries all over the world. Engineering at Illinois is the only U.S. institution to offer an international minor in engineering as part of a regular degree program.

- Major in Systems Engineering and Design (formerly General Engineering (p. 202))
- Major in Industrial Engineering (p. 199)

GE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GE>)

IE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IE>)

Industrial Engineering Courses

IE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

IE 297 Independent Study credit: 1 to 4 Hours.

Individual investigations of any phase of Industrial Engineering. May be repeated in separate terms. Prerequisite: Consent of instructor.

IE 300 Analysis of Data credit: 3 Hours.

Nature of probabilistic models for observed data; discrete and continuous distribution function models; inferences on universe parameters based on sample values; control charts, acceptance sampling, and measurement theory. Credit is not given for both IE 300 and CEE 202. Prerequisite: MATH 241.

IE 310 Deterministic Models in Optimization credit: 3 Hours.

Linear Optimization - Simplex method, duality, and sensitivity analysis, Transportation and Assignment Problems, Network Optimization Models, Dynamic Programming, Nonlinear optimization, and Discrete optimization. Credit is not given for both IE 310 and CEE 201. Prerequisite: Credit or concurrent registration in MATH 415.

IE 311 Operations Research Lab credit: 1 Hour.

Applications of OR models with the use of software tools. Prerequisite: Concurrent registration in IE 310.

IE 330 Industrial Quality Control credit: 3 Hours.

Contemporary concepts and methods for quality and productivity design and improvement; philosophies of Deming, Taguchi, and others leading the quality management and engineering movement; Shewhart's methods for statistical process control; process capability analysis; statistical methods for tolerance assessment; process control methods employing attribute data; design of experiments, concepts, and methods. Prerequisite: IE 300.

IE 340 Human Factors credit: 4 Hours.

Introduction to human factors, ergonomics, engineering psychology, history of ergonomics, human-machine relations, displays and controls, human-computer interaction, industrial and aviation systems, physiology of work and anthropometrics, cognitive ergonomics, human reliability, human as manual controller, human-machine systems design, prototyping, professional practice and ethics, laboratory exercises. Same as PSYC 358. Prerequisite: PSYC 100, PSYC 103, or consent of instructor.

IE 360 Facilities Planning and Design credit: 3 Hours.

Facility planning, plant layout design, and materials handling analysis; determination of facilities requirements, site selection, materials flow, use of analytical and computerized techniques including simulation, and applications to areas such as manufacturing, warehousing, and office planning. Prerequisite: Credit or concurrent enrollment in IE 310.

IE 361 Production Planning & Control credit: 3 Hours.

Scope of production systems and activities involved in their design, establishment, management, operation, and maintenance; mathematical and computer models for planning and control of facilities, human resources, projects, products, material, and information in production systems. Prerequisite: IE 310.

IE 370 Stochastic Processes and Applications credit: 3 Hours.

Introduction to stochastic processes with applications in decision-making under uncertainty. Topics include newsvendor problem, discrete-time Markov chain (including classification of states, stationary distribution, absorbing states), Poisson processes (including time-homogenous, time-nonhomogeneous, thinning Poisson), continuous-time Markov chain (including Markov property, generator matrix, stationary distribution), queuing theory (including M/M/k queue, open Jackson network), and Markov decision processes (including finite-horizon models, infinite-horizon models). Prerequisite: IE 300 and IE 310.

IE 397 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phase of Industrial Engineering. May be repeated in separate terms. Prerequisite: Consent of instructor.

IE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in industrial engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

IE 400 Design & Anlys of Experiments credit: 3 or 4 Hours.

Concepts and methods of design of experiments for quality design, improvement and control. Simple comparative experiments, including concepts of randomization and blocking, and analysis of variance techniques; factorial and fractional factorial designs; Taguchi's concepts and methods; second-order designs; response surface methodology. Engineering applications and case studies. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

IE 410 Stochastic Processes & Applic credit: 3 or 4 Hours.

Modeling and analysis of stochastic processes. Transient and steady-state behavior of continuous-time Markov chains; renewal processes; models of queuing systems (birth-and-death models, embedded-Markov-chain models, queuing networks); reliability models; inventory models. Familiarity with discrete-time Markov chains, Poisson processes, and birth-and-death processes is assumed. Same as CS 481. 3 undergraduate hours. 4 graduate hours. Prerequisite: IE 310.

IE 411 Optimization of Large Systems credit: 3 or 4 Hours.

Practical methods of optimization of large-scale linear systems including extreme point algorithms, duality theory, parametric linear programming, generalized upper bounding technique, price-directive and resource-directive decomposition techniques, Lagrangian duality, Karmarkar's algorithm, applications in engineering systems, and use of state-of-the-art computer codes. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 310 and MATH 415.

IE 412 OR Models for Mfg Systems credit: 3 or 4 Hours.

Operations research techniques applied to problems in manufacturing and distribution. Single and multi-stage lot sizing problems, scheduling and sequencing problems, and performance evaluation of manufacturing systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 310.

IE 413 Simulation credit: 3 Hours.

Use of discrete-event simulation in modeling and analysis of complex systems. Data structures and event-list management; verification and validation of simulation models; input modeling, including selection of probability distributions and random variate generation; statistical analysis of output data. Same as CS 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: CS 101 and IE 310.

IE 420 Financial Engineering credit: 3 or 4 Hours.

Introduction to the theory and practice of financial engineering: basics of derivative securities and risk management; Markowitz portfolio theory and capital asset pricing model; interest rate and bonds; forward and futures contracts, hedging using futures contracts; option contracts and arbitrage relationship; binomial model, no-arbitrage pricing, risk-neutral pricing, and American options pricing; Brownian motion, Black-Scholes-Merton model, delta hedging, Greek letters, implied volatility, and volatility smile. 3 undergraduate hours. 4 graduate hours. Prerequisite: IE 300.

IE 430 Economic Found of Quality Syst credit: 3 or 4 Hours.

Total quality systems for planning, developing, and manufacturing world-class products. Economic foundations of total quality. Product value, cost, pricing, environmental quality, activity-based costing, design for assembly, organization structure, lead time, innovation, Taguchi methods, simulation-based significance testing, Strategic Quality Deployment, statistical process control, and conjoint analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

IE 431 Design for Six Sigma credit: 3 Hours.

Quality Engineering principles and the Six Sigma Define-Measure-Analyze-Improve-Control (DMAIC) process. Application of concepts and methods of statistical process control, designed experiments, and measurement systems analysis to cases of quality and productivity improvement; application of the fundamentals of quality engineering and the Six Sigma to areas of produce development, service enterprise, and manufacturing processes. 3 undergraduate hours. 3 graduate hours. Prerequisite: IE 300.

IE 445 Human Performance and Cognition in Context credit: 3 or 4 Hours.

Same as EPSY 456 and PSYC 456. See EPSY 456.

IE 497 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to industrial engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

IE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in industrial engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 hours.

Industrial Engineering

For the Degree of Bachelor of Science in Industrial Engineering

Industrial engineering is a discipline that encompasses the analysis, development, improvement, implementation, and evaluation of integrated systems and their components, including materials, information, energy, people, money, time, equipment, and associated processes. Industrial engineering draws upon a variety of disciplines, from mathematics to psychology, from communications to computer science, and from production management to process control. Industrial engineers design efficient, productive systems in a wide range of business, industrial, and governmental settings.

The technical portion of the industrial engineering curriculum is designed as a sequence of increasingly specialized experiences. The entering student's first year is spent mastering the basics of science: math, chemistry, and physics. Second-year students begin to take fundamental engineering courses such as statics, dynamics, statistics, and strength of materials. Third-year students take a core of industrial engineering courses and begin their chosen area of specialization in one of five tracks, including: Operations Research; Quality Engineering; Supply Chain, Manufacturing, and Logistics; Economics and Finance; and Industrial Engineering Fundamentals. During their senior year, students broaden and deepen their knowledge with additional technical elective courses. Finally, all students participate in the practice of engineering through the capstone senior design course in which they work in teams to solve problems submitted by industry partnering companies, and present their solutions in reports and presentations supported by complete economic analyses. Engineering design, communication, teamwork, and laboratory experiences are integrated throughout all four years of the curriculum.

A combined B.S.-M.S. Industrial Engineering degree program is available. Its admission and course requirements are described in the College of Engineering program information section (<http://catalog.illinois.edu/undergraduate/engineer>).

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements?src=search>).

Note: the TGPA rules for this curriculum are under review and if changed, will be reflected at the Web site indicated.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve

your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
SE 100	Introduction to ISE	1
SE 390	General Engineering Seminar	0
Total Hours		1

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
MATH 415	Applied Linear Algebra	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
Total Hours		31

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Industrial Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of industrial engineering.

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci	3
ECE 110	Introduction to Electronics	3
IE 300	Analysis of Data	3
IE 310	Deterministic Models in Optimization	3
IE 311	Operations Research Lab	1
IE 410	Stochastic Processes & Applic	3
IE 413	Simulation	3
IE 430	Economic Found of Quality Syst	3
ME 330	Engineering Materials	4
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
SE 101	Engineering Graphics & Design	3
SE 261	Business Side of Engineering	1
SE 494	Senior Engineering Project I	3
SE 495	Senior Engineering Project II	2
Total Hours		44

Track Option Electives

These courses enable the student to tailor his or her studies to one's interests and career goals in the major subdisciplines of industrial engineering.

Code	Title	Hours
Track option electives. Courses selected from departmentally approved lists of Track Option Electives or by petition to the department. The current Track options include:		12
Industrial Engineering Fundamentals (IEF)		
Operations Research (OR)		
Quality Engineering (QE)		
Supply Chain, Manufacturing and Logistics (SC&L)		
Economics and Finance (E&F)		

Technical Electives

These courses augment and strengthen the rigorous analysis and design principles practiced in the major subdisciplines of industrial engineering.

Code	Title	Hours
Computer science elective selected from the departmentally approved list of Computer Science Electives.		3
IE technical electives selected from the departmentally approved list of IE Technical Electives.		6
Engineering Science technical elective chosen from the departmentally approved list of Engineering Science Electives.		3
Total Hours		15

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 102	Microeconomic Principles	3
or ECON 103	Macroeconomic Principles	
Electives from the campus General Education Social and Behavioral Sciences list.		3
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing the combination GE 494 + GE 495 in the Industrial Engineering Technical Core)		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.		
		6

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
SE 101 Engineering Graphics Design or RHET 105 ¹	3-4
MATH 221 ² Calculus I	4
Liberal education elective ³	3
ENG 100 Engineering Orientation	0
SE 100 Introduction to ISE	1
Semester Hours	
	15-16

Second Semester

PHYS 211 University Physics: Mechanics	4
CS 101 Intro Computing: Engrg Sci	3
MATH 231 Calculus II	3
ECE 110 Introduction to Electronics	3
RHET 105 Writing and Research or SE 101 ¹	4-3
Semester Hours	
	17-16

Second Year

First Semester

PHYS 212 University Physics: Elec Mag	4
TAM 211 Statics	3
SE 261 Business Side of Engineering	1
MATH 241 Calculus III	4

Liberal education elective ³	3
Semester Hours	
	15

Second Semester

IE 300 Analysis of Data	3
MATH 285 Intro Differential Equations	3
PHYS 213 Univ Physics: Thermal Physics	2
TAM 212 Introductory Dynamics	3
TAM 251 Introductory Solid Mechanics	3
Liberal education elective ³	3
SE 390 General Engineering Seminar	0
Semester Hours	
	17

Third Year

First Semester

IE 310 Deterministic Models in Optimization	3
IE 311 Operations Research Lab	1
IE 430 Economic Found of Quality Syst	3
MATH 415 Applied Linear Algebra	3
ME 330 Engineering Materials	4
Liberal education elective ³	3
Semester Hours	
	17

Second Semester

Computer science elective ⁵	3
IE technical elective ⁶	3
IE 413 Simulation	3
Track option electives ⁴	6
Semester Hours	
	15

Fourth Year

First Semester

IE 410 Stochastic Processes Applic	3
SE 494 Senior Engineering Project I & SE 495 ⁸	3-5
OR	
IE technical elective ^{6,7}	
Track option elective ⁴	3
Engineering science elective ⁹	3
Liberal education elective ³	3
Semester Hours	
	15-17

Second Semester

SE 494 Senior Engineering Project I & SE 495 ^{7,8}	5-3
OR	
IE technical elective ⁶	
Track option elective ⁴	3
Liberal education elective ³	3
Free electives	6
Semester Hours	
	17-15
Total Hours:	
	128

¹ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is SE 101.

² MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

- ³ *Liberal education electives* (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 102 or ECON 103 must be one of the social & behavioral sciences courses, highly recommended before the fourth semester. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.
- ⁴ Selected from the departmentally approved lists of Track Option Electives (<http://ise.illinois.edu/undergraduate-programs/industrial-engineering-degree/industrial-engineering-track-options>) or by petition to the department.
- ⁵ Selected from the departmentally approved list of Computer Science Electives (<https://ise.illinois.edu/undergraduate/courses-curriculum.html>)
- ⁶ Selected from the departmentally approved list of IE Technical Electives (<https://ise.illinois.edu/undergraduate/courses-curriculum.html>)
- ⁷ IE 494 and IE 495 may be taken in the first or second semester of the fourth year as authorized. The alternative is a liberal education elective.
- ⁸ Combination satisfies the General Education Advanced Composition requirement.
- ⁹ Selected from the departmentally approved list of Engineering Science Electives (<https://ise.illinois.edu/undergraduate/courses-curriculum.html>).

Systems Engineering and Design For the Degree of Bachelor of Science in Systems Engineering and Design (formerly General Engineering)

Systems Engineering and Design (SED) is a comprehensive, interdisciplinary program emphasizing interactions between parts of a whole. It brings together basic sciences, engineering analysis, and engineering design. The curriculum offers flexibility through a Secondary Field Option, while providing a broad background in engineering as a whole and decision-making that supports overall design. Systems Engineers understand how to coordinate interacting parts of a whole and to evaluate engineering within economic and physical constraints.

Design experience and project management are emphasized and integrated across the core with a focus on establishing critical problem-solving skills applied across disciplines, strong communication skills, and the ability to work effectively and get results in a team environment.

The capstone experience for Systems Engineering and Design undergraduates is the Senior Project Course. Students work collaboratively with industry and a team of faculty members on a real-world problem during their final semester. The results are documented in a final written report and a formal presentation at the end of the

semester to the company so that the student recommendations may be implemented.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Note: Technical grade point average requirements for graduation and advanced-level course registration are being considered for this curriculum. If added, these rules will be summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
SE 100	Introduction to ISE	1
SE 390	General Engineering Seminar	0
Total Hours		1

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
MATH 415	Applied Linear Algebra	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
Total Hours		31

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Systems Engineering and Design Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of systems engineering and design.

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci	3
ECE 110	Introduction to Electronics	3
ECE 211	Analog Circuits & Systems	2

SE 261	Business Side of Engineering	1
SE 310	Design of Structures and Mechanisms	3
SE 311	Engineering Design Analysis	3
SE 312	Instrumentation and Test Lab	1
SE 320	Control Systems	4
SE 424	State Space Design for Control	3
SE 495	Senior Engineering Project II	2
IE 300	Analysis of Data	3
IE 310	Deterministic Models in Optimization	3
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
TAM 335	Introductory Fluid Mechanics	4
SE 101	Engineering Graphics & Design	3
SE 494	Senior Engineering Project I	3
Total Hours		50

Secondary Field Option Electives

These courses enable the student to tailor the studies to one's interests and career goals in both technical and nontechnical areas.

Code	Title	Hours
	Secondary field option electives selected from departmentally approved lists or by petition to the department. See the Secondary Field Options section below.	12

Technical Electives

The design elective augments a student's knowledge in one or more subdisciplines of mechanics and structures, control systems, and decision-making that support a systems approach to engineering. The engineering science elective extends the knowledge of that area.

Code	Title	Hours
	Design elective selected from the departmentally approved list of Design Electives.	3
	Engineering science elective selected from the departmentally approved list of Engineering Science Electives.	3
Total Hours		6

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 102 or ECON 103	Microeconomic Principles Macroeconomic Principles	3
	Electives from the campus General Education Social and Behavioral Sciences list.	3
	Electives from the campus General Education Humanities and the Arts list.	6

Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
---	---

Total Hours	18
-------------	----

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4

Advanced Composition (satisfied by completing the combination GE 494 + GE 495 in the Systems Engineering and Design Technical Core)

Total Hours	4
-------------	---

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.	6

Secondary Field Options

Secondary field options are of two types: preapproved and customized. Preapproved secondary fields have designated titles and a specified list of courses, from which several may be selected. Approval for the substitution of a course for one on the specified list may be requested via a petition form submitted to the department. Customized secondary fields may be created to achieve goals in areas not provided by pre-approved fields. To do this, a suitable title and all the courses must be petitioned for acceptance by the department. Petition approval is based on the merit of the secondary field and the coherence of the courses within it relative to the student's goals.

Pursuit of campus minors, dual degrees, and James Scholar contracts may be integrated with customized secondary field options. Courses taken may be applied to minors, dual degrees, or contracts as well as secondary field options.

Preapproved Secondary Fields

Preapproved secondary fields are listed below. Approved courses for each are specified at the department's secondary field website (<http://ise.illinois.edu/undergraduate-programs/general-engineering-degree/secondary-field-option>). The following course substitutions may be used

interchangeably to comply with prerequisites of specified courses in some of the secondary fields:

- CEE 202, IE 300, STAT 400
- CEE 201, IE 310
- MSE 406, CEE 300
- ECE 486, SE 320, ME 340

Students may petition to the department for inclusion of a course in the secondary fields listed below. The most likely classes to be accepted are non-permanent and experimental offerings relevant to the various fields. A current list of these may be found at the department's secondary field website (<http://ise.illinois.edu/undergraduate-programs/general-engineering-degree/secondary-field-option>).

- Automotive Engineering
- Bioengineering¹
- Business Systems Integration and Consulting
- Civil Engineering Structures
- Communications and Computer Systems
- Computer Science¹
- Construction
- Control Systems
- Digital Prototyping
- Engineering Administration
- Engineering Marketing
- Environmental Quality
- Manufacturing Engineering¹
- Nondestructive Testing and Evaluation
- Operations Research
- Quality Control
- Rehabilitation Engineering
- Robotics
- Theoretical and Applied Mechanics

¹ *Students fulfilling the corresponding Campus Minor may simultaneously complete the requirements of this Systems Engineering and Design secondary field option.*

Customized Secondary Fields

Customized secondary fields differ from preapproved ones in that no sets of specified courses to choose from have been predefined. For all customized secondary field options, a course list must be constructed and submitted for approval by the department.

The following list contains examples of over fifty titles of customized secondary field options which have been approved. The complete list may be found at the department's secondary field website (<http://ise.illinois.edu/undergraduate-programs/general-engineering-degree/secondary-field-option>). Additional titles beyond those listed may be proposed.

- A foreign language (several)
- An engineering discipline (several)
- Audio Engineering
- Economics
- Entrepreneurship

- Finance
- Fluid Dynamics
- International Business
- Mathematics
- Pre-Law
- Pre-Med
- Renewable Energy

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
Liberal education elective ³	3
ENG 100 Engineering Orientation	0
SE 101 Engineering Graphics Design or RHET 105 ¹	3-4
MATH 221 ² Calculus I	4
SE 100 Introduction to ISE	1
Semester Hours	15-16

Second Semester

ECE 110 Introduction to Electronics	3
PHYS 211 University Physics: Mechanics	4
MATH 231 Calculus II	3
CS 101 Intro Computing: Engrg Sci	3
RHET 105 Writing and Research or SE 101 ¹	4-3
Semester Hours	17-16

Second Year

First Semester

MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
TAM 211 Statics	3
Liberal education elective ³	3
SE 261 Business Side of Engineering	1
Semester Hours	15

Second Semester

IE 300 Analysis of Data	3
MATH 285 Intro Differential Equations	3
PHYS 213 Univ Physics: Thermal Physics	2
TAM 212 Introductory Dynamics	3
TAM 251 Introductory Solid Mechanics	3
Liberal education elective ³	3

SE 390	General Engineering Seminar	0
Semester Hours		17

Third Year**First Semester**

ECE 211	Analog Circuits Systems	2
MATH 415	Applied Linear Algebra	3
	Secondary field option elective ⁴	3
SE 310	Design of Structures and Mechanisms	3
SE 320	Control Systems	4
Semester Hours		15

Second Semester

IE 310	Deterministic Models in Optimization	3
TAM 335	Introductory Fluid Mechanics	4
	Liberal education elective ³	3
SE 311	Engineering Design Analysis	3
SE 312	Instrumentation and Test Lab	1
SE 424	State Space Design for Control	3
Semester Hours		17

Fourth Year**First Semester**

	Secondary field option elective ⁴	3-5
OR		
	SE 494 & SE 495 ⁶	
	Design elective ⁷	3
	Engineering science elective ⁸	3
	Secondary field option elective ⁴	3
	Liberal education elective ^{3, 5}	3
Semester Hours		15-17

Second Semester

SE 494	Senior Engineering Project I & SE 495 ^{5,6}	5-3
OR		
	Secondary field option elective ⁴	3
	Liberal education elective ³	3
	Free electives	6
Semester Hours		17-15

Total Hours: 128

¹ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is SE 101.

² MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 102 or ECON 103 must be one of the social & behavioral sciences courses, highly recommended before the fourth semester. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ Selected from the departmentally approved lists of Secondary Field Option Electives (<http://ise.illinois.edu/undergraduate-programs/general-engineering-degree/secondary-field-option/preapproved-secondary-field>) or by petition to the department.

⁵ IE 494 and IE 495 may be taken in the first or second semester of the fourth year as authorized. The alternative is a liberal education elective.

⁶ Combination satisfies the General Education Advanced Composition requirement.

⁷ Selected from the departmentally approved list of Design Electives (<http://ise.illinois.edu/sites/default/files/documents/ISE%20Electives%2012%202%2013.pdf>). (<https://ise.illinois.edu/undergraduate/courses-curriculum.html>)

⁸ Selected from the departmentally approved list of Engineering Science Electives (<https://ise.illinois.edu/undergraduate/courses-curriculum.html>).

Materials Science and Engineering

David G. Cahill

201 Materials Science and Engineering Building, 1304 West Green, Urbana

PH: (217) 333-1441

FX: (217) 333-2736

<http://matse.illinois.edu>

Curriculum in Materials Science and Engineering (<http://mse.illinois.edu>)

For the Degree of Bachelor of Science in Materials Science and Engineering

Materials science and engineering is the basis for all engineering. Improvements in the quality of life require knowledge of the processing and properties of current materials and the design, development and application of new materials. The Materials Science and Engineering (MatSE) curriculum provides an understanding of the underlying principles of synthesis and processing of materials and of the interrelationships between structure, properties, and processing. Students learn how to create advanced materials and systems required, e.g., for flexible electronic displays and photonics that will change communications technologies, for site specific drug delivery, for self-healing materials, for enabling the transition to a hydrogen-based economy, and for more efficient photovoltaics and nuclear systems for energy production. The curriculum uses concepts from both basic

physics and chemistry and provides a detailed knowledge of what makes the materials we use every day behave as they do.

Students in the first two years take courses in general areas of science and engineering as well as courses introducing the concepts in MatSE. In the third year, students study the common, central issues related to MatSE. In the senior year, students focus on an area of MatSE of their greatest interest, providing them with the detailed knowledge to be immediately useful to corporations, become entrepreneurs, or to provide the underpinning knowledge for graduate study. Note: students interested in biomaterials take a specific set of courses to provide them with a background in biology and chemistry while maintaining a strong engineering focus.

A combined B.S.-M.S. Materials Science and Engineering degree program is available. Its admission and course requirements are described in the College of Engineering program information section (p. 140) and the department's website.

Focus Areas

The MatSE program provides a diverse set of courses enabling a plan of study designed around the interest of the student. The plan of study includes the core areas of materials science (ceramics, metals, polymers, electronic materials, and biomaterials), as well as emerging interdisciplinary topics (e.g., materials for energy, advanced processing and/or characterization methods, materials theory and computation). The biomaterials area requires a unique set of prerequisites and courses, and so has a distinct curriculum. Students are encouraged to take engineering, science, and business electives of interest to them and of relevance to their career goals. Highlights of the possible focus areas are:

- **Advanced Processing and Characterization Methods:** Introduces principles for designing and engineering materials structure, properties, and chemistry from atomic to macroscopic scales. This area also teaches fundamental and practical concepts necessary for determining materials structure and chemistry at different length scales. This area utilizes basic knowledge from physics and chemistry.
- **Biomaterials:** The science and engineering of materials for use in biological applications, particularly as related to human health. This area includes concepts in basic and intermediate chemistry and and basic and intermediate biology, with relatively less coverage of physics topics. It includes a subset of the standard junior year courses and requires additional chemistry and biology in the junior year.
- **Composites:** Studies the science and engineering of materials formed by combining multiple materials into a single material. Studies of composites make significant use of properties of materials and mathematical knowledge.
- **Ceramics:** Studies the science and engineering of ceramic materials, including alloy design, composites, synthesis, and processing methods. Ceramics makes significant use of concepts from both basic physics and basic chemistry.
- **Electronic Materials:** Describes the design and engineering of materials primarily for the microelectronics industries. Topics span the ceramics, metals, and polymers areas. Concepts from basic and intermediate physics are used along with basic chemistry.
- **Metals:** Introduces the design and processing of metals and alloys to achieve desired properties. This area primarily uses concepts from basic and intermediate physics with relatively less emphasis on chemical concepts.

- **Polymers:** Teaches the methods for molecular design to achieve desired properties in individual polymers, polymer blends, and polymer composites as well as processing methods. This area primarily uses concepts from basic and intermediate chemistry with relatively less emphasis on physics concepts.
- **Materials for Energy and the Environment:** Studies materials for energy production, harvesting, and storage; materials for environmental remediation, water purification, and recycling; and includes discussions on sustainability and life-cycle analysis of the environmental impact of materials. Materials issues related to both renewable and non-renewable energy production are covered. This area utilizes concepts from both physics and chemistry.
- **Materials Theory and Computation:** Introduces computational modeling approaches for materials that span length- and time-scales from the atomic to the macroscopic. This area focuses on computational prediction of material response to different stimuli (mechanical loads, temperature, electronic excitations, etc.) and fundamental material properties.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as follows.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
MSE 183	Freshman Materials Laboratory ^{1,2}	1
Total Hours		1

¹ External transfer students take ENG 300 instead.

² This optional course is highly recommended for freshmen and may be used to help meet free elective requirements.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which this engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ¹	4
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		34

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Materials Science and Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of materials science and engineering.

For All Students

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci	3
ECE 205	Elec & Electronic Circuits	3
IE 300	Analysis of Data ¹	3
or STAT 400	Statistics and Probability I	
MSE 182	Introduction to MatSE	2
MSE 201	Phases and Phase Relations	3
MSE 206	Mechanics for MatSE	4
MSE 307	Materials Laboratory I	3
MSE 308	Materials Laboratory II	3
MSE 395	Materials Design	3
MSE 401	Thermodynamics of Materials	3
MSE 402	Kinetic Processes in Materials	3
MSE 406	Thermal-Mech Behavior of Matls	3
Total Hours		36

¹ The replacement of IE 300 with STAT 400 is not allowed for students in the Biomaterials Area unless one of their area or technical electives is deemed by the Accreditation Board for Engineering and Technology (ABET) to be an engineering course. The extra hour of credit for STAT 400 may be used to help meet free elective requirements.

For the Biomaterials Area

Code	Title	Hours
CHEM 232	Elementary Organic Chemistry I	0 TO 4
MCB 150	Molec & Cellular Basis of Life	4
MCB 450	Introductory Biochemistry	3
MCB 252	Cells, Tissues & Development	3
Subtotal		13
Total for the Biomaterials Area		49

For All Other Areas

Code	Title	Hours
MSE 304	Electronic Properties of Matls	3
MSE 405	Microstructure Determination	3
Subtotal		6
Total for all non-Biomaterials Students		42

Technical Electives

These courses stress the rigorous analysis and design principles practiced in the major subdisciplines of materials science and engineering embodied in the MatSE focus areas.

For the Biomaterials Area

Code	Title	Hours
	Biomaterials area topical lectures selected from the list of topical lectures established by the department. ¹	5

MSE 404	Laboratory Studies in Materials Science and Engineering	3
MSE 470	Design and Use of Biomaterials	3
	Topical lectures outside the biomaterials area.	6
Total Hours		17

¹ Topical Lectures (<http://www.matse.illinois.edu/academics/undergraduate/specializations.html#approved>).

For All Other Areas

Code	Title	Hours
	Topical lectures selected from the list of courses established by the department. No more than 6 hours may be from introductory topical lectures. ¹	12
MSE 404	Laboratory Studies in Materials Science and Engineering	6
	Technical electives selected from the list of approved courses established by the department. ²	6
Total Hours		24

¹ Topical Lectures (<http://www.matse.illinois.edu/academics/undergraduate/specializations.html#approved>).

² List of approved technical electives (<http://www.matse.illinois.edu/academics/undergraduate/curriculum/technical.html>).

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
	Electives from the campus General Education Social and Behavioral Sciences list.	6
	Electives from the campus General Education Humanities and the Arts list.	6
	Electives either from a list approved by the college, or additional courses from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy two or more cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing the sequence MSE 307 + MSE 308 in the Materials Science and Engineering Technical Core)		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree. ¹		6

¹ *College of Engineering Advising Website* (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>)

Topical Lecture Courses

The courses listed below have been approved by the department as topical lectures for all focus areas.

Code	Title	Hours
Biomaterials Area		
MSE 470	Design and Use of Biomaterials	3
Topical Lectures ¹		5
All Other Areas		
MSE 420	Ceramic Materials & Properties	3
MSE 421	Ceramic Processing	3
MSE 422	Electrical Ceramics	3
MSE 423	Ceramic Processing Laboratory	3
ECE 340	Semiconductor Electronics	3
MSE 460	Electronic Materials I	3
MSE 461	Electronic Materials II	3
MSE 440	Mechanical Behavior of Metals	3
MSE 441	Metals Processing	3
MSE 442	Metals Laboratory	3
MSE 443	Design of Engineering Alloys	3
MSE 450	Polymer Science & Engineering	3
MSE 452	Polymer Laboratory	3
MSE 453	Plastics Engineering	3
Area technical electives ¹		3-6

¹ *Selected from the departmental list of approved area technical electives* (<http://www.matse.illinois.edu/academics/undergraduate/specializations.html#approved>) for focus areas.

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each

individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken. The first two years of the Suggested Sequence is the same for all MatSE students. The third and fourth years vary with the Focus Area chosen. Refer to the appropriate third and fourth year sequence.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
ENG 100 Engineering Orientation	0
MATH 221 Calculus I	4
MSE 182 Introduction to MatSE	2
RHET 105 Writing and Research (or Liberal education elective) ^{2,3}	4
<hr/>	
Semester Hours	14

Second Semester

CHEM 104 General Chemistry II	3
CHEM 105 General Chemistry Lab II	1
MATH 225 Introductory Matrix Theory	2
MATH 231 Calculus II	3
MSE 183 ⁴ Freshman Materials Laboratory	1
PHYS 211 University Physics: Mechanics	4
RHET 105 Writing and Research (or Liberal education elective) ^{2,3}	4
<hr/>	
Semester Hours	17

Second Year

First Semester	Hours
CS 101 Intro Computing: Engrg Sci	3
MATH 241 Calculus III	4
MSE 201 Phases and Phase Relations	3
PHYS 212 University Physics: Elec Mag	4
Liberal education elective ³	3
<hr/>	
Semester Hours	17

Second Semester

ECE 205 Elec Electronic Circuits	3
MATH 285 Intro Differential Equations	3
MSE 206 Mechanics for MatSE	4
PHYS 214 Univ Physics: Quantum Physics	2
Liberal education elective ³	3
<hr/>	
Semester Hours	15
<hr/>	
Total Hours:	63

All students except Biomaterials Area

Third Year

First Semester	Hours
IE 300 Analysis of Data or STAT 400 ⁵	3
MSE 307 ⁶ Materials Laboratory I	3

MSE 401	Thermodynamics of Materials	3
MSE 406	Thermal-Mech Behavior of Matls	3
Liberal education elective ³		3
Semester Hours		15

Second Semester

MSE 304	Electronic Properties of Matls	3
MSE 308 ⁶	Materials Laboratory II	3
MSE 402	Kinetic Processes in Materials	3
MSE 405	Microstructure Determination	3
Topical Lecture (Intro Level Suggested)		3
Liberal education elective ¹		3
Semester Hours		18

Fourth Year**First Semester**

Topical lecture courses ^{7,8}		6
MSE 404	Laboratory Studies in Materials Science and Engineering	3
Technical elective ⁹		3
Liberal education elective ³		3
Free elective		3
Semester Hours		18

Second Semester

MSE 395	Materials Design	3
MSE 404	Laboratory Studies in Materials Science and Engineering	3
Topical Lecture		3
Technical elective ⁹		3
Free elective		3
Semester Hours		15
Total Hours:		66

Biomaterials Area**Third Year****First Semester**

	Hours	
CHEM 232	Elementary Organic Chemistry I	3
MSE 307 ⁶	Materials Laboratory I	3
MSE 401	Thermodynamics of Materials	3
MSE 406	Thermal-Mech Behavior of Matls	3
MCB 150	Molec Cellular Basis of Life	4
Semester Hours		16

Second Semester

MCB 252	Cells, Tissues Development	3
IE 300	Analysis of Data or STAT 400 ⁵	3
MSE 308 ⁶	Materials Laboratory II	3
MSE 402	Kinetic Processes in Materials	3
Liberal education elective ³		3
Semester Hours		15

Fourth Year**First Semester**

MSE 470	Design and Use of Biomaterials	3
MCB 450	Introductory Biochemistry	3

Topical lecture in biomaterials area		2
Topical lecture outside of biomaterials area		3
Liberal education elective ³		3
Free Elective		3

Semester Hours		17
----------------	--	----

Second Semester

MSE 395	Materials Design	3
MSE 404	Laboratory Studies in Materials Science and Engineering	1.5
Topical lecture in biomaterials area		3
Topical lecture outside of biomaterials area		3
Liberal education elective ³		3
Free elective		3

Semester Hours		16.5
----------------	--	------

Total Hours:		64.5
--------------	--	------

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² RHET 105 may be taken in the first or second semester as authorized. The alternative is a social sciences or humanities elective.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ This course is highly recommended for freshmen, who may use it to help meet free elective requirements.

⁵ Satisfies the General Education Advanced Composition requirement.

⁶ The replacement of IE 300 with STAT 400 is not allowed for students in the Biomaterials Area unless one of their area or technical electives is deemed by ABET to be an engineering course. The extra hour of credit for this course may be used to help meet free elective requirements.

⁷ To be selected from list of area specialty course (<http://www.matse.illinois.edu/academics/undergraduate/specializations.html#approved>) established by the department to provide an acceptable level of study in the student's chosen focus area.

⁸ During fourth year, strongly recommended is incorporation of one or more of an internship, co-op position, and a research project during summers or an academic semester, or both. For students who intend to continue in graduate school, recommended additionally is the undertaking of a research project (Senior Thesis) in the senior year. The project may take the place of 4-6 hours of free, technical, or area specialty electives.

⁹ Selected from the departmental list of approved technical electives (<http://www.matse.illinois.edu/academics/undergraduate/curriculum/technical.html>).

MSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MSE>)

Courses

MSE 101 Materials in Today's World credit: 3 Hours.

Introduction to the field of materials science. Examination and demonstration of materials and their properties in the context of their use in everyday objects. Survey of the role materials have played and will continue to play in shaping society. Intended for non-engineering majors. Technical elective credit is not given to College of Engineering majors. This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

MSE 182 Introduction to MatSE credit: 2 Hours.

Overview of MatSE as a basis for understanding how structure, property, and processing relationships are developed and used for different types of materials. Case studies of advances in new materials and processes illustrating the role of materials in modern society. Laboratory-discussion demonstrations and experiments. Design-team analysis or synthesis of objects that use materials creatively.

MSE 183 Freshman Materials Laboratory credit: 1 Hour.

Team-based laboratory developing concepts introduced in MSE 182. Practical descriptions of materials concepts, literature research, experimental design, concept validation, teamwork, and presentation of results. Prerequisite: MSE 182.

MSE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 5 hours. May be repeated in the same term.

MSE 201 Phases and Phase Relations credit: 3 Hours.

Understanding microstructure. Quantitative examination of phases (crystalline and non-crystalline structures) and the relationships between phases (phase diagrams). Commercial practices for producing desired microscopic phase configurations and macroscopic shapes (processing). Credit is not given for both MSE 201 and MSE 280. Prerequisite: MSE 182; credit or concurrent enrollment in CHEM 104, MATH 231 and PHYS 211.

MSE 206 Mechanics for MatSE credit: 4 Hours.

Statics, mechanics of materials, and fluid mechanics concepts pertinent to the fields of materials science and engineering: force resultants; stresses and strains produced in elastic bodies; microscopic effects of different loading states (tension, compression, torsion, and bending) on deformable bodies; beam stresses and deflections; three-dimensional stresses and strains; stress and strain-rate relationships for Newtonian and non-Newtonian fluids; conservation equations (control volume analysis) for fluid flow; Reynolds number; slow inertial and turbulent flows. Credit is not given for both MSE 206 and either TAM 251 or TAM 335. Prerequisite: MATH 225, MATH 241 and PHYS 211; credit or concurrent enrollment in CS 101 and MSE 201.

MSE 280 Engineering Materials credit: 3 Hours.

Materials science and engineering of ceramics, electronic materials, metals and polymers. Bonding; crystallography; imperfections; processing and properties of semiconductors, polymers, metals, ceramics and composites; phase diagrams. Case studies. Credit is not given for both MSE 280 and any of CEE 300, ME 330, MSE 201. Prerequisite: CHEM 102 and PHYS 211.

MSE 304 Electronic Properties of Matls credit: 3 Hours.

Electronic structure and bonding of materials, electrical conduction in metals and semiconductors, and dielectric and magnetic properties of solids. Credit is not given for both MSE 304 and PHYS 460. Prerequisite: PHYS 214.

MSE 307 Materials Laboratory I credit: 3 Hours.

Experiments using optical and scanning electron microscopy and various thermal and thermodynamic measuring techniques. Familiarization with laboratory test instruments. MSE 307 and MSE 308 are approved for General Education credit only as a sequence. Both courses must be completed to receive Advanced Composition credit. Prerequisite: Credit or concurrent registration in MSE 401 and either MSE 201 or MSE 280. This course satisfies the General Education Criteria for:
Advanced Composition

MSE 308 Materials Laboratory II credit: 3 Hours.

Experiments characterizing mechanical, transport, and magnetic-electric properties of materials and the use optical and scanning electron microscopy and infrared spectroscopy. MSE 307 and MSE 308 are approved for General Education credit only as a sequence. Both courses must be completed to receive Advanced Composition credit. Prerequisite: MSE 307; credit or concurrent registration in MSE 304 and MSE 405. This course satisfies the General Education Criteria for:
Advanced Composition

MSE 395 Materials Design credit: 3 Hours.

Design of various engineering devices, objects, or systems. Team-based and faculty-guided projects directed toward the development of materials-based solutions to problems originating from student, faculty, and industrial suggestions. Solutions are based on the knowledge, skills, and design experience acquired in earlier course work and incorporate engineering standards and realistic constraints such as economic, environmental, sustainability, manufacturability, ethical, health and safety, social, and political concerns. Prerequisite: This course is available to engineering majors with senior standing only.

MSE 396 Introduction to Research credit: 1 to 3 Hours.

Fundamental tenets of research including an introduction to laboratory safety, constructing a hypothesis, and the design of experiments to test the hypothesis. Basics of mathematical modeling and statistical analysis of data, including the analysis of research data. Emphasis on exposure to the basic procedures comprising engineering communication and the importance of verbal and written communication. Approved for Letter and S/U grading. May be repeated in separate terms.

MSE 397 Independent Study credit: 1 to 4 Hours.

Individual study of any topic in materials science and engineering selected by the student and conducted under the supervision of a member of the faculty. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MSE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

MSE 401 Thermodynamics of Materials credit: 3 Hours.

Basic thermodynamic principles including energy, entropy, and free energy; macroscopic properties of hard and soft materials systems, such as equilibrium states, phases, and phase transitions. Application of phase diagrams. Statistical interpretation of thermodynamics on the atomistic level. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 401 and CHEM 444 or PHYS 427. Prerequisite: MSE 201 or MSE 280; credit or concurrent registration in MATH 285.

MSE 402 Kinetic Processes in Materials credit: 3 Hours.

Kinetics of chemical reactions; rate equations, reaction mechanisms; transport processes; diffusion equations, atomic and molecular diffusion; phase transformations; nucleation, crystallization, displacive, spinodal decomposition; surface and interface phenomena; sintering, grain growth, recovery, and recrystallization. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 201 and MSE 401.

MSE 403 Synthesis of Materials credit: 3 Hours.

Fundamentals of the synthesis of materials. Principles of synthesis; processes, approaches, synthetic methodology and probes; methodologies in materials synthesis; polymerization, sol-gel processes, liquid and vapor phase synthesis, materials coupling reactions, and precursor-derived, radiation-induced and asymmetric synthesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 201; credit or concurrent registration in MSE 401.

MSE 404 Laboratory Studies in Materials Science and Engineering credit: 1.5 Hours.

Experiments include direct hands-on investigations or are performed through computational approaches. Laboratory experiences include both fundamental studies as well as investigations on more applied topics. 1.5 undergraduate hours. 1.5 graduate hours. May be repeated if topics vary. Prerequisite: MSE 307 and MSE 308 or permission of instructor. Senior standing.

MSE 405 Microstructure Determination credit: 3 Hours.

Fundamentals and applications of various forms of microscopy and diffraction for characterization of physical microstructure of materials and of various forms of spectroscopy for characterization of chemical microstructure. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 214, CHEM 104, MSE 201, and MSE 307.

MSE 406 Thermal-Mech Behavior of Matls credit: 3 Hours.

Fundamentals of elastic, viscoelastic and plastic deformation of materials, elementary theory of statics and dynamics of dislocations; strengthening mechanisms; behavior of composites; fracture and fatigue behavior; fundamentals of thermal behavior: heat capacity, thermal expansion and conductivity; effects of thermal stress. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 406 and either ME 430 or TAM 424. Prerequisite: MSE 206; credit or concurrent registration in MSE 401.

MSE 420 Ceramic Materials & Properties credit: 3 Hours.

Ceramic material fundamentals, emphasizing structure-property relations. Development, use, and control of the properties of a wide variety of ceramic materials from a physico-chemical point of view. 3 undergraduate hours. 3 graduate hours.

MSE 421 Ceramic Processing credit: 3 or 4 Hours.

Microstructure development and processing of ceramic materials, with an emphasis on structure-property-processing relationships. Processing methodologies and their effects on microstructural development. Illustration and examination of several ceramic components within this context. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 420.

MSE 422 Electrical Ceramics credit: 3 Hours.

Electrical ceramics, from insulators to conductors, and magnetic and optical materials; the role of the processing cycle and microstructure development on the design and performance of electrical components; capacitors, resistors, and inductors; structure-property relations for pyro-, piezo-, and ferroelectric materials; perovskite and spinel based structures; varistors, thermistors, transducers, actuators, memory elements, multilayered components, and their applications. Design project. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 420.

MSE 423 Ceramic Processing Laboratory credit: 3 Hours.

Experiments and demonstrations involving a wide range of modern ceramic processing methods will be conducted to develop fundamental understanding of the relationships between raw materials, processing methods, microstructural development, and physical properties. Lab emphasis on the underlying physics and chemistry of processing and design of processing routes to achieve desired material properties. Technical reports. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 421.

MSE 440 Mechanical Behavior of Metals credit: 3 Hours.

Mechanical behavior of solids: crystal plasticity, dislocations, point defects and grain boundaries, creep and fatigue behavior, and fracture. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 406.

MSE 441 Metals Processing credit: 3 Hours.

Melt, mechanical, thermal, powder, and surface processing of metals. Extraction of metals, joining of metals, metal composites, and metal recycling. Relationships between the processing of metals, the microstructures that are produced, and the behavior of metal components. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 406.

MSE 442 Metals Laboratory credit: 3 Hours.

Advanced metallurgy laboratory. Effects of heat treatment; mechanical testing; oxidation and corrosion; metallography of selected alloys. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 308, MSE 440, and MSE 441.

MSE 443 Design of Engineering Alloys credit: 3 Hours.

Application of science and engineering principles to the design, selection, and performance of engineering alloys. Alloy classes, design, effect of alloying elements, relation to processing variables, and structure-property relationships; design project. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 401 and MSE 402.

MSE 445 Corrosion of Metals credit: 3 or 4 Hours.

Electrochemistry, thermodynamics, and kinetics of corrosion; behavior of ferrous and nonferrous metals; corrosion rates; corrosion control; cathodic and anodic protection; high-temperature corrosion; corrosion testing; electrolytic machining methods. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 450 Polymer Science & Engineering credit: 3 or 4 Hours.

Polymer solution properties, conformation, and molecular weight characterization. Rheological and viscoelastic behavior: relaxations and transitions, rubber elasticity. Crystallinity, morphology, and deformation of crystalline polymers. Blends and composites. Methods of fabrication. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 452 Polymer Laboratory credit: 3 Hours.

Experimental investigations of polymer synthesis, characterization (molecular, thermal, structural and electronic), processing and device fabrication. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 453 Plastics Engineering credit: 3 Hours.

Engineering characteristics of plastics; viscoelasticity, viscosity, yield, and fracture; reinforced polymers; processing; environmental considerations; applicability of technical data sheets; design (project); current advances. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 454 Mechanics of Polymers credit: 3 Hours.

Same as AE 427 and TAM 427. See TAM 427.

MSE 455 Macromolecular Solids credit: 3 Hours.

Mechanical behavior of amorphous and semi-crystalline polymers; overview of polymer structure and characterization; polymer morphology; orientation effects, rubber elasticity, polymer linear viscoelasticity using Boltzmann superposition and mechanical models; measurement of viscoelastic properties; relaxation and transitions; polymeric yield phenomena and plastic flow; deformation mechanisms; fracture and craze formation; impact and fatigue. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 456 Mechanics of Composites credit: 3 Hours.

Behavior of composite materials and their use in engineering structures: behavior and properties of the constituent fibers and matrices, micromechanical predictions of composite properties, anisotropic elasticity, behavior of composite laminae, and classical lamination theory; fracture mechanisms, failure theories; behavior of composite plates and beams. Same as AE 428 and TAM 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: AE 321, CEE 300, ME 330, or MSE 406.

MSE 457 Polymer Chemistry credit: 3 or 4 Hours.

Methods used to make polymers including reaction mechanisms, kinetics, and analytical techniques. Emphasis on understanding how macromolecule structure, composition, and properties are controlled through a variety of synthetic approaches. Same as CHEM 480. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 458 Polymer Physics credit: 3 or 4 Hours.

Physics of polymer systems. Equilibrium conformation, structure, properties and phase transitions of polymer solutions, dense melts, liquid crystals, mixtures, block copolymers, surfaces and interfaces, gels and rubbers, biopolymers, and electronic polymers. Same as CHEM 482. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401.

MSE 460 Electronic Materials I credit: 3 Hours.

Materials science, engineering, and processing of semiconductors. Semiconductor structure and chemistry relationships to electronic and optical properties. Control of processing to achieve desired properties; design and production of novel materials. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340; MSE 304 or PHYS 460.

MSE 461 Electronic Materials II credit: 3 Hours.

Materials science, engineering, and processing of microlithographic materials, conductors, and dielectrics for electronic applications. Performance related to materials properties and processing. Processing commonly used in microelectronic circuit manufacture for metallization, dielectric formation, and lithography. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

MSE 462 Electronic Materials Lab credit: 3 Hours.

Fabrication, analysis, and properties of thin film materials. Principles and practice of (i) deposition of thin film materials by vacuum evaporation, sputtering and plasma assisted processes; (ii) modification of properties by thermal reaction, surface treatment, etc.; (iii) characterization of key properties including electrical conductivity, optical properties, and stress. Methods to optimize the film microstructure and engineering properties via growth techniques. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

MSE 466 Materials in Electrochem Syst credit: 3 Hours.

Materials issues in electrochemical systems including fundamental thermodynamics, kinetics and electrode processes in electrochemical systems and materials specific issues in the materials design, materials in energy storage and conversion systems, and electrochemical corrosion. Emphasis placed on issues of materials selection, microstructure, systems design, materials limitations, and data analysis. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 466 and CHEM 524.

MSE 470 Design and Use of Biomaterials credit: 3 Hours.

Characterization and use of biomaterials in medical applications. Concepts of biocompatibility in terms of structure and properties of materials and interactions between materials and proteins, cells, and tissue. Issues related to the design of biomaterials. Design of biomaterials to meet specific medical needs. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent registration in both MCB 252 and either CHEM 232 or MSE 403.

MSE 472 Biomaterials Laboratory credit: 3 Hours.

Experiments involving the chemistry and physics of biomaterials, biocompatibility of materials, tissue regeneration, rheology of biomaterials and tissues, structural studies of biomaterials, and controlled release of small molecules and drugs. Laboratory techniques for protein purification, cytotoxicity testing, tissue culture, mechanical testing, microscopy, and X-ray diffraction. Same as BIOE 473. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 470.

MSE 473 Biomolecular Materials Science credit: 3 Hours.

Fundamental and unifying principles in biomolecular materials science. Nucleic acids, proteins, lipids, and sugars. Specific and non-specific interactions which govern biomolecular behavior in a wide range of contexts (e.g., self-assembly, cell adhesion). Present knowledge and empirical evidence integrated with discussions of experimental characterization and manipulation techniques in biotechnology. Application of course content and expository research into current literature via a case study term project. 3 undergraduate hours. 3 graduate hours.

MSE 474 Biomaterials and Nanomedicine credit: 3 Hours.

Design and synthesis of polymeric biomaterials and nanobiomaterials for their applications in drug and gene delivery. Part (1) fundamental biopolymer synthesis: functional group protection and de-protection; bioconjugation; protein pegylation and design and synthesis of natural and synthetic non-degradable and degradable polymers, hydrogels, bio-inspired materials, and stimuli responsive biomaterials. Part (2) preparation of nanomedicines for drug and gene delivery: nanofabrication of micelles, nanoparticles, protein conjugates, drug conjugates, nanoencapsulates, and polymeric vesicles; in-vitro and in-vivo small-molecule, gene, and protein delivery. Impact of the chemical structures of biopolymers on the stability, biocompatibility, toxicity, and in-vitro and in-vivo efficacy; clinical translation of the resulting nanomedicines in drug delivery. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 236 or MSE 457; MCB 450.

MSE 480 Surfaces and Colloids credit: 3 or 4 Hours.

Chemistry and physics of surfaces and interfaces, with emphasis on behavior in liquid media. Surface composition; surface and interfacial forces; colloidal stability and flocculation; amphiphilic molecules. Same as CHEM 488. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401.

MSE 481 Electron Microscopy credit: 3 or 4 Hours.

Theory and application of transmission electron microscopy and diffraction with emphasis on thin crystals; electron optics, interference phenomena, interpretation of images and diffraction patterns, specimen preparation. 3 undergraduate hours. 4 graduate hours. Prerequisite: MSE 405.

MSE 484 Composite Materials credit: 3 or 4 Hours.

Metal, ceramic, and polymer matrix composites. Interrelationships between processing, microstructure, and properties. Selecting composite materials for different engineering applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 201 and MSE 206.

MSE 485 Atomic Scale Simulations credit: 3 or 4 Hours.

Application of Monte Carlo and Molecular Dynamics techniques in primarily classical simulations to understand and predict properties of microscopic systems in materials science, physics, biology, and chemistry. Numerical algorithms, connections between simulation results and real properties of materials (structural or thermodynamic), and statistical and systematic error estimation using real simulation programs. Simulation project comprised of scientific research, algorithm development, and presentation. Same as CSE 485 and PHYS 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: MSE 401; one of C, C++, or Fortran programming experience.

MSE 487 Materials for Nanotechnology credit: 3 or 4 Hours.

Survey of the synthesis, processing, structure properties and technological applications of materials with nanometer dimensions. Semiconductor nanocrystals and size-dependent optical properties; metal nanostructures and plasmonics; nanowires and nanotubes; electronics and optoelectronics; nanoscale heterostructures; assembly and fabrication. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401 and PHYS 214.

MSE 488 Optical Materials credit: 3 or 4 Hours.

Optical properties of materials of current and potential technological importance and application to devices. Applicable optics fundamentals based on Maxwell's equations. Liquid crystals for displays; photopolymers for holographic data storage; electro-optic materials for high speed light modulators; electroluminescent materials for light emitting diodes. Application of optics, materials and chemistry in design of practical devices. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 and PHYS 214.

MSE 489 Matl Select for Sustainability credit: 3 or 4 Hours.

Quantitative methods to optimize the selection of materials including traditional (minimize mass or volume, maximize performance) and sustainability (minimize energy consumption and CO₂ emission during synthesis, maximize recyclability) goals. Tradeoff methods to optimize both via engineering design and materials selection for product lifetime, economic outlay and return, time dynamics and materials consumption, recycling, and disposal. Application of commercial software to optimize selections. For engineering and science majors only. 3 undergraduate hours. 4 graduate hours.

MSE 492 Lab Safety Fundamentals credit: 1 Hour.

Key aspects of laboratory setups, operating procedures, and emergency preparedness measures necessary for the experimentalist. Same as CHEM 494. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only.

MSE 497 Independent Study credit: 1 to 4 Hours.

Individual study of any topic in materials science and engineering under the supervision of a member of the faculty. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MSE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

MSE 499 Senior Thesis credit: 1 to 5 Hours.

Individual research in an area of materials science and engineering under the supervision of members of the staff. 1 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Grade point average of 3.0 and consent of instructor.

Mechanical Science and Engineering

Anthony Jacobi

144 Mechanical Engineering Building, 1206 West Green, Urbana
PH: (217) 244-8924

<http://mechse.illinois.edu>

Undergraduate Program Office: 154 Mechanical Engineering Building
PH: (217) 333-5981

E-mail: mechse-ug-advise@illinois.edu

- Bachelor of Science in Mechanical Engineering (p. 220)
- Bachelor of Science in Engineering Mechanics (p. 217)

ME Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ME>)

Mechanical Engineering Courses

ME 170 Computer-Aided Design credit: 3 Hours.

Geometry and topology of engineered components: creation of engineering models and their presentation in standard 2D blueprint form and as 3D wire-frame and shaded solids; meshed topologies for engineering analysis and tool-path generation for component manufacture; ISO and ANSI standards for coordinate dimensioning and tolerancing; geometric dimensioning and tolerancing. Use of solid-modeling software for creating associative models at the component and assembly levels with automatic blueprint creation, interference checking, and linked bill of materials. Credit is not given for both ME 170 and GE 101.

ME 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ME 270 Design for Manufacturability credit: 3 Hours.

Introduction to DFM methodologies and tools; material selection (new and traditional materials); designing for primary manufacturing processes (cutting fundamentals, casting, forming, and shaping); designing with plastics (snap-fits, integral hinges, etc.); design for assembly (DFA); geometric dimensioning and tolerancing (GD&T). Same as TAM 270. Prerequisite: ME 170. ME and EM majors only.

ME 297 Introductory Independent Study credit: 1 to 3 Hours.

Independent study and/or individual projects related to mechanical engineering. Approved for Letter and S/U grading. May be repeated to a maximum of 6 credit hours for letter grade; no limit for S/U grade mode. Prerequisite: Consent of Instructor.

ME 300 Thermodynamics credit: 3 Hours.

Classical thermodynamics through the second law; system and control-volume analyses of thermodynamic processes; irreversibility and availability; relations for ideal gas mixtures. Prerequisite: MATH 241.

ME 310 Fundamentals of Fluid Dynamics credit: 4 Hours.

Fundamentals of fluid mechanics with coverage of theory and applications of incompressible viscous and inviscid flows, and compressible high speed flows. Credit is not given for both ME 310 and TAM 335. Prerequisite: MATH 285; credit or concurrent registration in ME 300.

ME 320 Heat Transfer credit: 4 Hours.

Principles and application of heat transfer by conduction, convection, and thermal radiation. Prerequisite: ME 310 or TAM 335.

ME 330 Engineering Materials credit: 4 Hours.

Structures of polymers, metals, and ceramics as the basis for their mechanical behavior. Manipulation of structure through such processes as heat treatment and solidification. Mechanisms of material failure in service (yielding, fracture, fatigue, creep, corrosion, and wear) and simple design techniques to avoid these failures. Strategies for materials selection in design. Credit is not given for both ME 330 and either CEE 300 or MSE 280. Prerequisite: CHEM 102 and TAM 251.

ME 340 Dynamics of Mechanical Systems credit: 3.5 Hours.

Dynamic modeling of mechanical components and systems; time-domain and frequency-domain analyses of linear time-invariant systems; multi-degree-of-freedom systems; linearization of nonlinear systems. Credit is not given for both ME 340 and either GE 320 or AE 353. Prerequisite: MATH 285 and TAM 212; credit or concurrent registration in ECE 205, ECE 206, and MATH 415.

ME 351 Analysis of Mfg Processes credit: 3 Hours.

Mechanistic and empirical modeling of manufacturing processes including metal cutting theory, casting analysis, forging analysis, sheet metal forming, plastics molding, welding and mechanical joining assembly analysis. Also, hands-on exposure to manufacturing processes, CAD/CAM software (MasterCam), 5 axis machining (ShopBot), Wire EDM machining, statistical process control (SPC), and geometric dimensioning and tolerancing (GD&T) metrology principles using CMM. Prerequisite: ME 270.

ME 360 Signal Processing credit: 3.5 Hours.

Basic electromechanical techniques used in modern instrumentation and control systems. Use of transducers and actuators. Signal conditioning, grounding, and shielding. Analog and digital signal processing and feedback control methods with emphasis on frequency domain techniques. Frequency response of continuous and discrete systems. Credit is not given for both ME 360 and ABE 425. Prerequisite: ME 340.

ME 370 Mechanical Design I credit: 3 Hours.

Kinematics and dynamics of machinery, including analytical kinematics, force analysis, cam design and balancing. Application of elementary mechanics of solids to analyze and size machine components for stress and deflection. Finite-element analysis with emphasis on beam and plate models. Prerequisite: ME 170, TAM 212, and TAM 251.

ME 371 Mechanical Design II credit: 3 Hours.

Design and analysis of machinery for load-bearing and power transmission. Consideration of material failure modes, including yielding, fracture, fatigue, and creep. Design and selection of machine elements: bolts, springs, rolling-element bearings, fluid-film lubrication, and power transmissions, including gears and friction drives. Prerequisite: ME 330 and ME 370.

ME 390 Seminar credit: 0 Hours.

Lectures by faculty and invited authorities, concerning the ethics and practices of mechanical engineering/engineering mechanics, as well as its relationship to other fields of engineering, to economics, and to society. Offered fall term only. Approved for S/U grading only.

ME 400 Energy Conversion Systems credit: 3 or 4 Hours.

Processes and systems for energy conversion, including power and refrigeration cycles, air conditioning, thermoelectrics and fuel cells; ideal-gas mixtures and psychrometrics. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 300.

ME 401 Refrigeration and Cryogenics credit: 3 or 4 Hours.

Theory of operation and design of equipment for production of low temperatures, from below ambient to near absolute zero; industrial, consumer, aerospace, medical, and research applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 300, ME 310, and ME 320.

ME 402 Design of Thermal Systems credit: 3 or 4 Hours.

Selection of components in fluid- and energy-processing systems to meet system-performance requirements; computer-aided design; system simulation; optimization techniques; investment economics and statistical combinations of operating conditions. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in ME 320.

ME 403 Internal Combustion Engines credit: 3 Hours.

Theory and analysis of reciprocating internal-combustion engines; fuels, carburetion, combustion, exhaust emissions, detonation, fuel injection, and factors affecting performance; laboratory work on variables that affect performance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in ME 400 or ABE 466.

ME 404 Intermediate Thermodynamics credit: 4 Hours.

Classical thermodynamics, including the TdS equations and the Maxwell relations; development of thermodynamic property relations, behavior of real gases, thermodynamics of mixtures, phase equilibrium and chemical reactions and equilibrium with an emphasis on combustion reactions; statistical thermodynamics including the effect of molecular and atomic structure, statistical concepts and distributions, calculation of thermodynamic properties of gas-phase atoms and molecules, kinetic theory of gases, and vibrations in crystals and the electron gas in metals; selected applications. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ME 404 and any of PHYS 427, CHEM 442, or CHEM 444. Prerequisite: ME 300.

ME 410 Intermediate Gas Dynamics credit: 4 Hours.

Solution of internal compressible-flow problems by one-dimensional techniques, both steady and unsteady; flows with smooth and abrupt area change, with friction, with heat addition, and with mass addition; flows with weak and strong waves, multiple confined streams, and shock waves. 4 undergraduate hours. 4 graduate hours. Prerequisite: ME 300 and ME 310; or one of AE 311, TAM 335.

ME 411 Viscous Flow & Heat Transfer credit: 4 Hours.

Same as AE 412. See AE 412.

ME 412 Numerical Thermo-Fluid Mechs credit: 2 to 4 Hours.

Numerical techniques for solving the equations governing conduction and convective heat transfer in steady and unsteady fluid flows: finite-difference and finite-volume techniques, basic algorithms, and applications to real-world fluid-flow and heat-transfer problems. Same as CSE 412. 2 or 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 310 and ME 320.

ME 420 Intermediate Heat Transfer credit: 4 Hours.

Conduction heat transfer, radiation heat transfer, mass transfer, phase change, heat exchangers; numerical methods. 4 undergraduate hours. 4 graduate hours. Prerequisite: ME 310 and ME 320.

ME 430 Failure of Engrg Materials credit: 3 or 4 Hours.

Material anisotropy and elasto-plastic properties at the crystal level; microstructural basis for fatigue, fracture, and creep in metals, polymers, and ceramics; failure mechanisms and toughening in composites; structure and behavior of metal-matrix composites, ceramic-matrix composites, and polymer composites. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 330.

ME 431 Mechanical Component Failure credit: 3 or 4 Hours.

Relationship of materials and mechanics concepts to the design of structures and components: elasticity, plasticity, thermal loading, creep, fatigue, fracture, and residual-life assessments as they relate to materials selection and design. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 330 and ME 371; Recommended: ME 430.

ME 432 Fundamentals of Photovoltaics credit: 3 or 4 Hours.

In this course, we will develop a fundamental understanding of how solar cells convert light to electricity, how solar cells are made, how solar cell performance is evaluated, and the photovoltaic technologies that are currently on the market and/or under development. Using thermodynamics, materials physics, and engineering analysis we will assess and critique the potential and drawbacks of modern photovoltaic technologies, including single- and multi- crystalline silicon, tandem cells, CdTe, CIGS, PVT, bulk heterojunctions (organic), Graetzel cells, nanostructure-based, and third generation PV. 3 undergraduate hours. 4 graduate hours. Approved for Letter and S/U grading. Prerequisite: PHYS 212 and ME 330 or equivalent.

ME 440 Kinem & Dynamics of Mech Syst credit: 3 or 4 Hours.

Kinematics and dynamics of constrained rigid-body mechanical systems; use of modern computer-based analysis software packages. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 370.

ME 445 Introduction to Robotics credit: 4 Hours.

Same as AE 482 and ECE 470. See ECE 470.

ME 446 Robot Dynamics and Control credit: 4 Hours.

Same as ECE 489 and SE 422. See SE 422.

ME 450 Modeling Materials Processing credit: 3 Hours.

Manufacturing processes for metals and polymers; creation of process models based on momentum, heat, and mass transfer; model simplification by estimation and scaling; applications to casting, microstructure evolution, polymer molding and extrusion, and welding. 3 undergraduate hours. 3 graduate hours. Prerequisite: ME 320 and ME 330.

ME 451 Computer-Aided Mfg Systems credit: 3 or 4 Hours.

The application of computer technology and operations research to manufacturing systems. Use of microprocessors for direct numeric control of machine tools, adaptive control and optimization, and integrated manufacturing systems. Applications of industrial robots. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 270.

ME 452 Num Control of Mfg Processes credit: 3 Hours.

Numerical control systems, manufacturing processes, principles and practices basic to numerical control, and programming methodology for numerical control. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 101 and ME 270.

ME 455 Micromanufacturing Process & Automation credit: 3 or 4 Hours.

Scaling laws in miniaturization, Micro-machine tools design and characterization, Micromanufacturing process modeling, simulation and automation, Micro-metrology and Micro-assembly systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 270 or equivalent or consent of instructor.

ME 460 Industrial Control Systems credit: 4 Hours.

Industrial control techniques; case studies of industrial systems; design, selection, and maintenance of industrial control systems, including electromechanical, pneumatic, thermal, and hydraulic systems. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ME 460 and ECE 486. Prerequisite: ME 340 and ME 360.

ME 461 Computer Cntrl of Mech Systems credit: 3 Hours.

Microcomputer control of thermal and mechanical systems: sensors and transducers, signal transmission and conversion, and regulator actuation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 360 or ABE 425.

ME 470 Senior Design Project credit: 3 Hours.

Solution of a real-world design problem: development, evaluation, and recommendation of alternative solutions subject to realistic constraints that include most of the following considerations: economics, environment, sustainability, manufacturability, ethics, health and safety, society, and politics. 3 undergraduate hours. No graduate credit. Departmental approval required. Prerequisite: Concurrent enrollment in no more than two required ME courses; completion of all required courses.

This course satisfies the General Education Criteria for:
Advanced Composition

ME 471 Finite Element Analysis credit: 3 or 4 Hours.

The finite element method and its application to engineering problems: truss and frame structures, heat conduction, and linear elasticity; use of application software; overview of advanced topics such as structural dynamics, fluid flow, and nonlinear structural analysis. Same as AE 420 and CSE 451. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both ME 471 and CEE 470. Prerequisite: CS 101 and ME 370.

ME 472 Introduction to Tribology credit: 3 or 4 Hours.

Friction, wear, and lubrication; engineering surfaces; surface properties and surface topography; Hertzian contacts and contact of rough surfaces; friction of surfaces in contact; wear and surface failures; boundary lubrication; fluid properties; hydrodynamic lubrication; elastohydrodynamic lubrication; bearing selection; introductory micro- and nanotribology. 3 undergraduate hours. 3 or 4 graduate hours.

ME 481 Whole-Body Musculoskel Biomech credit: 3 or 4 Hours.

Exploration of the human musculoskeletal system with an emphasis on the whole-body or organism level; modeling and analysis techniques for examining human movement, such as rigid-body modeling techniques, forward and inverse dynamics, and Lagrangian mechanics; examination of current topics, such as orthopedic biomechanics, prosthetics and orthotics, postural control, and locomotion; use of computerized motion-capture equipment and software to examine, simulate, and analyze human movement. Same as BIOE 481. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 212 and TAM 251.

ME 482 Musculoskel Tissue Mechanics credit: 3 Hours.

Composition-structure-function relationships for musculoskeletal tissues, including bone, tendon, ligament, cartilage, and muscle; hierarchical structure of tissues from the macro- to nano-scales; relation of composition to mechanical properties of health and diseased tissue; experimental methods used to obtain mechanical properties. Same as BIOE 482. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 251.

ME 483 Mechanobiology credit: 4 Hours.

Integrative approach to mechanobiology; mechanics of cell adhesion; cytoskeletal structure and mechanics; mechanotransduction; mechanics of cell proliferation, apoptosis, cancer cells, and stem cells; aging; critical issues facing the mechanobiological sciences. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 103 and TAM 251.

ME 485 MEMS Devices & Systems credit: 3 Hours.

Same as ECE 485. See ECE 485.

ME 487 MEMS-NEMS Theory & Fabrication credit: 4 Hours.

Physical and chemical theory, design, and hands-on fabrication of micro- and nano-electromechanical systems (MEMS and NEMS); cleanroom fabrication theory, including general cleanroom safety, lithography, additive and subtractive processes, bulk and surface micromachining, deep reactive ion etching (DRIE), lithographic Galvanoformung Abformung (LIGA), packaging, scaling, actuators, and micro-nanofluids; fabrication of two take-home devices, such as piezoresistive sensors and microfluidic logic chips, that demonstrate advanced fabrication processing. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 212.

ME 496 Honors Project credit: 1 to 4 Hours.

Special project or reading course for James Scholars in engineering. 1 to 4 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Consent of instructor.

ME 497 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to mechanical engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

ME 498 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in mechanical engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 0 to 4 undergraduate hours. 0 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 hours.

TAM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TAM>)

Theoretical and Appl Mechanics Courses**TAM 195 Mechanics in the Modern World credit: 1 Hour.**

Freshman introduction to engineering mechanics and its role in modern engineering analysis and design. Project activity.

TAM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

TAM 201 Mechanics for Technol & Mgmt credit: 3 Hours.

Engineering mechanics (statics, dynamics, solid mechanics, and fluid mechanics) and the role that mechanics plays in engineering analysis and design. For Technology and Management majors only.

TAM 210 Introduction to Statics credit: 2 Hours.

Forces, moments, couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; shear-force and bending-moment distributions; Coulomb friction; centroids and center of mass; applications of statics in design. Credit is not given for both TAM 210 and TAM 211. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

TAM 211 Statics credit: 3 Hours.

Forces, moments, and couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; shear-force and bending-moment distributions; Coulomb friction; centroids, center of mass, moment of inertia, polar moment of inertia, and product of inertia; virtual work; hydrostatic pressure; applications of statics in design. Credit is not given for both TAM 211 and TAM 210. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

TAM 212 Introductory Dynamics credit: 3 Hours.

Kinematics and dynamics of the three-dimensional motion of particles; kinematics and dynamics of the plane motion of rigid bodies; methods of work energy and impulse momentum; moving reference frames. Prerequisite: TAM 210 or TAM 211.

TAM 251 Introductory Solid Mechanics credit: 3 Hours.

Relationship between internal stresses and deformations produced by external forces acting on deformable bodies, and design principles based on mechanics of solids: normal stresses, shear stresses, and deformations produced by tensile, compressive, torsional, and bending loading of members; beam deflections; elastic energy and impact; multi-dimensional stress states; buckling of columns. Prerequisite: TAM 210 or TAM 211.

TAM 252 Solid Mechanics Design credit: 1 Hour.

Design problems and projects intended to accompany TAM 251. Prerequisite: Credit or concurrent registration in TAM 251.

TAM 270 Design for Manufacturability credit: 3 Hours.

Same as ME 270. See ME 270.

TAM 297 Introductory Independent Study credit: 1 to 3 Hours.

Independent study and/or individual projects related to engineering mechanics. Approved for Letter and S/U grading. May be repeated to a maximum of 6 credit hours for letter grade; no limit for S/U grade mode. Prerequisite: Consent of Instructor.

TAM 302 Engineering Design Principles credit: 3 Hours.

Examples of mechanical design problems that occur in engineering practice and the procedures and issues involved in solving them; technical aspects and societal ramifications of the design process; intellectual property, ethics, and contemporary issues; probability and statistics; computational mechanics; case studies; student discussion of design-related issues at different levels; design project reports and presentations; student teams.

TAM 324 Behavior of Materials credit: 4 Hours.

Same as CEE 300. See CEE 300.

TAM 335 Introductory Fluid Mechanics credit: 4 Hours.

Fluid statics; continuity, momentum, and energy principles via control volumes; ideal and real fluid flow; introduction to the Navier-Stokes equation; similitude; laminar and turbulent boundary layers; closed-conduit flow, open-channel flow, and turbomachinery. Prerequisite: TAM 212.

TAM 412 Intermediate Dynamics credit: 4 Hours.

Lagrangian mechanics of dynamical systems with an emphasis on vibrations; constraints and generalized coordinates; motion in accelerating frames; conservation laws and invariance of the Lagrangian; particle motion in one dimension, the two-body problem, and central-force motion; free and forced vibration of linearized single-degree-of-freedom and multi-degree-of-freedom discrete systems; weakly nonlinear vibrations; parametric resonance; introduction to Hamiltonian dynamics; rigid-body motions. 4 undergraduate hours. 4 graduate hours. Credit is not given for both TAM 412 and AE 352. Prerequisite: MATH 225 or MATH 415; MATH 285; TAM 212.

TAM 413 Fund of Engrg Acoustics credit: 3 or 4 Hours.

Same as ECE 473. See ECE 473.

TAM 416 Intro to Nonlinear Dyn & Vib credit: 4 Hours.

Single- and multi-degree-of-freedom oscillators; asymptotic methods; forced, internal and combination resonances; time-discrete dynamical systems (maps); complex dynamics; parametric vibrations and resonances; introduction to nonlinear localization and nonlinear targeted energy transfer; nonlinear vibrations of elastic continua; application in mechanics and engineering. 4 undergraduate hours. 4 graduate hours. Prerequisites: MATH 285 OR MATH 441; MATH 415; TAM 212.

TAM 424 Mechanics of Structural Metals credit: 3 Hours.

Micromechanisms at the atomic, single-crystal, and polycrystal levels and their use in explaining the deformation and failure characteristics of metals; elastic deformation, dislocation mechanics, plastic deformation and strengthening mechanisms, fracture mechanics and fracture mechanisms, fatigue, and creep; design criteria; special topics. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 300 or ME 330.

TAM 427 Mechanics of Polymers credit: 3 Hours.

Mechanical behavior of amorphous and semi-crystalline polymers; overview of polymer structure, properties, and processing; polymer linear viscoelasticity using Boltzmann superposition and mechanical models; measurement of viscoelastic properties; polymeric yield phenomena; fracture and craze formation; impact and fatigue. Same as AE 427 and MSE 454. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 300 or ME 330.

TAM 428 Mechanics of Composites credit: 3 Hours.

Same as AE 428 and MSE 456. See MSE 456.

TAM 435 Intermediate Fluid Mechanics credit: 4 Hours.

Analytical solution methods for problems involving ideal and real fluids: potential flow theory, boundary-layer theory; surface waves, vortex dynamics, and compressible flows. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of AE 312, ME 310, TAM 335.

TAM 445 Continuum Mechanics credit: 4 Hours.

Tensor algebra and analysis; kinematics of continua; mass, force, stress, and the general balance laws of continuum mechanics; introduction to constitutive equations. 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 451 Intermediate Solid Mechanics credit: 4 Hours.

Analysis of stress and strain (definitions, transformation of axes, equilibrium equations, and symmetry of the stress tensor); linear materials, Hooke's law; strain energy, potential energy, energy principles and methods; two-dimensional problems in elasticity (torsion, axisymmetric problems); the finite-element method for two- and three-dimensional boundary-value problems in linear elasticity; plasticity (introduction, yield criteria, elastic-plastic behavior, and limit-load calculations); linear-elastic fracture mechanics (introduction, Griffith's approach, stress intensity factor, and energy release rate). 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 456 Experimental Stress Analysis credit: 3 Hours.

Basic theories for measuring stresses and deformations in load-carrying engineering components; use of optical, electrical, and mechanical instrumentation; laboratory sessions on brittle coatings, electrical resistance strain gages, photoelasticity, and moire interferometry. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 251.

TAM 461 Cellular Biomechanics credit: 4 Hours.

Mechanics of biological cells and tissues: cell structure; mechanics of biomembranes; the cytoskeleton and cortex; dynamic cell processes; cell motility and control of cell shape and proliferation; experimental approaches and theoretical models. Same as BIOE 461. 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 470 Computational Mechanics credit: 3 or 4 Hours.

Modercomputational mechanics: mappings and iterative methods; stability; convergence; consistency; numerical and symbolic solutions of ordinary and partial differential equations; finite-difference methods; the finite-element method; spectral methods. Applications to problems in solid mechanics, fluid mechanics, and dynamics. Same as CSE 450. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 101 and MATH 285.

TAM 497 Independent Study credit: 1 to 4 Hours.

Individual studies in any area of theoretical and applied mechanics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 12 hours, with a maximum of 8 hours in any one term. Prerequisite: consent of instructor.

TAM 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in theoretical and applied mechanics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 undergraduate hours or 12 graduate hours.

TAM 499 Senior Thesis credit: 3 Hours.

Thesis investigation of special subjects in mechanics, including theoretical or experimental research. 3 undergraduate hours. No graduate credit. Prerequisite: Department and instructor approval required.

Bachelor of Science in Engineering Mechanics

<http://mechse.illinois.edu>

Undergraduate Program Office: 154 Mechanical Engineering Building

Fax: (217) 244-6534

E-mail: mechse-ug-advise@illinois.edu (mechse-undergrad@illinois.edu)

For the Degree of Bachelor of Science in Engineering Mechanics

Engineering mechanics is the discipline devoted to the solution of mechanics problems through integrated application of mathematical, scientific, and engineering principles. Special emphasis is placed on the physical principles underlying modern engineering design.

The program derives its strength from rigorous treatments of statics, dynamics, solid mechanics, fluid mechanics, and mechanics of materials. These topics form the basis of all the mechanical sciences and have wide applicability in modern engineering. Students in engineering mechanics also develop a strong background in mathematics, physics, and chemistry, while specializing in one of several secondary fields within mechanics, such as experimental mechanics.

Special emphasis is placed on advanced dynamics, continuum mechanics, and the rapidly emerging field of computational mechanics. Laboratory experiments in fluid mechanics and mechanics of materials complement an integrated design sequence, starting in the freshman year, which culminates in a team-based design project in one of the professional engineering disciplines, such as aerospace, civil, or mechanical engineering. Students also have the opportunity for independent, creative work in a one-on-one or small group environment under the supervision of a faculty member.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements?src=search>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
TAM 195	Mechanics in the Modern World	1
ME 390	Seminar	0
Total Hours		1

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
MATH 221	Calculus I ¹	4

MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 415	Applied Linear Algebra	3
MATH 441	Differential Equations	3
MATH 442	Intro Partial Diff Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		40

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Engineering Mechanics Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of engineering mechanics.

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci	3
ECE 205	Elec & Electronic Circuits	3
ME 170	Computer-Aided Design	3
ME 300	Thermodynamics	3
ME 470	Senior Design Project	3
TAM 211	Statics	3
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
TAM 252	Solid Mechanics Design	1
TAM 302	Engineering Design Principles	3
TAM 324	Behavior of Materials	4
TAM 335	Introductory Fluid Mechanics	4
TAM 412	Intermediate Dynamics	4
TAM 445	Continuum Mechanics	4
TAM 470	Computational Mechanics	3
Total Hours		47

Secondary Field Option Electives

This component of the curriculum enables the student to specialize further by electing a secondary field, a coherent group of technical courses in mechanics and closely related subjects. The current secondary fields are:

- Biomechanics
- Computational Mechanics
- Engineering Science and Applied Mathematics
- Experimental Mechanics
- Fluid Mechanics
- Mechanics of Materials
- Solid Mechanics

Each secondary field generally specifies two required courses and two additional courses from a list of approved elective courses. For each of the secondary fields, the required and approved elective courses specified for them are indicated on the Engineering Mechanics

Secondary Field Webpage (<http://mechanical.illinois.edu/undergraduate/engineering-mechanics/em-secondary-fields>). To add flexibility to the program and to accommodate particular interests, the student may petition to substitute appropriate courses, including 500-level courses if the student has the adequate preparation, for any of the secondary field elective courses. Without petition, a student may select any one course listed as required in one of the secondary field options to satisfy elective course credits in a chosen secondary field.

Code	Title	Hours
	Secondary field electives selected from departmentally approved courses for Secondary Field Options.	12

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives?src=search>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
	Electives from the campus General Education Social and Behavioral Sciences list.	6
	Electives from the campus General Education Humanities and the Arts list.	6
	Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
	Total Hours	18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
	Advanced Composition (satisfied by completing TAM 324 in the Engineering Mechanics Technical Core)	
	Total Hours	4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering Advising Website, so that there are at least 128 credit hours earned toward the degree.	6

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
Liberal education elective ³	3
ENG 100 Engineering Orientation	0
MATH 221 ¹ Calculus I	4
RHET 105 Writing and Research or ME 170 ²	4-3
TAM 195 Mechanics in the Modern World	1
Semester Hours	16-15

Second Semester

Liberal education elective ³	3
MATH 231 Calculus II	3
ME 170 Computer-Aided Design or RHET 105 ²	3-4
CHEM 104 General Chemistry II	3
CHEM 105 General Chemistry Lab II	1
PHYS 211 University Physics: Mechanics	4
Semester Hours	17-18

Second Year

First Semester

Liberal education elective ³	3
CS 101 Intro Computing: Engrg Sci	3
MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
TAM 211 Statics	3
ME 390 Seminar	0
Semester Hours	17

Second Semester

ECE 205 Elec Electronic Circuits	3
PHYS 213 Univ Physics: Thermal Physics	2
PHYS 214 Univ Physics: Quantum Physics	2
TAM 212 Introductory Dynamics	3
TAM 251 Introductory Solid Mechanics	3
TAM 252 Solid Mechanics Design	1
Liberal education elective ³	3
Semester Hours	17

Third Year**First Semester**

MATH 415 Applied Linear Algebra	3
MATH 441 Differential Equations	3
ME 300 Thermodynamics	3
TAM 324 Behavior of Materials	4
TAM 335 Introductory Fluid Mechanics	4
Semester Hours	17

Second Semester

MATH 442 Intro Partial Diff Equations	3
TAM 302 Engineering Design Principles	3
TAM 412 Intermediate Dynamics	4
TAM 445 Continuum Mechanics	4
Semester Hours	14

Fourth Year**First Semester**

TAM 470 Computational Mechanics	3
ME 470 or Senior Design Project	3
Secondary field elective ⁴	3
Secondary field elective ⁴	3
Liberal education elective ³	3
Free elective	3
Semester Hours	15

Second Semester

ME 470 or Senior Design Project	3
Secondary field elective ⁴	6
Secondary field elective ⁴	3
Liberal education elective ³	3
Free elective	3
Semester Hours	15
Total Hours:	128

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is ME 170.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives?src=search>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ Selected from departmentally approved lists of Secondary Field Electives (<http://mechanical.illinois.edu/undergraduate/engineering-mechanics/em-secondary-fields>).

Bachelor of Science in Mechanical Engineering

mechse.illinois.edu (<http://mechse.illinois.edu>)

Undergraduate Program Office: 154 Mechanical Engineering Building
 Fax: (217) 244-6534
 E-mail: mechse-ug-advise@illinois.edu (mechse-undergrad@illinois.edu)

For the Degree of Bachelor of Science in Mechanical Engineering

Mechanical engineering may be the most diverse of the engineering fields, embracing many subfields and affecting all aspects of our lives. Mechanical engineers work on new machines, products, and processes that hold the promise of better lives for all of us. They are concerned with both technological and economic aspects in the design, development, and use of their products. Today, one of the challenges is to design efficient, low-cost machines and processes that use the fewest possible natural resources to improve the lives of people throughout the world.

The technical portion of the mechanical engineering curriculum is designed as a sequence of increasingly specialized experiences. The entering student's first year is spent mastering the basics of science: math, chemistry, and physics. Building on this base, in the second year students begin to take fundamental engineering courses such as statics, dynamics, basic circuits and electronics, thermodynamics, and strength of materials. By the third year, students are taking specialized mechanical engineering courses in the subfields of fluid mechanics, heat transfer, dynamic systems and controls, materials, mechanical design, and manufacturing. Finally, during the senior year, students have the opportunity to both broaden and deepen their knowledge of the field through technical elective courses. At the end of the curriculum, students take the capstone senior design course in which the knowledge and skills they have learned are applied to projects submitted to the department by industrial firms or by faculty members. Engineering design, communication, teamwork, and laboratory experiences are integrated throughout the curriculum from the first year to the last year.

A combined B.S.-M.S. Mechanical Engineering degree program is available. Its admission and course requirements are described in the College of Engineering program information section (p. 140).

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Technical grade point average requirements for graduation and advanced-level course registration apply to students in this curriculum. These rules are summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements?src=search>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
ME 390	Seminar	0
Total Hours		0

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
MATH 415	Applied Linear Algebra	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
Total Hours		29

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Mechanical Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of mechanical engineering.

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci	3
ECE 205	Elec & Electronic Circuits	3
ECE 206	Elec & Electronic Circuits Lab	1
ME 170	Computer-Aided Design	3
ME 270	Design for Manufacturability	3
ME 300	Thermodynamics	3
ME 310	Fundamentals of Fluid Dynamics	4
ME 320	Heat Transfer	4
ME 330	Engineering Materials	4
ME 340	Dynamics of Mechanical Systems	3.5
ME 360	Signal Processing	3.5
ME 370	Mechanical Design I	3
ME 371	Mechanical Design II	3
ME 470	Senior Design Project	3
TAM 210	Introduction to Statics	2
TAM 212	Introductory Dynamics	3
TAM 251	Introductory Solid Mechanics	3
Total Hours		52

Technical Electives

The science electives augment the foundational science courses in an area of interest and preparation for later courses. The MechSE, statistics,

and additional technical courses stress the rigorous analysis, design, and statistics principles practiced in mechanical engineering.

Code	Title	Hours
Science elective(s), chosen from one of the following:		4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
MCB 150	Molec & Cellular Basis of Life	
PHYS 213 & PHYS 214	Univ Physics: Thermal Physics and Univ Physics: Quantum Physics	
MechSE electives chosen from a departmentally approved list. ¹		6
Statistics elective, one course chosen from:		3
IE 300	Analysis of Data	
STAT 400	Statistics and Probability I	
Technical electives chosen from a departmentally approved list. ²		6
Total Hours		19

¹ MechSE electives departmentally approved list (<http://mechanical.illinois.edu/undergraduate/mechanical-engineering/mech-tech-electives>).

² Technical electives departmentally approved list (<http://mechanical.illinois.edu/undergraduate/mechanical-engineering/mech-tech-electives>).

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives?src=search>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 102	Microeconomic Principles	3
or ECON 103	Macroeconomic Principles	
Electives from the campus General Education Social and Behavioral Sciences list.		3
Electives from the campus General Education Humanities and the Arts list.		6
Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing ME 470 in the Mechanical Engineering Technical Core)		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.		
		6

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
ENG 100 Engineering Orientation	0
MATH 221 ¹ Calculus I	4
RHET 105 Writing and Research or ME 170 ²	4-3
Liberal education elective ³	3
Semester Hours	

Second Semester	Hours
Science electives ⁴	4
MATH 231 Calculus II	3
ME 170 Computer-Aided Design or RHET 105 ²	3-4
PHYS 211 University Physics: Mechanics	4
CS 101 Intro Computing: Engrg Sci	3
Semester Hours	

Second Year

First Semester	Hours
MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
TAM 210 Introduction to Statics	2
ME 270 Design for Manufacturability	3
ME 390 Seminar	0
Liberal education elective ³	3
Semester Hours	

Second Semester	Hours
ECE 205 Elec Electronic Circuits	3
ECE 206 Elec Electronic Circuits Lab	1
MATH 285 Intro Differential Equations	3
ME 300 Thermodynamics	3
TAM 212 Introductory Dynamics	3
TAM 251 Introductory Solid Mechanics	3
Semester Hours	

Third Year

First Semester	Hours
MATH 415 Applied Linear Algebra	3
ME 310 Fundamentals of Fluid Dynamics	4
ME 330 Engineering Materials	4
ME 340 Dynamics of Mechanical Systems	3.5
Liberal education elective ³	3
Semester Hours	

Second Semester	Hours
ME 320 Heat Transfer	4
ME 360 Signal Processing	3.5
ME 370 Mechanical Design I	3
Liberal education elective ³	3
Free elective	3
Semester Hours	

Fourth Year

First Semester	Hours
ME 371 Mechanical Design II	3
MechSE elective ⁵	3
Statistics elective ⁶	3
ME 470 Senior Design Project (or Technical elective) ⁷	3
Liberal education elective ³	3
Semester Hours	

Second Semester	Hours
ME 470 Senior Design Project (or Technical elective) ⁷	3
MechSE elective ⁴	3
Technical elective ⁷	3
Liberal education elective ³	3
Free elective	3
Semester Hours	

Total Hours: 128

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is ME 170.

³ *Liberal education electives* (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives?src=search>) *must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 102 or ECON 103 must be one of the social & behavioral sciences courses. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirement.*

⁴ *Science elective(s) – 4 hours required. Choose from CHEM 104 + CHEM 105, MCB 150, or PHYS 213 + PHYS 214. If MCB 150 is taken, then MCB 151 is also recommended. Note that PHYS 213 and PHYS 214 will normally be taken in the fourth semester or later, since they have PHYS 211 and PHYS 212, respectively, as prerequisites, in addition to MATH 241.*

⁵ *MechSE electives – 6 hours required. Choose from a departmentally approved list of MechSE Electives (<http://mechanical.illinois.edu/undergraduate/mechanical-engineering/me-tech-electives>).*

⁶ *Statistics elective—3 hours required. Choose either IE 300 or STAT 400.*

⁷ *Technical electives—6 hours required. Choose from a departmentally approved list of Technical Electives. (<http://mechanical.illinois.edu/undergraduate/mechanical-engineering/me-tech-electives>)*

Nuclear, Plasma, and Radiological Engineering

James F. Stubbins

216 Talbot Laboratory, 104 South Wright, Urbana

PH: (217) 333-2295

FX: (217) 333-2906

<http://npres.illinois.edu>

Curriculum in Nuclear, Plasma, and Radiological Engineering (<http://npres.illinois.edu>)

E-mail: nuclear@illinois.edu

For the Degree of Bachelor of Science in Nuclear, Plasma, and Radiological Engineering

Nuclear, plasma, and radiological engineering is a branch of engineering that is concerned with the development and use of nuclear energy and radiation sources for a wide variety of applications in energy production, in materials processing and science, and for biomedical and industrial uses. Areas of interest include the continued safe and reliable application of fission reactors as central electric power plant thermal sources; plasma processing applications and the longer term development of fusion reactors for electric power generation; and the use of radiation sources in such areas as materials, biological systems, medical treatment, radiation instrumentation, environmental systems, and activation analysis.

The first two years of the curriculum provide a strong foundation in basic sciences (physics, mathematics, and chemistry), engineering sciences (analytical mechanics and thermodynamics), an introduction to digital computer use, and introduction to nuclear energy systems. Most technical concentration takes place in the third and fourth years of the curriculum according to the educational and career interest of the students. The curriculum provides three professional concentration areas: power, safety and the environment; plasma and fusion science and engineering; and radiological, medical, and instrumentation applications. Each concentration area allows flexibility in developing advanced technical expertise but also requires depth of understanding in the area. The third path meets pre-med requirements and facilitates the minor in bioengineering. To complete this concentration area, students should take certain chemistry and biology courses in the first two years of the curriculum.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as follows.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
NPRES 100	Orientation to NPRES	1
Total Hours		1

¹ *External transfer students take ENG 300 instead.*

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		28

¹ *MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.*

Nuclear, Plasma, and Radiological Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of nuclear engineering.

Code	Title	Hours
CS 101	Intro Computing: Engrg & Sci ¹	3
ECE 205	Elec & Electronic Circuits	3
ECE 206	Elec & Electronic Circuits Lab	1
ME 300	Thermodynamics	3
NPRE 247	Modeling Nuclear Energy System	3
NPRE 431	Materials in Nuclear Engrg	3
NPRE 441	Radiation Protection	4
NPRE 446	Radiation Interact w/Matter I	3
NPRE 447	Radiation Interact w/Matter II	3
NPRE 448	Nuclear Syst Engrg & Design	4
NPRE 451	NPRE Laboratory	3
NPRE 455	Neutron Diffusion & Transport	4
NPRE 458	Design in NPRE	4
TAM 210	Introduction to Statics ^{1,2}	2
TAM 212	Introductory Dynamics ²	3
Total Hours		46

¹ Students may elect to take CS 125 in place of CS 101, and TAM 211 in place of TAM 210. The extra hour will be applied toward the Professional Concentration Area electives.

² Students in the Plasma and Fusion Science Engineering Professional Concentration Area may elect to take PHYS 325 in place of TAM 212. Further, students in this concentration may elect to take both PHYS 325 and PHYS 326 in place of TAM 210 and TAM 212. The extra hour from PHYS 325 and PHYS 326 will be applied toward the Professional Concentration Area electives.

Professional Concentration Area Electives

The NPRE Professional Concentration Area requirement is fulfilled by taking certain required technical and some elective technical courses stressing the rigorous analysis and design principles practiced in one of the three professional concentration areas: Power, Safety, and the Environment; Plasma and Fusion Science Engineering; or Radiological, Medical, and Instrumentation Applications.

Code	Title	Hours
	Professional Concentration Area electives. See the Professional Concentration Areas section below.	25

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
ECON 102 or ECON 103	Microeconomic Principles Macroeconomic Principles	3

Electives from the campus General Education Social and Behavioral Sciences list.	3
Electives from the campus General Education Humanities and the Arts list.	6
Electives either from a list approved by the college or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
Total Hours	18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
	Advanced Composition. May be satisfied by completing a course in either the liberal education or free elective categories which has the Advanced Composition designation. Alternately, NPRE 481 should be considered, which may also be applied to the Professional Concentration elective hours.	
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Free+Electives?src=search>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising Web site, so that there are at least 128 credit hours earned toward the degree.	6

Professional Concentration Areas

Students are expected to develop a solid background in one of the various subfields within a Professional Concentration Area which are defined below.

Power, Safety, and the Environment

Code	Title	Hours
TAM 335	Introductory Fluid Mechanics	4
or ME 310	Fundamentals of Fluid Dynamics	
NPRE 421	Plasma and Fusion Science	3
NPRE 432	Nuclear Engrg Materials Lab	2
	Technical electives broken down as follows:	16
	A minimum of 6 hours of departmentally approved NPRE Electives.	

Technical electives selected from departmentally approved Power, Safety, and the Environment elective course work in one of the following subfields: Thermal Sciences; Power and Control Systems; Solid, Fluid and Continuum Mechanics; Computational Sciences and Engineering; Environmental Engineering and Science. The student's academic advisor must approve the chosen course set to insure that a strong program is achieved.¹

Total Hours 25

¹ Power, Safety, and the Environment elective course work.

Plasma and Fusion Science and Engineering

Code	Title	Hours
TAM 335	Introductory Fluid Mechanics	4
or ME 310	Fundamentals of Fluid Dynamics	
NPRE 421	Plasma and Fusion Science	3
NPRE 423	Plasma Laboratory	2
NPRE 429	Plasma Engineering	3

Technical electives selected from departmentally approved Plasma and Fusion Science and Engineering elective course work in one of the following subfields: Physical Science, Electrical Engineering, or Electronic Materials. The student's academic advisor must approve the chosen course set to insure that a strong program is achieved.¹

Total Hours 25

¹ Plasma and Fusion Science and Engineering elective course work.

Radiological, Medical and Instrumentation Applications

Code	Title	Hours
NPRE 435	Radiological Imaging	3
Select one from:		2
MCB 403	Cell & Membrane Physiology Lab	
BIOE 415	Biomedical Instrumentation Lab	
NPRE 444	Nuclear Analytical Methods Lab	

Technical electives selected from departmentally approved Radiological, Medical and Instrumentation Applications elective course work in one of the following subfields: Biomolecular Engineering, Biomedical Engineering, and Radiation Detection and Analysis. The student's academic advisor must approve the chosen course set to ensure that a strong program is achieved.¹

Total Hours 25

¹ Radiological, Medical and Instrumentation Applications elective course work

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
ENG 100 Engineering Orientation	0
MATH 221 ¹ Calculus I	4
NPRE 100 Orientation to NPRE	1
RHET 105 Writing and Research (or Free elective) ²	4-3
Liberal education elective ³	3

Semester Hours 16-15

Second Semester

CS 101 ⁴ Intro Computing: Engrg Sci	3
MATH 231 Calculus II	3
PHYS 211 University Physics: Mechanics	4
Liberal education elective ³	3
RHET 105 Writing and Research (or Free elective) ^{2,5}	3-4

Semester Hours 16-17

Second Year

First Semester

MATH 241 Calculus III	4
PHYS 212 University Physics: Elec Mag	4
TAM 210 ^{4,6} Introduction to Statics	2
Professional Concentration Area elective ⁷	3
Liberal education elective ³	3

Semester Hours 16

Second Semester

MATH 285 Intro Differential Equations	3
ME 300 Thermodynamics	3
PHYS 214 Univ Physics: Quantum Physics	2
NPRE 247 Modeling Nuclear Energy System	3
TAM 212 ⁶ Introductory Dynamics	3
Liberal education elective ³	3

Semester Hours 17

Third Year

First Semester

ECE 205 Elec Electronic Circuits	3
ECE 206 Elec Electronic Circuits Lab	1
NPRE 446 Radiation Interact w/Matter I	3
TAM 335 Introductory Fluid Mechanics or ME 310 (or Professional Concentration Area elective in Radiological, Medical, and Instrumentation Applications) ⁸	4

Liberal education elective ³	3
Free elective	3
Semester Hours	17
Second Semester	
NPRE 421 Plasma and Fusion Science (or Professional Concentration Area elective in Radiological, Medical, and Instrumentation Applications) ⁸	3
NPRE 447 Radiation Interact w/Matter II	3
NPRE 451 NPRE Laboratory	3
NPRE 455 Neutron Diffusion Transport	4
Professional Concentration Area elective ⁷	3
Semester Hours	16
Fourth Year	
First Semester	
NPRE 431 Materials in Nuclear Engrg	3
NPRE 448 Nuclear Syst Engrg Design	4
Professional Concentration Area electives ⁷	6
Liberal education elective ³	3
Semester Hours	16
Second Semester	
NPRE 441 Radiation Protection	4
NPRE 458 Design in NPRE	4
Professional Concentration Area electives	6
Semester Hours	14
Total Hours:	128

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is a free elective.

³ Liberal education electives (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. ECON 102 or ECON 103 must be one of the social & behavioral sciences courses, recommended to be taken early. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

⁴ Students may elect to take CS 125 in place of CS 101, and TAM 211 in place of TAM 210. The extra hour will be applied toward the Professional Concentration Area electives.

⁵ Consideration should be given to NPRE 101 as a free elective in the spring semester of the freshman or sophomore year. Alternately, free elective hours provide a means to fulfill requirements for campus minors such as Bioengineering, Computer Science, International Minor in Engineering, Mathematics, or Physics, without excessive additional hours beyond the normal degree requirements.

⁶ Students in the Plasma and Fusion Science Engineering Professional Concentration Area may elect to take PHYS 325 in place of TAM 212. This facilitates the minor in Physics. Further, students in this concentration may elect to take both PHYS 325 and PHYS 326 in place of TAM 210 and TAM 212. The extra hour from PHYS 325 and PHYS 326 will be applied toward the Professional Concentration Area electives.

⁷ A student must fulfill the NPRE Professional Concentration Area requirement (<http://npre.illinois.edu/academics/undergraduate-program/technical-electives>) by taking the required technical courses and technical elective courses in one of the three professional concentration areas: Power, Safety, and the Environment; Plasma and Fusion Science Engineering; or Radiological, Medical, and Instrumentation Applications.

⁸ Students in the Power, Safety, and the Environment and in the Plasma and Fusion Science Engineering Professional Concentration Areas must take a fluid mechanics course (TAM 335 or ME 310) and NPRE 421. Students in the Radiological, Medical, and Instrumentation Applications Concentration are not required to take these courses. They may instead use the hours otherwise filled with these courses to take electives in the Radiological, Medical and Instrumentation Applications Areas.

NPRE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NPRE>)

Courses

NPRE 100 Orientation to NPRE credit: 1 Hour.

Introduction to nuclear, plasma, and radiological engineering. Demonstrations and discussion of nuclear phenomena (reactor operation, plasma behavior, and others). Experiments on radioactive decay and radiation shielding with formal laboratory report and a student project.

NPRE 101 Introduction to Energy Sources credit: 3 Hours.

Explanation of energy technologies using an elementary approach presupposing no prior scientific or technical background. Coverage of all energy sources including fossil fueled, solar, hydro, and nuclear power. Integral demonstrations and a tour of the University's power plant. Discussion of energy related incidents with emphasis on environmental, economic, and social impact. Same as ENV 101.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

NPRE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated in separate terms to a maximum of 2 times.

NPRE 201 Energy Systems credit: 2 or 3 Hours.

Patterns of energy production and utilization and technical aspects of renewable energy resources, advanced fossil fuel systems, and advanced nuclear systems. Same as GLOBL 201. Prerequisite: MATH 220 or MATH 221; one of PHYS 101, PHYS 211, CHEM 104, CHEM 204, ME 300.

NPRE 241 Intro to Radiation Protection credit: 2 Hours.

Elements of radiation protection and health physics, emphasizing practical applications. Prerequisite: MATH 220 or MATH 221; one of CHEM 102, IB 150, MCB 150, PHYS 211.

NPRE 247 Modeling Nuclear Energy System credit: 3 Hours.

Applications of elementary nuclear physics in nuclear engineering. Nuclear reactor materials and components. Steady-state and transient operation of nuclear reactors. Nuclear energy removal and conversion. Radiation shielding. Prerequisite: PHYS 212; credit or concurrent registration in MATH 285.

NPRE 397 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phase of nuclear engineering selected by the student and approved by the department. May be repeated. Prerequisite: Consent of instructor.

NPRE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in nuclear, plasma, and radiological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

NPRE 402 Nuclear Power Engineering credit: 3 or 4 Hours.

Principles of utilization of fission energy in nuclear power engineering; includes such topics as fission processes and controlled chain reactions; nuclear reactor types, design principles, and operational characteristics; power reactor design criteria; radiation hazards and radioactive waste treatment; economics; other applications such as propulsion and research reactors. 3 undergraduate hours. 4 graduate hours. Credit is not given for both NPRE 402 and NPRE 247.

NPRE 412 Nuclear Power Econ & Fuel Mgmt credit: 3 or 4 Hours.

Quantitative analysis of the impact of the nuclear power industry; nuclear fuel cycle and capital costs for thermal and fast reactors; optimization of the use of nuclear fuels to provide the lowest energy costs and highest system performance; comparison between fossil fuel systems, fission systems, and controlled thermonuclear fusion systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 402 or NPRE 247. Junior standing is required.

NPRE 421 Plasma and Fusion Science credit: 3 Hours.

Physics of plasmas, including particle and fluid descriptions, waves, collisions, stability, and confinement, with applications to controlled thermonuclear fusion reactors, problems in fusion engineering, and astrophysics. 3 undergraduate hours. 3 graduate hours. Prerequisite: For engineering or physical science majors with junior standing.

NPRE 423 Plasma Laboratory credit: 2 Hours.

Experiments relating to plasma engineering and fusion energy. Topics in ultra-high vacuum technology rf and dc electric plasma probes, measurements of dc and pulsed magnetic fields, dynamics of a theta pinch, and laser interferometry to measure plasma density. 2 undergraduate hours. 2 graduate hours. Prerequisite: NPRE 421 and NPRE 451.

NPRE 429 Plasma Engineering credit: 3 Hours.

Basic principles and examples for adapting and applying the plasma state to solve a number of modern engineering problems. Plasma processing of materials for microelectronics and other uses, lighting, plasma displays, and other technologies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329 or PHYS 435.

NPRE 431 Materials in Nuclear Engrg credit: 3 Hours.

Development of a materials engineering background in the context of nuclear systems and radiation applications; relation of structure of materials to their physical and mechanical properties; development of phase formation and reaction kinetics from basic thermodynamics principles; charged particle interactions with surfaces; transport concepts of neutral and charged particles in matter; materials performance in nuclear and radiation applications, including radiation damage and effects. 3 undergraduate hours. 3 graduate hours.

NPRE 432 Nuclear Engrg Materials Lab credit: 2 Hours.

Experiments relating to materials applications in nuclear engineering and energy systems. Examination of topics in room and elevated temperature mechanical properties of structural materials, corrosion, physical properties, radiation damage and effects, and materials selection in design. 2 undergraduate hours. 2 graduate hours. Prerequisite: Credit or concurrent registration in NPRE 431.

NPRE 435 Radiological Imaging credit: 3 Hours.

Physical, mathematical and experimental foundations of radiological imaging techniques, such as typical sources of ionizing radiation, the interactions of radiation with matter, image formation techniques, linear systems theory applied to radiological imaging, and the techniques for tomographic image reconstruction. Includes diagnostic radiological imaging modalities, such as X-ray computed tomography (CT), single photon computed emission tomography (SPECT), positron emission tomography (PET), as well as modern X-ray imaging techniques, such as phase contrast imaging and diffraction-enhanced X-ray imaging. Provides a solid foundation for understanding of modern radiological imaging techniques, and in-depth discussions on the strengths and limitations of various modalities in application to medical, physical, security and environmental imaging. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 441 Radiation Protection credit: 4 Hours.

Sources of nuclear radiation; ionization and energy deposition in matter with an emphasis on biological systems; principles of dosimetry; determination of exposure and limits for internal and external emitters; basic shielding calculations. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 446.

NPRE 442 Radioactive Waste Management credit: 3 Hours.

Radiation and radiological concepts and measurement, the fuel cycle and waste classification, Part 61, state and federal regulations and regulatory agencies, radiochemistry and the environmental fate of radionuclides, uranium-related wastes, low-level wastes, high-level wastes, used fuel reprocessing, private fuel storage, waste package stability, risk assessment, geologic repositories, transporting radioactive wastes, decommissioning wastes, transmutation, an international perspective on radioactive waste management, and the global nuclear energy partnership. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 231; PHYS 102 or PHYS 212.

NPRE 444 Nuclear Analytical Methods Lab credit: 2 or 3 Hours.

Experiments relating to nuclear analytical methods and techniques. Emphasis on neutron activation analysis, energy dispersive x-ray fluorescence and particle spectroscopy. Use of radiation for medical and materials imaging. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Credit of 2 hours is given if NPRE 451 or equivalent has been taken. Prerequisite: CHEM 102 and NPRE 446.

NPRE 446 Radiation Interact w/Matter I credit: 3 Hours.

Experimental and theoretical foundations of interaction of neutrons, photons, and charged particles with matter. Emphasis on topics that underlie the following applications: radiation detection, biological effects and radiation dosimetry, radiation damage and nuclear materials, neutron activation analysis, and fission and fusion energy systems. Classical theory of charged particle cross sections. Introductory quantum mechanics. Exact and numerical solutions of the Schrodinger equation. Quantum theory of cross sections. Photon interactions with atomic electrons and nuclei. Radioactive-series decay. Computer assignments illustrate fundamental concepts. 3 undergraduate hours. 3 graduate hours. Credit is not given to NPRE majors for graduate hours. Prerequisite: MATH 285 and ME 300.

NPRE 447 Radiation Interact w/Matter II credit: 3 Hours.

Continuation of NPRE 446. Quantum theory of ionization of matter by charged particles. Nuclear models and structure. Alpha decay, fission and fusion reactions. Beta and gamma decay. Nuclear reactions. Radiation damage effects. Special topics. Computer assignments to illustrate fundamental concepts. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 448 Nuclear Syst Engrg & Design credit: 4 Hours.

Engineering principles underling nuclear systems designed with emphasis on nuclear power reactors. Materials for nuclear systems. Energy generation and removal in single- and two-phase flows. Reactor and component control systems and nuclear fuel reloading patterns. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285, ME 300, and NPRE 455.

NPRE 451 NPRE Laboratory credit: 3 Hours.

Radiation detection and instrumentation; radiation dosimetry and shielding; basic measurements in nuclear engineering; engineering applications; micro computer data acquisition and experimental control. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 455 Neutron Diffusion & Transport credit: 4 Hours.

Neutron migration, neutron slowing down and thermalization; neutron continuity equation, multigroup diffusion theory, homogeneous and heterogeneous medium, thermal and fast assemblies; numerical methods for multigroup diffusion equations; reactor dynamics perturbation theory; reactivity coefficients; introductory transport theory. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 247.

NPRE 457 Safety Anlys Nucl Reactor Syst credit: 3 or 4 Hours.

Basic safety philosophy in nuclear reactor systems; brief review of nuclear reactor systems; regulatory processes; siting considerations; safety problems related to reactor dynamics; evaluation of postulated accidents; risks associated with nuclear fuel cycle; methods of systems safety analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: NPRE 402 or NPRE 247.

NPRE 458 Design in NPRE credit: 4 Hours.

Design in nuclear, plasma, and radiological engineering systems; basic principles of definition, organization, constraints, modeling and optimization of system design; case studies; class design projects applying these basic principles. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 448.

NPRE 461 Probabilistic Risk Assessment credit: 3 or 4 Hours.

Multidisciplinary theories and techniques of risk, safety, and reliability of complex systems and state-of-the-art Probabilistic Risk Assessment (PRA), which provides input for risk-informed decision-making for design, operation, and regulatory oversight in diverse high-consequence industries such as nuclear power, aviation, space, chemical processes, oil and gas, and healthcare. Topics include: Systematic Risk Scenario Modeling, Consequence Analysis, Bayesian Updating, Bayesian Belief Network, Binary Decision Diagram, Uncertainty Propagation, Hardware Reliability, Human Error Modeling, Failure Causal Modeling, Maintenance and Repair Modeling, Risk Importance Ranking, and Data Analytics. PRA and Reliability Engineering software codes will be utilized for assignments. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior or Graduate Standing in any Engineering Department.

NPRE 470 Fuel Cells & Hydrogen Sources credit: 3 Hours.

The role of hydrogen as a global energy form, hydrogen production by nuclear, fossil and renewable energy sources; hydrogen handling, safety; transportation and storage methods including high-pressure, cryogenic, metal hydrides and chemical hydrides; basic science and technology of fuel cells, including electrochemical processes; fuel cell thermodynamics; low- and high-temperature fuel cells; applications including portable electronics, automotive vehicles, distributed and back-up power, and space power. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102, MATH 285, and PHYS 212.

NPRE 475 Wind Power Systems credit: 3 or 4 Hours.

Overview of wind energy systems; historical development, safety aspect, environmental considerations, wind properties and measurement, site selection, and wind turbine design; transmission systems considerations; mechanical, electrical, control aerodynamic and environmental engineering of modern wind turbines; fatigue failure; annual power production; economics and environmental aspects and accident prevention and mitigation; computational fluid dynamics (CFD) analysis of wind flow and blade interactions; energy storage options; hydrogen production; electrical power transmission issues; licensing issues; alternative wind energy systems; design project involving a wind farm or the construction of a specific type of wind turbine based on a wind park site visit. 3 undergraduate hours. 4 graduate hours. Prerequisite: CS 101, MATH 241; one of CHBE 421, ECE 110, ECE 205, ME 310, TAM 335.

NPRE 480 Energy and Security credit: 3 Hours.

Security and supplies of energy, mineral resources, and water. Evolution of the importance of various fuels in conflicts (including coal, oil, uranium, and natural gas) starting with the Franco-Prussian Wars. Theories of international conflict and examination of the role of individual leaders versus institutional factors in the precipitation and outcome of pivotal wars. Econometric analyses relevant to past and projected future energy use. Same as GLOBL 480 and PS 480. 3 undergraduate hours. 3 graduate hours. Prerequisite: Composition I and Quantitative Reasoning I.

NPRE 481 Writing on Technol & Security credit: 3 or 4 Hours.

Development of writing skills in standard computer, desktop publishing, and electronic publishing formats. On themes such as, global and regional security environments, arms control, nuclear energy, and climate change. For graduate credit, writing projects include documentation of computational work using software appropriate for typesetting of mathematical formulas. Same as GLOBL 481. 3 undergraduate hours. 3 or 4 graduate hours. 4 graduate hours with consent of instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

NPRE 483 Seminar on Security credit: 1 Hour.

Preparation of reports on a set of introductory lectures and student choices from various on-campus seminar series relevant to technology of domestic and international security and the regional and international contexts that influence the nature of security problems. Same as GLBL 483. 1 undergraduate hour. 1 graduate hour. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Composition I.

NPRE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in nuclear, plasma, and radiological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

Physics

Dale Van Harlingen

209 Loomis Laboratory of Physics, 1110 West Green, Urbana

PH: (217) 333-3761

<http://physics.illinois.edu>

Curriculum in Engineering Physics (<http://physics.illinois.edu/education/undergraduate>)

Fax: (217) 333-9819

E-mail: undergrad-info@physics.illinois.edu

For the Degree of Bachelor of Science in Engineering Physics

The Engineering Physics curriculum is a flexible program that combines a firm foundation in physics and mathematics with the freedom to choose from a diverse range of technical options. The curriculum is designed to prepare students for a wide variety of technical and professional careers, including graduate study in physics or a closely allied field.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

A technical grade point average requirement for graduation applies to students in this curriculum. This rule is summarized at the College of Engineering's Undergraduate Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvise/Technical+GPA+Requirements>).

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
ENG 100	Engineering Orientation ¹	0
PHYS 110	Physics Careers ¹	0
Total Hours		0

¹ External transfer students take ENG 300 instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations ²	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CS 101	Intro Computing: Engrg & Sci	3
Total Hours		33

¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

² MATH 285 may be replaced by MATH 441 followed by MATH 442.

Engineering Physics Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of engineering physics.

Code	Title	Hours
PHYS 225	Relativity & Math Applications	2
PHYS 325	Classical Mechanics I	3
PHYS 435	Electromagnetic Fields I	3
PHYS 486 or PHYS 485	Quantum Physics I ^{1,2} Atomic Phys & Quantum Theory	4
Total Hours		12

¹ If PHYS 486 is chosen, take prerequisite MATH 415, which may be used to meet free elective requirements.

² If PHYS 485 is taken, an additional free elective hour or a surplus flexible physics core course hour offsets the one-hour credit differential.

Flexible Physics Core Electives

These courses complement the Engineering Physics Technical Core, extending the intellectual understanding of engineering physics.

Code	Title	Hours
Flexible physics core electives. Choose three courses from a departmentally approved list with at least one being a lab course, PHYS 401, PHYS 402, PHYS 403, PHYS 404, or PHYS 406. The number of hours varies depending upon the courses chosen. ¹		9-15

¹ Departmentally Approved List

Mathematics Elective

Code	Title	Hours
	Mathematics elective, chosen from a departmentally approved list of Mathematics Electives. ¹	3

¹ *Approved list of Mathematics Electives*

Technical/Professional Option Electives

Students may select from a list of preapproved options or design a custom option, subject to departmental approval. The current preapproved options, requiring 12-22 credit hours of course work, are:

- Acoustical Physics
- Astrophysics
- Atmospheric Science
- Biophysics
- Business
- Computational Physics
- Computer Engineering
- Energy/Sustainability
- Materials Science
- Nuclear Physics
- Optical Physics
- Law
- Professional Physics
- Solid State Electronics
- Pre-Med
- Pre-Law

The course work is selected in consultation with the student's advisor to address an intellectually coherent body of knowledge.

Code	Title	Hours
	Technical/professional option electives for the option selected, chosen from a departmentally approved list of Technical/Professional Option Electives (or a list designed for a departmentally approved custom option). The number of hours varies depending upon the option chosen. ¹	12-27

¹ *List of Technical/Professional Option Electives*

Liberal Education

The liberal education courses (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives>) develop students' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
	Electives from the campus General Education Social and Behavioral Sciences list.	6

	Electives from the campus General Education Humanities and the Arts list.	6
	Electives either from a list approved by the college, or from the campus General Education lists for Social and Behavioral Sciences or Humanities and the Arts.	6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
	Advanced Composition. May be satisfied by completing a course with the Advanced Composition designation in either the social sciences and humanities or the free elective categories.	
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering Advising Website (<https://wiki.cites.illinois.edu/wiki/display/ugadvice/Free+Electives>), give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
	Free electives. Additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering Advising Website, so that there are at least 128 credit hours earned toward the degree. The number of hours varies depending upon the total hours earned in both the Flexible Physics Core and the Technical/Professional Option and whether or not MATH 415 and PHYS 486 are taken in place of PHYS 485.	13-37

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
ENG 100 Engineering Orientation	0
MATH 221 ¹ Calculus I	4
PHYS 110 Physics Careers	0

RHET 105 Writing and Research (or Liberal education elective) ^{3,4}	4-3	Flexible physics core electives or Free electives ^{7,8}	6
Liberal education elective ⁴	3	Semester Hours	16
Semester Hours	15-14	Second Semester	
Second Semester		Free electives	11-10
CS 101 Intro Computing: Engrg Sci	3	Technical/professional option electives or Free electives ^{6,11}	5
MATH 231 Calculus II	3	Semester Hours	16-15
PHYS 211 ² University Physics: Mechanics	4	Total Hours:	128
RHET 105 Writing and Research (or Liberal education elective) ^{3,4}	3-4		
Liberal education elective ⁴	3	¹ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.	
Semester Hours	16-17	² Students with proficiency or advanced placement (AP or IB) credit in MATH 221 are strongly encouraged to enroll in MATH 231 and PHYS 211 for the first semester.	
Second Year		³ RHET 105 may be taken in the first or second semester of the first year as authorized. The alternative is a social sciences or humanities elective.	
First Semester		⁴ Liberal education electives (https://wiki.cites.illinois.edu/wiki/display/ugadvice/Liberal+Education+Electives) must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used satisfy the cultural studies requirements.	
MATH 241 Calculus III	4	⁵ MATH 285 may be replaced by MATH 441 followed by MATH 442.	
PHYS 212 University Physics: Elec Mag	4	⁶ To be chosen from a departmentally approved list of Technical/Professional Option Electives (http://physics.illinois.edu/current/undergrad/ep_options.asp), in consultation with the student's advisor, for the option elected (or a list fashioned for a departmentally approved custom option). The number of credit hours varies 12-22 depending upon the option chosen.	
PHYS 225 Relativity Math Applications	2	⁷ The flexible physics core requirement consists of three courses chosen from a departmentally approved list of Flexible Physics Core Electives with at least one of them being a lab course, PHYS 401, PHYS 403, PHYS 404, or PHYS 406. The number of credit hours varies 9-15 depending upon the courses chosen.	
Liberal education electives ⁴	6	⁸ For courses chosen with more than 3 hours credit, the surplus hours may be used to meet free elective requirements.	
Semester Hours	16	⁹ To be chosen from a departmentally approved list of Mathematics Electives (http://physics.illinois.edu/undergrad/math-options.asp). Any course satisfying the Mathematics Elective cannot be used to satisfy any other requirement.	
Second Semester		¹⁰ If PHYS 485 is taken, an additional free elective hour or a surplus flexible physics core course hour offsets the one-hour credit differential.	
MATH 285 ⁵ Intro Differential Equations	3	¹¹ Taken if needed to complete a technical/professional option requiring more than 12 hours of credit.	
PHYS 213 Univ Physics: Thermal Physics	2		
PHYS 214 Univ Physics: Quantum Physics	2		
PHYS 325 Classical Mechanics I	3		
Technical/professional option elective ⁶	3		
Liberal education elective ⁴	3		
Semester Hours	16		
Third Year			
First Semester			
MATH 415 Applied Linear Algebra (if PHYS 486 will be taken) or Free elective	3		
PHYS 435 Electromagnetic Fields I	3		
Flexible physics core elective ^{7,8}	3		
Mathematics elective ⁹	3		
Technical/professional option elective ⁶	3		
Free elective	3		
Semester Hours	18		
Second Semester			
PHYS 485 Atomic Phys Quantum Theory or 486 ¹⁰	3-4		
Flexible physics core electives ^{7,8}	6		
Technical/professional option electives ⁶	6		
Semester Hours	15-16		
Fourth Year			
First Semester			
Technical/professional option electives or Free electives ^{6,11}	10	PHYS Class Schedule (https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PHYS)	

Courses

PHYS 100 Thinking About Physics credit: 2 Hours.

Conceptual and problem solving skills in preparation for PHYS 211: –analysis and mathematical descriptions of physical situations – understanding the meaning of the solutions Prerequisite: Credit or concurrent registration in MATH 220 or MATH 221.

PHYS 101 College Physics: Mech & Heat credit: 5 Hours.

Newton's Laws, work and energy, rotational motion, fluids, thermodynamics, and waves. A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 101 and either PHYS 211 or PHYS 213. Prerequisite: Trigonometry.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 102 College Physics: E&M & Modern credit: 5 Hours.

Electric forces and fields, electric potential, electric circuits, magnetic forces and fields, geometrical optics, relativity, and modern physics. A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 102 and either PHYS 212 or PHYS 214. Prerequisite: PHYS 101.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 110 Physics Careers credit: 0 Hours.

Exploration of careers founded on physics undergraduate training. Introduction to the Physics Department, faculty, research and curricula. Outside speaker presentations. Approved for S/U grading only.

PHYS 123 Physics Made Easy credit: 3 Hours.

Inquiry-based, nonmathematical, hands-on study of physics for elementary school teachers. Coverage of most of the National Science Education K-4 Content Standards. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

PHYS 140 How Things Work credit: 3 Hours.

Nonmathematical approach underscoring the generality and ubiquity of basic physical laws in understanding commonplace phenomena: musical instruments, photography, electric and electronic circuits, television, motors, engines, etc. Credit is not given to engineering majors.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 150 Physics of Societal Issues credit: 3 Hours.

Physics topics and applications relevant in the modern world: energy, quantum mechanics, electricity and magnetism, nuclear physics, waves, light, and outer space. Application to satellites, alternative energy, medical imaging, radiation, nuclear weapons, climate change, and electronics. Emphasis on analytical thinking and the applicability to modern societal issues.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 192 Science and Pseudoscience credit: 1 Hour.

Extra-sensory perception, alien abduction, and psychic crime-solving from the standpoint of scientific inquiry and exploration; the scientific method, how science progresses, and the types of argumentative fallacies that pervade the pseudoscientific community; examples of good science and how the scientific method is self-correcting.

PHYS 193 Physics of Music credit: 2 Hours.

Physics of music and musical instruments; acoustical physics, propagation of sound waves, the biological physics of human hearing, and the acoustical physics associated with all types of musical instruments.

PHYS 194 Behavior of Complex Systems credit: 1 Hour.

Exploration of systems with simple rules that nevertheless exhibit complex behavior. Lecture demonstrations on fractal growth, chaos, catastrophes, self-assembly, lightning, turbulence, explosions, and human rhythms. Simple computer models which exhibit regular, irregular, symmetric, and self-similar patterns and dynamics. Dynamics of isolated and coupled complex systems and mathematical tools for quantifying complex behavior.

PHYS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PHYS 211 University Physics: Mechanics credit: 4 Hours.

Newton's Laws, work and energy, static properties and fluids, oscillations, transverse waves, systems of particles, and rotations. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 211 and PHYS 101. Prerequisite: Credit or concurrent registration in MATH 231.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 212 University Physics: Elec & Mag credit: 4 Hours.

Coulomb's Law, electric fields, Gauss' Law, electric potential, capacitance, circuits, magnetic forces and fields, Ampere's law, induction, electromagnetic waves, polarization, and geometrical optics. A calculus-based approach for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 212 and PHYS 102. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 213 Univ Physics: Thermal Physics credit: 2 Hours.

First and second laws of thermodynamics including kinetic theory of gases, heat capacity, heat engines, introduction to entropy and statistical mechanics, and introduction to application of free energy and Boltzmann factor. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 213 and PHYS 101. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 214 Univ Physics: Quantum Physics credit: 2 Hours.

Interference and diffraction, photons and matter waves, the Bohr atom, uncertainty principle, and wave mechanics. A calculus-based course for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 214 and PHYS 102. Prerequisite: PHYS 212.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 221 Enrichment Mechanics credit: 1 Hour.

Supplement to PHYS 211 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based mechanics. Prerequisite: PHYS 100; concurrent registration in PHYS 211.

PHYS 222 Enrichment E & M credit: 1 Hour.

Supplement to PHYS 212 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based electricity & magnetism. Prerequisite: PHYS 100; concurrent registration in PHYS 212.

PHYS 225 Relativity & Math Applications credit: 2 Hours.

Theory of Special Relativity, with applications to kinematics and dynamics. Key mathematical methods as they apply to aspects of electromagnetic theory and classical mechanics, including vector analysis, series expansions, matrices, Fourier analysis, partial differentiation, three-dimensional calculus, and simple differential equations. Prerequisite: Credit or concurrent registration in PHYS 212.

PHYS 280 Nuclear Weapons & Arms Control credit: 3 Hours.

Nontechnical analysis of the physics of nuclear weapons, nuclear weapon effects, delivery systems, and defenses against nuclear attack; presentation of current issues; basis for making informed judgments about nuclear armaments and arms control. Same as GLBL 280.

This course satisfies the General Education Criteria for:
Advanced Composition

PHYS 298 Freshmen/Sophomore Special Topics in Physics credit: 0 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the introductory level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 credit hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with freshman or sophomore standing.

PHYS 325 Classical Mechanics I credit: 3 Hours.

Kinematics and dynamics of classical systems, including a review of Newtonian kinematics and dynamics. Three dimensional motion, variable mass, and conservation laws; damped and periodically driven oscillations; gravitational potential of extended objects and motion in rotating frames of reference; Lagrangian and Hamiltonian mechanics. Prerequisite: PHYS 225; credit or concurrent registration in MATH 285.

PHYS 326 Classical Mechanics II credit: 3 Hours.

Continuation of PHYS 325. Central force motion, collisions and scattering, rotational motion, coupled oscillations, continuous media, and fluid dynamics. Prerequisite: PHYS 325.

PHYS 329 Atmospheric Dynamics I credit: 3 Hours.

Same as ATMS 302. See ATMS 302.

PHYS 330 Atmospheric Dynamics II credit: 3 Hours.

Same as ATMS 312. See ATMS 312.

PHYS 398 Sophomore/Junior Special Topics in Physics credit: 1 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the intermediate level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with sophomore or junior standing.

PHYS 401 Classical Physics Lab credit: 3 Hours.

Experiments and techniques in classical mechanics and electromagnetism. Dynamics of electrical and mechanical oscillators in the linear domain. Fourier analysis of system response. Measurements of electrostatic fields, transmission lines, waves, and radiation. Electromagnetic phenomena in dielectrics, conductors, and magnetic materials. Instruction in data analysis and report writing. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent enrollment in PHYS 325.

PHYS 402 Light credit: 4 Hours.

Wave kinematics; geometrical optics: basic concepts, ray-tracing and matrix formalism, Gaussian imaging by thick lenses, stops, apertures, and intensity relations; interference; interference spectroscopy and coherence; diffraction: Fresnel-Kirchhoff formulation, Fraunhofer case, Fresnel case, and holography; polarized light. 4 undergraduate hours. 3 or 4 graduate hours. (3 hours without lab). Prerequisite: MATH 285; PHYS 102 or PHYS 214.

PHYS 403 Modern Experimental Physics credit: 4 or 5 Hours.

Techniques and experiments in the physics of atoms, atomic nuclei, molecules, the solid state, and other areas of modern physical research. 5 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in PHYS 486.

PHYS 404 Electronic Circuits credit: 5 Hours.

Physics of semiconductor devices; theory and application of discrete and integrated devices in linear circuits; use of operational amplifiers and feedback; regulation, oscillators, and modulation; emphasizes practical experience. 5 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 325.

PHYS 406 Acoustical Physics of Music credit: 4 Hours.

Acoustical physics associated with music and musical instruments, propagation of sound waves in and from musical instruments, and the biological physics of human hearing. Investigation of topics via advanced laboratory and data acquisition techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 419 Space, Time, and Matter-ACP credit: 3 or 4 Hours.

Identical to PHYS 420 except for the additional writing component including a final term paper. Same as PHIL 419. 3 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 419 and PHYS 420. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

This course satisfies the General Education Criteria for:
Advanced Composition

PHYS 420 Space, Time, and Matter credit: 2 Hours.

Philosophical examination of some fundamental concepts and theories of the physical world, such as time, matter, space, and geometry; interpretation of quantum theory. Same as PHIL 420. 2 undergraduate hours. 2 graduate hours. Credit is not given for both PHYS 420 and PHYS 419. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

PHYS 427 Thermal & Statistical Physics credit: 4 Hours.

Equilibrium thermodynamics, statistical mechanics, and kinetic theory of gases. A unified treatment is used in that the principles of heat and thermodynamics are discussed along with statistical postulates and the microscopic approach of introductory quantum mechanics. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 427 and any of ME 404, CHEM 444, MSE 500. Prerequisite: PHYS 213, PHYS 214, and PHYS 325.

PHYS 435 Electromagnetic Fields I credit: 3 Hours.

Static electric and magnetic fields, their interactions with electric charge and current, and their transformation properties; the effect of special relativity is incorporated. Macroscopic fields in material media are described. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 285; credit or concurrent enrollment in PHYS 325.

PHYS 436 Electromagnetic Fields II credit: 3 Hours.

Time-dependent fields. Electromagnetic induction, Maxwell's equations, electromagnetic wave propagation in various media and structures, and electromagnetic radiation from charge and current distributions. Relativistic covariance of Maxwell's equations. Course Information: 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 435.

PHYS 460 Condensed Matter Physics credit: 4 Hours.

Bonding and structure of crystals; energy bands in insulators, semiconductors, and metals; electrical conductivity; optical properties; lattice vibrations; elasticity; point defects; dislocations. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 460 and MSE 304. Prerequisite: PHYS 435; PHYS 485 or PHYS 486.

PHYS 466 Atomic Scale Simulations credit: 3 or 4 Hours.

Same as CSE 485 and MSE 485. See MSE 485.

PHYS 470 Subatomic Physics credit: 4 Hours.

The nature and properties of nuclei and elementary particles, symmetries, interactions, nuclear models, tools and techniques of experimental subatomic physics, and applications to power generation, astrophysics, chemistry, medicine, and biology. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 485 or PHYS 486.

PHYS 475 Introduction to Biophysics credit: 3 or 4 Hours.

Major concepts of physics inherent to biological systems. Basics of biology, including protein and DNA structure and their organization into cells with a focus on single molecule biophysics. Major experimental techniques including x-ray diffraction, optical and magnetic traps, and fluorescence microscopy, including new super-resolution techniques. Applications to cytoplasmic and nuclear molecular motors, bacterial motion, nerves, and vision. Same as BIOP 401. 3 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 485 Atomic Phys & Quantum Theory credit: 3 Hours.

Basic concepts of quantum theory which underlie modern theories of the properties of materials; elements of atomic and nuclear theory; kinetic theory and statistical mechanics; quantum theory and simple applications; atomic spectra and atomic structure; molecular structure and chemical binding. 3 undergraduate hours. 3 graduate hours. Credit is not given for both PHYS 485 and CHEM 442. Prerequisite: MATH 285 and PHYS 214.

PHYS 486 Quantum Physics I credit: 4 Hours.

Atomic phenomena integrated with an introduction to quantum theory; evidence for the atomic nature of matter and the properties of the Schrodinger equation, single particle solutions in one dimension, the hydrogen atom, perturbation theory, external fields, and atomic spectroscopy of outer electrons. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285; PHYS 214; credit or concurrent registration in MATH 415.

PHYS 487 Quantum Physics II credit: 4 Hours.

Continuation of PHYS 486. Identical particles, spectral hyperfine structure, magnetic properties of matter, atomic spectroscopy of inner electrons, high-energy photon effects, molecular binding and spectra, emission and absorption of light, and symmetry principles. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 486.

PHYS 496 Intro to Physics Research credit: 3 Hours.

Examination of current research topics through extensive reading, writing, and oral-presentation activities. 3 undergraduate hours. No graduate credit.

This course satisfies the General Education Criteria for: Advanced Composition

PHYS 497 Individual Study credit: 1 to 4 Hours.

Individual study at an advanced level in a subject not covered by course offerings. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

PHYS 498 Special Topics in Physics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in physics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

PHYS 499 Senior Thesis credit: 3 Hours.

Faculty-guided writing of a senior thesis involving independent research. Oral presentations of research and outside journal articles, proposal writing and reviewing, poster presentation, preparation of graduate school applications, and discussion of physics frontiers with outside experts. 3 undergraduate hours. No graduate credit. Prerequisite: PHYS 496.

Minor in Bioengineering

<http://bioengineering.illinois.edu>

Bioengineering is a broad, interdisciplinary field that brings together engineering, biology, and medicine to create new techniques, devices, and understanding of living systems to improve the quality of human life. Its practice ranges from the fundamental study of the behavior of biological materials at the molecular level to the design of medical devices to help the disabled.

Any of the existing engineering programs can provide a good foundation for work in bioengineering. However, the engineering undergraduate needs additional education in the biologically oriented sciences to obtain a strong background for bioengineering. With such a background, the student should be able to progress rapidly on the graduate level in any branch of bioengineering. In industry, the graduate will be competent to handle engineering tasks related to biology.

For students pursuing the Bioengineering Minor from non-engineering backgrounds, please note that upper level electives may have engineering courses as prerequisites and these, and any subsequent prerequisite courses, are required for anyone taking the course.

Students may fulfill the requirements for a minor in bioengineering by completing the following course sequence. Engineering students who are proficient in biology may waive MCB 150 as a prerequisite for courses in this minor.

Code	Title	Hours
BIOE 120	Introduction to Bioengineering	1
BIOE 414 or CHBE 472	Biomedical Instrumentation Techniques in Biomolecular Eng	3
CHEM 232	Elementary Organic Chemistry I	3
MCB 244	Human Anatomy & Physiology I	3
MCB 246	Human Anatomy & Physiology II	3

or MCB 250	Molecular Genetics	
MCB 252	Cells, Tissues & Development	3
MCB 253	Exp Techniqs in Cellular Biol	2
Bioengineering Related Technical Elective ¹		3
Total Hours		21

¹ Courses to be selected from a list of departmentally approved list of 300- and 400-level Bioengineering Related Technical Electives (<http://bioengineering.illinois.edu/undergraduate-programs/undergraduate-minor/bioengineering-minor-engineering-students/#related%20courses>).

For more information regarding the Bioengineering minor, visit the Bioengineering minor Web site (<http://bioengineering.illinois.edu/undergraduate-programs/undergraduate-minor/bioengineering-minor-engineering-students>), contact the Bioengineering Department Office (1270 Digital Computer Laboratory, 217-333-1867, bioengineering@illinois.edu), or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Minor in Computer Science

This minor is offered by the Department of Computer Science for students seeking significant knowledge of digital computers without the more complete treatment of a major in computer science. This minor may be taken by any student except Computer Science and Computer Engineering majors.

The foundation upper-level courses in computer programming and software and in theory of computation are required. Three elective 200- and 300-level courses provide some specialization and depth and breadth of study. Specific requirements are listed below. Note that some courses have other prerequisites.

Code	Title	Hours
CS 125	Intro to Computer Science ¹	4
CS 173	Discrete Structures ¹	3
CS 225	Data Structures	4
Three courses, including at least one at the 400 level, chosen from a departmentally approved list. ²		9
Total Hours		20

¹ The following substitutions are routinely allowed: ECE 220 for CS 125; MATH 213 for CS 173; and ECE 391 for CS 241.

² Departmentally approved list (<https://wiki.cites.illinois.edu/wiki/display/undergradProg/Degree+Requirements/#DegreeRequirements-csminor>).

For more information regarding the CS minor, visit the CS minor Web site (<https://wiki.cites.illinois.edu/wiki/display/undergradProg/Degree+Requirements/#DegreeRequirements-csminor>), contact the Computer Science Academic Office (1210 Siebel Center, 217-333-4428, undergrad@cs.illinois.edu), or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Minor in Electrical and Computer Engineering

Electrical and computer engineering transforms our day-to-day lives through a multitude of innovative technologies and products. The ECE

minor is intended to expose students from other disciplines to the unlimited opportunities for innovation in this exciting field, and to the methodologies and tools used by electrical and computer engineers for the exploration and design of new technologies and products. The minor is open to undergraduates outside the ECE Department. Computer Science majors cannot elect the Computer Engineering Option within the minor.

Code	Title	Hours
Circuits Requirement:		
Select one of the following:		3
ECE 110	Introduction to Electronics	
ECE 205	Elec & Electronic Circuits	
Programming Requirement: ¹		
Select one of the following (with no particular preference):		3-4
CS 101	Intro Computing: Engrg & Sci	
CS 125	Intro to Computer Science	
A probability or statistics course chosen from an approved list. ²		3-4
Select one of the following options: ³		12
A. Electrical Engineering Option		
Core requirement:		
ECE 210	Analog Signal Processing	
Advanced Core Electives:		
Two ECE courses chosen from an approved list. ⁴		
B. Computing Engineering Option		
Core Requirement:		
ECE 120	Introduction to Computing	
ECE 220	Computer Systems & Programming	
Advanced Core Electives:		
One ECE course chosen from an approved list. ⁵		
Elective ECE Courses to achieve a minimum of 18 hours of ECE course work. ⁶		
Total Hours		21-23

¹ If the student will be taking ECE 220 following ECE 120, this requirement will be waived.

² ECE 313 or IE 300 or BIOE 310 or MATH 461 or MATH 463/STAT 400 or CEE 202 or CS/STAT 361

³ To complete the minor, both the Core and Advanced Core courses from Option "A" or "B," must be completed.

⁴ Advanced Core Electives (EE): ECE 310, ECE 329, ECE 330, ECE 340, ECE 342/343

⁵ Advanced Core Electives (CE): ECE 385, ECE 391, ECE 411

⁶ Completion of the minor requires a minimum of 18 hours ECE course work. No additional hours are needed in this category if all courses taken to satisfy the previous requirements are ECE courses. Otherwise chose from any 300 and 400 level classes except ECE 316, 317, 396, 397, 496, 499.

For more information regarding the Electrical and Computer Engineering minor, visit the Electrical and Computer Engineering minor Web site (<http://www.ece.illinois.edu/academics/ugrad/ece-minor.asp>), contact the Electrical and Computer Engineering Undergraduate Programs Office (2120 ECE Building, 217-333-0716, ece-advisor@illinois.edu), or

visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

International Minor in Engineering

Many College of Engineering graduates will be involved in international activities during their professional careers. In anticipation of such involvement, the college offers an opportunity for students to complete an international minor as part of any engineering degree program. All international minor requirements must be satisfied before graduation. The requirements are:

- Completion of all degree requirements in the student's selected engineering discipline. Courses for the International Minor can be combined with degree requirements.
- Completion of foreign language studies in a language of the student's choice of geographical area (proficiency level will vary with the geographical area selected) if applicable. Students completing a minor in Great Britain or Australian studies will NOT have to have completed a foreign language.
- Completion of a minimum of 21 hours of cultural and language studies related to the geographical area of concentration; 9 hours must be other than language credit and include at least one 300- or 400-level course. These courses can be used as campus and college general education requirements. Courses taken on campus for the minor must be taken for grade. Students completing the Great Britain or Australian minor will complete their 21 hours of related coursework in the "other" non-language area.
- Completion of a minimum five-week approved residence in the chosen country or geographic area, whether it be for work or study.

The student will be expected to select a specific geographical area for concentration, which will be identified in the designation of the minor; for example International Minor-Latin American studies. Course work selected for the minor must be approved by the International Programs in Engineering Office; a list of suggested courses is available.

International Programs in Engineering sponsors academic year, semester, and summer programs that include language and cultural courses and satisfy the residency requirement. With sufficient foreign language background before entering engineering, a student will normally be able to complete the degree and minor in four years. Those not having this background, or taking a year of study at a foreign institution, may take four and one-half to five years to complete their degrees.

For more information regarding the International Minor (IM), visit the International Minor website (<http://engineering.illinois.edu/ipeng/opportunities/international-minor-in-engineering.html>), contact the Engineering Study Abroad Office (210 Engineering Hall, (217)244-0054, ipeng@illinois.edu) or visit the Office of the Associate Dean for Undergraduate Programs, International Programs in Engineering Office, 210 Engineering Hall. To sign up for the minor students should follow the directions at the IM website.

Minor in Materials Science and Engineering

Materials are the basis for all engineering and also are the basis for much of the research in various areas of science. The Minor in Materials Science and Engineering is designed to give students in other areas of engineering and science both a broad view of all materials as well as several courses in a particular area of materials, knowledge that will be

of value whether the student pursues a career in industry, government, or academia.

The courses, listed below, have been selected to give an undergraduate student both a strong background in all types of materials as well as more detailed knowledge of a particular area of materials (e.g., ceramics, metals, polymers, electronic materials or biomaterials)

The following six courses are required:

Code	Title	Hours
Core Course Work		
MSE 280	Engineering Materials	3
MSE 401	Thermodynamics of Materials ¹	3
One additional course chosen from an approved list. ²		3
Introductory Area course chosen from an approved list. ³		3
Senior lab source chosen from an approved list. ³		3
Advanced Area course chosen from one of several approved lists. ³		3
Total Hours		18

¹ *Other thermodynamics courses may be substituted upon petition.*

² *Approved List of Core Courses.*

³ *Approved List for Area Introductory Courses, Senior Lab Courses, and Advanced Area Courses.*

For more information regarding the Materials Science and Engineering minor, visit the Materials Science and Engineering minor Web site (http://matse.illinois.edu/academics/matse_minor.html), contact the MatSE Department Office (201 MSEB, 217-333-1441, matse@illinois.edu), or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Physics Minor

Physics and technology go hand in hand, with physics providing the foundation for a broad range of technical fields. This minor is intended to encourage you to expand your understanding of physics beyond the introductory level, to deepen your understanding of fundamental principles, and to enhance your ability to keep abreast of an ever-changing technological world. Depending on your choice of 300- and 400-level physics courses, a total of 21-25 hours is required.

Code	Title	Hours
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
or PHYS 214	Univ Physics: Quantum Physics	
PHYS 225	Relativity & Math Applications	2
PHYS 325	Classical Mechanics I	3
Any two PHYS courses at the 300 or 400 level except PHYS 419 and PHYS 420		6-10
Total Hours		21-25

For more information regarding the Physics minor, visit the Physics minor website, (<http://physics.illinois.edu/undergrad/minor.asp>) contact the Physics Undergraduate Programs Office (233 Loomis Laboratory of Physics, 217-333-4361, undergrad@physics.illinois.edu), or visit

the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Polymer Science and Engineering Minor

Polymer science and engineering is a broad, interdisciplinary field that brings together various aspects of chemistry, physics, and engineering for the understanding, development, and application of the materials science of polymers. Many of the existing engineering programs provide a good foundation for work in polymer science and engineering. However, the undergraduate student needs additional courses specifically dealing with the science and engineering of large molecules. With such a background, the student should be able to progress rapidly in industry or at the graduate level. In addition to those students specifically desiring a career in polymers, this minor also can be valuable to students interested in the development, design, and application of materials in general.

The courses listed below have been selected specifically to give an undergraduate student a strong background in polymer science and engineering. A minimum of eight courses is required, including 3 Core courses, one course each in thermodynamics, mechanical properties, and chemistry and two additional polymer-related courses, as listed below. Several of these the student would normally take to satisfy the requirements of the basic degree. The student should consult the Department of Materials Science and Engineering when formulating a plan of course work.

The following courses are required. Credit hours will exceed 25 if a Thermodynamics course-pair option is chosen.

Code	Title	Hours
Core Course Work		
MSE 450 or CHBE 456	Polymer Science & Engineering	3-4
MSE 452	Polymer Laboratory	3
MSE 453	Plastics Engineering	3
Thermodynamics: one course (or a course pair) chosen from an approved list ¹		3-8
TAM 251	Introductory Solid Mechanics (Mechanical Properties)	3
CHEM 236	Fundamental Organic Chem I (Chemistry)	4
Polymer-Related Course Work: two courses chosen from an approved list. ²		6
Total Hours		25-30

¹ Thermodynamics approved list

² Polymer approved list

For more information, visit the Polymer Science and Engineering minor website (<http://www.matse.illinois.edu/academics/undergraduate/curriculum/polymer.html>), contact the MatSE Department Office (201 MSEB, (217)-333-1441, matse@illinois.edu), or visit the Office of the Associate Dean for Undergraduate Programs, 206 Engineering Hall.

Minor in Technology and Management

Successful management of technology-driven businesses today requires that employees work effectively in interdisciplinary teams. Team-based project management requires that each member of the team contribute not only in his or her own area of expertise, but in other aspects of the project as well. The better equipped a new employee is to reach this level of competency quickly, the more valuable will be his or her contributions. Moreover, an employee having such competency will be better prepared to assume positions of increased responsibility and challenge.

The Hoeft Technology & Management Program offers a minor in Technology & Management to undergraduate students in the College of Business and the College of Engineering. Students in the Colleges of ACES and LAS may also be eligible based on their major. The minor is designed to prepare students for success in a wide variety of careers. Today, more than ever, employers have high expectations of undergraduate hires. The T&M Program provides a comprehensive experience to ready graduates for early career success.

Students in the minor are able to acquire a thorough foundation in their major course of study and a comprehensive understanding of the fundamental elements of a cross-discipline education. The course of study leading to a minor in Technology & Management is comprised of the following:

Code	Title	Hours
Required Courses Taken by Engineering Students Only (in order taken)		
BADM 365	New Product Marketing	3
ACCY 200	Fundamentals of Accounting	3
FIN 221	Corporate Finance	3
Required Courses Taken by Business Students Only (in order taken)		
MSE 101	Materials in Today's World	3
ECE 317	ECE Technology & Management	3
TAM 201	Mechanics for Technol & Mgmt	3
Required Courses Taken by Engineering and Business Students Together (in order taken)		
TMGT 367	Mgmt of Innov and Technology	3
TMGT 366	Product Design and Development	3
TMGT 460	Business Process Modeling	3
TMGT 461	Tech, Eng, & Mgt Final Project	2

Throughout the minor, emphasis is placed on an interdisciplinary team approach to the development of comprehensive solutions to real-world problems. In many cases, the problems are provided by industry sponsors who, along with business and engineering faculty advisors, provide assistance and guidance to student teams.

The T&M Program is sponsored by leading companies in a variety of industries. These companies provide strategic guidance, access to senior executives, real-world business problems, and internship and full-time employment opportunities. The current T&M Corporate Affiliates include Abbott, Anheuser-Busch InBev, BP, Boeing, Capital One, John Deere, and Motorola Solutions.

In addition to formal courses, the T&M Program offers a comprehensive set of extracurricular activities to develop skills and provide valuable

experiences to students. These include a leadership development and career development workshops, business skills workshops (for example, professional branding, improvisation training, etiquette dinner, and golf etiquette), an international immersion trip, and an international business plan competition.

The Hoeft Technology & Management Program aims to prepare graduates for successful careers in a variety of functions and industries. T&M students have pursued careers in a wide range of industries and fields.

Students who wish to pursue this minor must apply for admission to The Hoeft Technology & Management Program during winter break of their sophomore year. Enrollment in the minor is limited and admission is competitive. Applications are reviewed by the program staff and offers of admission are based on the student's academic record, extracurricular involvement, demonstrated leadership, and career goals.

For more information regarding the Technology & Management minor, visit the Technology & Management website (<http://www.techmgmt.uiuc.edu>) or contact the Technology & Management Program Office (470K Wohlers Hall, (217) 244-5752, techgmt@illinois.edu).

Minor in Computational Science and Engineering

<http://cse.illinois.edu>

Code	Title	Hours
Core Courses		9
Programming ¹		
CS 101	Intro Computing: Engrg & Sci	3
CS 125	Intro to Computer Science	4
CS 225	Data Structures	4
ECE 220	Computer Systems & Programming	4
LING 402	Tools & Tech Spch & Lang Proc	3
Applied Math ²		
ECE 493	Advanced Engineering Math	3 or 4
MATH 441	Differential Equations	3 or 4
or MATH 442	Intro Partial Diff Equations	
or MATH 489	Dynamics & Differential Eqns	
MATH 415	Applied Linear Algebra	3 or 4
MATH 444	Elementary Real Analysis	3 or 4
or MATH 447	Real Variables	
MATH 446	Applied Complex Variables	3 or 4
or MATH 448	Complex Variables	
MATH 482	Linear Programming	3 or 4
or MATH 484	Nonlinear Programming	
STAT 408	Actuarial Statistics I	4
or STAT 409	Actuarial Statistics II	
or STAT 410	Statistics and Probability II	
or STAT 420	Methods of Applied Statistics	
or STAT 430	Topics in Applied Statistics	
or MATH 461	Probability Theory	
Computational Methods		
CS 411	Database Systems	3 or 4

CS 450	Numerical Analysis	3
or CSE 401	Numerical Analysis	
CS 466	Introduction to Bioinformatics	3 or 4
ECE 448	Artificial Intelligence	3 or 4
GEOG 489	Programming for GIS	4
LING 402	Tools & Tech Spch & Lang Proc	3
STAT 440	Statistical Data Management	3 or 4
TAM 470	Computational Mechanics	3 or 4
or CSE 450	Computational Mechanics	
Application Coursework/Computing Elective		9

OPTION 1		
Three 400-level CSE courses; see list at http://cse.illinois.edu/courses		
OPTION 2		
Two 400-level CSE courses AND an independent study on a computational topic ³		

- ¹ An equivalent (or advanced) programming course may be used to satisfy this requirement.
- ² Any advanced corresponding course from the above list of topics may be taken in lieu of an equivalent introductory course.
- ³ In order for an independent study to fulfill the minor requirement, the student must conduct the undergraduate research with one of the CSE affiliated faculty listed on the Computational Science and Engineering website: <http://cse.illinois.edu/research/affiliates>

Bachelor of Science in Innovation, Leadership and Engineering Entrepreneurship (ILEE)

The Technology Entrepreneur Center offers studies leading to the Bachelor of Science in Innovation, Leadership and Engineering Entrepreneurship (ILEE). The BS in ILEE degree is intended for College of Engineering students to better understand the innovative processes involved in identifying problems and creating, developing, and leading efforts to provide their engineering solutions. The curriculum is based on a sound disciplinary engineering technical core with additional aspects of problem identification and innovation, and complex multidisciplinary engineering project management and leadership.

Overview of Curricular Requirements

The curriculum requires 128 hours for graduation and is organized as shown below.

Orientation and Professional Development

These courses introduce the opportunities and resources your college, department, and curriculum can offer you as you work to achieve your career goals. They also provide the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
TE 298	Special Topics I	1
COE Department of Concentration introduction course		0
ENG 100	Engineering Orientation ¹	0
Total Hours		1

¹ External transfer students take ENG 300 - Engrg Transfer Orientation instead.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 221	Calculus I ¹	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4

¹ MATH 220 - Calculus may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Innovation, Leadership and Engineering Entrepreneurship Technical Core

These courses stress fundamental concepts that comprise the common intellectual understanding of innovation and leadership in Engineering Entrepreneurship.

Code	Title	Hours
TE 250	From Idea to Enterprise	2
ENG 298	Special Topics (User Oriented Collaborative Design)	3
TE 333	Creativity, Innovation, Vision	4
TE 360	Lectures in Engineering Entrepreneurship	1
SE 361	Emotional Intelligence Skills	3
TE 398	Special Topics II (Innovation and Engineering Design)	2
TE 401	Developing Breakthrough Projects	4
TE 450	Startups: Inc, Fund, Contracts, IP	3
TE 461	Technology Entrepreneurship	3
SE 462	Leading Sustainable Change	3
TE 466	High-Tech Venture Marketing	2
COE Department of Concentration Approved Technical core		14
Total Hours		44

Technical Electives

This elective requirement gives each student freedom to define a technical course of study in innovation and leadership of considerable breadth and focus.

Code	Title	Hours
Technical electives to be chosen from ILEE approved list		19
Technical electives to be chosen from COE Department of Concentration approved list		8

Liberal Education

The liberal education courses develop student' understanding of human culture and society, build skills of inquiry and critical thinking, and lay a foundation for civic engagement and lifelong learning.

Code	Title	Hours
Electives from the campus General Education social & behavioral sciences list.		6
Electives from the campus General Education humanities & the arts list.		6
Electives either from a list approved by the college or from the campus General Education lists for social & behavioral sciences or humanities & the arts.		6
Total Hours		18

Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used to satisfy the cultural studies requirements.

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition may be satisfied by taking any course in either the liberal education or free elective categories which has the Advanced Composition designation.		
Total Hours		4

Free Electives

These unrestricted electives, subject to certain exceptions as noted at the College of Engineering advising Website, give the student the opportunity to explore any intellectual area of unique interest. This freedom plays a critical role in helping students to define research specialties or to complete minors.

Code	Title	Hours
Free electives not counted above additional unrestricted course work, subject to certain exceptions as noted at the College of Engineering advising website. At least 128 credit hours must be earned to graduate.		8

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken.

First Year

First Semester	Hours
CHEM 102 General Chemistry I	3
CHEM 103 General Chemistry Lab I	1
COE Dept of Concentration introduction course	0
TE 298 Special Topics I (Introduction to ILEE)	1
ENG 100 Engineering Orientation	0
TE 250 From Idea to Enterprise	2
MATH 221 ¹ Calculus I	4

RHET 105 Writing and Research or Liberal education elective ^{2,3}	3-4
<hr/>	
Semester Hours	14-15
Second Semester	
ENG 298 Special Topics (User Oriented Collaborative Design)	3
COE Dept of Concentration Technical core ⁴	3
MATH 231 Calculus II	3
PHYS 211 University Physics: Mechanics	4
Rhet 105 or Liberal education elective ^{2,3}	3-4
<hr/>	
Semester Hours	16-17
Second Year	
First Semester	
TE 333 Creativity, Innovation, Vision	4
TE 360 Lectures in Engineering Entrepreneurship	1
MATH 241 Calculus III	4
SE 361 Emotional Intelligence Skills	3
PHYS 212 University Physics: Elec Mag	4
<hr/>	
Semester Hours	16
Second Semester	
COE Dept. of Concentration Technical Core ⁴	
TE 450 Startups: Inc, Fund, Contracts, IP	3
MATH 285 Intro Differential Equations	3
Liberal education electives ³	6
<hr/>	
Semester Hours	12
Third Year	
First Semester	
TE 461 Technology Entrepreneurship	3
TE 401 Developing Breakthrough Projects	1 to 4
SE 462 Leading Sustainable Change	3
Liberal education elective ³	3
Free elective	4
<hr/>	
Semester Hours	14-17
Second Semester	
ILEE Technical electives ⁴	9
TE 398 Special Topics II (Innovation and Engineering Design)	2
TE 466 High-Tech Venture Marketing	2
COE Dept. of Concentration Technical core ⁴	4
<hr/>	
Semester Hours	17
Fourth Year	
First Semester	
ILEE Technical Electives ⁴	5
COE Dept of Concentration Technical Electives ⁴	3
COE Dept of Concentration Technical Core ⁴	4

Free Electives	4
<hr/>	
Semester Hours	16
Second Semester	
ILEE Technical Electives ⁴	5
COE Dept of Concentration Technical Electives ⁴	4
Liberal Education Electives ³	6
<hr/>	
Semester Hours	15
<hr/>	
Total Hours:	120-125

- ¹ MATH 220 - Calculus may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus
- ² RHET 105 should be taken in the first or second semester of the first year as authorized. The alternative is a social sciences or humanities elective.
- ³ Liberal education electives must include 6 hours of social & behavioral sciences and 6 hours of humanities & the arts course work from the campus General Education lists. The remaining 6 hours may be selected from a list maintained by the college, or additional course work from the campus General Education lists for social & behavioral sciences or humanities & the arts. Students must also complete the campus cultural studies requirement by completing (i) one western/comparative culture(s) course and (ii) one non-western/U.S. minority culture(s) course from the General Education cultural studies lists. Most students select liberal education courses that simultaneously satisfy these cultural studies requirements. Courses from the western and non-western lists that fall into free electives or other categories may also be used to satisfy the cultural studies requirements.
- ⁴ to be chosen from approved list

Technical Core		
Code	Title	Hours
TE 250	From Idea to Enterprise	2
TE 401	Developing Breakthrough Projects	4
ENG 298	Special Topics (User Oriented Collaborative Design)	3
TE 333	Creativity, Innovation, Vision	4
TE 360	Lectures in Engineering Entrepreneurship	1
TE 450	Startups: Inc, Fund, Contracts, IP	3
SE 361	Emotional Intelligence Skills	3
TE 398	Special Topics II (Innovation and Engineering Design)	2
TE 461	Technology Entrepreneurship	3
SE 462	Leading Sustainable Change	3
TE 466	High-Tech Venture Marketing	2
COE Department of Concentration Approved Technical Core		14
<hr/>		
Total Hours		44

Fine and Applied Arts, College of

Peter Mortensen, Interim Dean

Office of the Dean

110 Architecture Building

608 East Lorado Taft Drive

Champaign, IL 61820

PH: (217) 333-1661

<http://www.faa.illinois.edu>

The College of Fine and Applied Arts prepares men and women for professional work in architecture, art and design, dance, landscape architecture, music, theatre, and urban and regional planning. Freshmen and transfer students may apply for admission. In each curriculum specific basic courses, professional courses, and general education requirements must be completed in order to qualify for the specific baccalaureate degree offered.

Graduate degrees are offered in all areas of study through the Graduate College.

The College of Fine and Applied Arts offers introductory courses designed to increase aesthetic appreciation and development, and to portray the role of the arts in civilization for all students who are attending the University of Illinois at Urbana-Champaign. Participation in the many bands, choruses, and orchestras on campus, as well as private instruction on most instruments and in voice, is available to students in all colleges by audition.

To serve the total academic community and all citizens in the state of Illinois, the college features the arts in exhibitions, concerts, lectures, performances, demonstrations, and conferences. Many outstanding professionals and works in these fields are brought to the University campus. All departments in the College of Fine and Applied Arts reserve the right to retain, exhibit, and reproduce the works submitted by students for credit in any course.

In addition to the teaching divisions, the College of Fine and Applied Arts includes the Krannert Center for the Performing Arts, the Krannert Art Museum and Kinkead Pavilion, Japan House, the Smart Energy Design Assistance Center, and the Visual Resources Center.

Special Facilities

Career Services Office

The Career Services Office (<https://faa.illinois.edu/current-students/career-services>) in the College of Fine and Applied Arts recognizes the unique career needs of students in the visual and performing arts. The office provides presentations and individual appointments to help students explore all of their options. The office also serves as a resource for concerned parents.

Krannert Art Museum and Kinkead Pavilion

Krannert Art Museum (<http://www.kam.uiuc.edu>) is an accredited general art museum with eight permanent galleries, four temporary exhibition galleries, and an open virtual-reality lab. Its outstanding permanent collection places it among the top tier of university art museums in the nation. But the space is used as more than an art museum by students at the University of Illinois. Here they can gather to hear improvised music played by international artists, watch films, and participate in an open mic hip-hop cafe. Come and experience a space that allows for simultaneous interplay between more than one artistic form.

Krannert Center for the Performing Arts

The Krannert Center for the Performing Arts (<http://www.krannertcenter.illinois.edu>) is a remarkable four-theatre performing arts complex with spaces for instruction, rehearsal, and performance in theatre, opera, dance, and music. The Foellinger Great Hall, seating 2,200, is designed for large-scale musical events. The Tryon Festival Theatre, with 1,000 seats, is for opera, dance, and other musical stage productions. The Colwell Playhouse seats 700 and is the home of the Department of Theatre. The Studio Theatre, seating 150, is for experimental productions. An outdoor amphitheater, rehearsal rooms, offices, dressing rooms, technical shops, and underground parking on two levels for 650 cars complete this monumental facility.

Japan House

The study of Japanese culture began at the University of Illinois in 1900, with the arrival of the first Japanese student. Throughout the last century, the University's role as a leader in Japanese studies began to take form. A major theme of Japan House (<http://japanhouse.art.illinois.edu/en>) is peace. The focus of Japan House is its three tea rooms. The grounds also feature a Japanese tea garden, strolling garden, and Zen-style rock garden.

SEDAC – Smart Energy Design Assistance Center

The Smart Energy Design Assistance Center (<http://smartenergy.illinois.edu/about-us.html>) provides advice and analyses enabling private and public facilities in the State of Illinois to increase their economic viability through the efficient use of energy resources.

University Music Performance Organizations

The School of Music offers credit for all students enrolled in its many performance organizations. These organizations include ensembles in the nationally recognized Band Division: a Wind Symphony, two Symphonic Bands, three Concert Bands, Basketball Band, Brass Band, Clarinet Choir, and the world-famous Marching Illini. The Choral Division offers singers the opportunity to perform in the Oratorio Society, Black Chorus, Women's Chorus, University Chorus, Men's and Women's Glee Clubs, Concert Choir, and UI Chorale. The University Symphony and Illini Symphony, three jazz bands, gamelans and other ethnomusicology performance ensembles, and ensembles specializing in contemporary music, chamber music, and early music, among others, satisfy student interest both as performers and concertgoers.

A student in any college wishing to enroll in a performance organization should contact the Office of Academic Affairs, Room 3076 Music Building (phone: 217-244-2670) or the appropriate ensemble director to receive further information and arrange for an audition.

Visual Resources Center

The Visual Resources Center facilitates access to images and other visual formats, provides instruction on using a variety of educational software, works with users on image related research projects, and provides consultation related to digitization best practices. The digital collection is available via ARTstor. 35mm and lantern slide collections are available during business hours.

Libraries

Students in the college have at their disposal outstanding library resources. In addition to the University Library, one of this country's great university collections, there are specialized libraries serving the needs of specific fields. The Ricker Library of Architecture and Art contains more than 49,000 books (with almost 50,000 additional publications in the

same fields located in the main University Library), 33,000 photographs, and 9,400 clippings.

The City Planning and Landscape Architecture Library houses about 20,000 volumes of current interest, while more than 110,000 additional related volumes in the Funk Library.

The Music and Performing Arts Library, located in the Music Building, contains more than 765,000 items. These include introductory, instructive, research, and reference materials including books, editions of music, recordings, manuscripts, microfilm, and other materials.

library.illinois.edu (<http://library.illinois.edu>)

Departments, Schools, and Curricula

The College of Fine and Applied Arts consists of the Departments of Dance, Landscape Architecture, Theatre, and Urban and Regional Planning; the Schools of Architecture, Art and Design, and Music. The specific functions of each department or school and the undergraduate curricula are described on the following pages. Consult the Undergraduate Handbook available on the college website for specific academic policies and procedures for students and faculty in the college.

Special Programs

Study Abroad

International study can be a life transforming experience. The college provides the opportunity for students to obtain campus credit for foreign study and/or travel for a summer session, one semester, or an academic year. Students in FAA have a range of opportunities for study abroad. They can pick from programs developed specifically for students in their major (e.g., senior year abroad in Barcelona for Architecture students) or from the many programs available through the Study Abroad Office (<http://www.studyabroad.illinois.edu>) which serves the entire university population.

Prior to departure students are required to submit a study plan for review by their advisor and the college. Students with approved study plans retain their status as UI students and may continue their student health insurance while abroad. Participation in an approved UI program also counts as time in residence at the University.

The Study Abroad Office also provides information on financial aid specifically for study away from campus. The office is located in the International Studies Building, 910 S. Fifth St., Champaign, IL.

Graduation Honors

The College honors superior students honors at graduation. To be eligible, students must have completed a minimum of four semesters of work and 65 hours of credit in residence at the Urbana-Champaign campus. More information on specifics may be found on the College website.

Dean's List

Each semester students are recognized by the College for academic excellence through the Dean's List. Eligible students must successfully complete at least 12 academic hours, taken for a letter grade (A through F), and earn a grade-point average that places them in the top 20 percent (approximately) of the College. Students who are registered with the Center for Wounded Veterans (CWV) or with Disability Resources and Educational Services (DRES) who are enrolled in less than 12 but a minimum of nine graded semester hours who are in the approximate top 20 percent are also eligible. Such students must sign a release with

CWV or DRES indicating their consent for consideration for Dean's List eligibility and have submitted that consent to their home unit's academic affairs office no later than Reading Day in the semester in which they wish to be considered for Dean's List. These consent forms are valid only for the semester in which they are issued, and students must submit by the deadline updated consent forms for each semester in which they wish to be considered for Dean's List.

Students with grades that are incomplete or deferred are not considered for the Dean's List until letter grades have been submitted for those courses. The GPA level necessary to be placed on the Dean's List is revised annually and is posted on the College Web site.

James Scholar Honors Program

The James Scholars Program in the College of Fine and Applied Arts focuses on developing Socially Engaged Artists by offering a series of required courses that provide progressive experiences in community engagement. James Scholars have opportunities to develop research projects within the local communities, to apply for funding to support their research, and to participate in symposia presenting their research to the campus and the general public. Detailed information on admission and requirements are available on the College website.

Requirements

Admission

All incoming students hoping to enroll in the College of Fine and Applied Arts as undergraduates must first complete the application for admission available from the university's Office of Undergraduate Admissions. Several programs within the college (majors in Art, Dance, Music and Theatre) require a portfolio, audition and/or interview as part of the admissions process. All application materials must be received before an admission decision can be made.

Graduation

Students who meet the general University requirements with reference to registration, residence, scholarship, fees, and general education requirements, and who maintain the minimum grade-point average required in their degree program, receive degrees appropriate to the curriculum completed. Refer to the specific unit and curricular requirements listed in the following sections. In addition, students must complete the required senior courses in their major field of study in residence at the Urbana-Champaign campus.

General Education

The Campus Senate, the faculty General Education Board, and the colleges have developed campus wide common general education requirements. Students are advised that some general education requirements may be fulfilled by courses required in the major. All FAA curricula require students to meet the minimum campus general education requirements for graduation. Some programs require additional general education courses. See the individual programs of study for each curriculum.

- Architectural Studies (p. 243)
- Art and Design - Foundation Year (p. 264)
- Art Crafts (p. 263)
- Art Education (p. 264)
- Art History (p. 265)
- Dance (p. 271)
- Graphic Design (p. 266)

- Industrial Design (p. 266)
 - Landscape Architecture (p. 279)
 - Music (p. 283)
 - Music Education (p. 300)
 - New Media (p. 268)
 - Painting (p. 269)
 - Photography (p. 269)
 - Sculpture (p. 270)
 - Theatre (p. 305)
 - Urban and Regional Planning (p. 314)
- Architectural Studies Minor (p. 244)
 - Art + Design Minor (p. 267)
 - Art History Minor (p. 319)
 - Community-Based Art Education Minor (p. 267)
 - Landscape Studies Minor (p. 280)
 - Music Minor (p. 284)
 - Theatre Minor (p. 307)
 - Urban Planning Minor (p. 315)

Academic Units

- Architecture, School of (p. 243)
- Art and Design, School of (p. 248)
- Dance, Department of (p. 271)
- Landscape Architecture, Department of (p. 279)
- Music, School of (p. 283)
- Theatre, Department of (p. 305)
- Urban and Regional Planning, Department of (p. 313)

Architecture, School of

Peter Mortensen, Ph.D.

117 Temple Buell Hall, 611 Taft Drive, Champaign, IL 61820

PH: (217) 333-1330, (G) (217) 244-4384 (U) (217) 333-7720

<http://arch.illinois.edu>

At Illinois, we are an internationally recognized leader in educating future professionals and scholars in architecture and allied fields. We provide a robust technical and conceptual program that enables students to create and innovate. The depth and breadth of our curriculum enables students to become leaders in a range of disciplinary specialties. Our comprehensive programs prepare students to design and research in a rapidly changing global context from the macro to the micro scale through our bachelors, masters, and doctoral degrees.

Degree Programs in Architecture

Contact: Lee W. Waldrep, Ph.D., Administrator for Undergraduate Student Services

School Office: 117 Temple Buell Hall, 611 Taft Drive, Champaign, IL 61820, (217) 333-7720, lwaldrep@illinois.edu

The School of Architecture offers a four-year preprofessional curriculum leading to the Bachelor of Science in Architectural Studies (BSAS) degree as well as a minor in Architectural Studies. The BS in Architectural Studies degree provides an undergraduate academic education in architecture that can serve as a foundation for advanced professional

education. The undergraduate curriculum offers an appropriate balance of basic professional studies in architectural design, architectural history, practice and technology, structures, and studies in the arts and sciences.

The following statement is from the National Architectural Accrediting Board (NAAB):

"In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may require a preprofessional undergraduate degree in architecture for admission. However, the preprofessional degree is not, by itself, recognized as an accredited degree."

The University of Illinois at Urbana-Champaign, College of Fine and Applied Arts, School of Architecture offers the following NAAB-accredited degree programs:

Master of Architecture (Pre-professional undergraduate degrees + 62 graduate credits)

Master of Architecture (Undergraduate degree + 65 prerequisite credit hours + 54 graduate credits)

Next accreditation visit for all programs: 2023

The NAAB Conditions for Accreditation (including Student Performance Criteria) may be found on the NAAB Web site (<http://www.naab.org>).

Since 1967, the School of Architecture operates a full academic-year study abroad program in Barcelona, Spain, which is open to qualified students on a priority basis. Course offerings parallel those available to students on the Urbana-Champaign campus but stress the European context.

The School of Architecture occupies design studios, lecture rooms, and offices in the Architecture Building, Architecture Annex, and Temple Hoyne Buell Hall. The Ricker Library of Architecture and Art is located in the Architecture Building.

For the Degree of Bachelor of Science in Architectural Studies

In this curriculum, normal progress is imperative. A student failing to complete any required course more than one semester later than the time designated in the curriculum is prohibited from progressive registration in architectural courses until the deficiency is corrected. To continue at the sophomore level and beyond, a student must have a cumulative grade point average of 2.00 (A = 4.0) for all University course work attempted. For the Bachelor of Science in Architectural Studies degree, a total of 120 semester hours are required.

First Year

First Semester	Hours
MATH 220 Calculus or 221	5-4
General Education ¹	6

FAA 101 Arts at Illinois	1
Semester Hours	12
Second Semester	
ARCH 172 Drawing and Modeling	3
ARCH 210 Intro to the Hist of Arch	3
MATH 231 Calculus II or PHYS 101	3-5
Composition I ²	4
General Education ¹	3
Semester Hours	16
Second Year	
First Semester	
ARCH 231 Anatomy of Buildings	4
ARCH 273 Representation	3
UP 101 Introduction to City Planning (or approved urban studies substitute) ⁵	3
General Education or Electives ^{1,3}	6
Semester Hours	16
Second Semester	
ARCH 232 Structural Fundamentals	4
ARCH 274 Strategies of Architectural Design	3
General Education or Electives ^{1,3}	9
Semester Hours	16
Third Year	
First Semester	
ARCH 321 Environment, Architecture, and Global Health Electives ³	3
ARCH 433 Design of Steel and Reinforced Concrete Structures	3
ARCH 433 Design of Steel and Reinforced Concrete Structures	4
Semester Hours	10
Second Semester	
ARCH 434 Environmental Control Systems I	5
ARCH 435 Structural Systems and Construction Methods	4
Semester Hours	9
Fourth Year	
First Semester	
ARCH 473 Architectural Design and Performance	6
Architectural History ⁴	3
Electives ³	4
Semester Hours	13
Second Semester	
ARCH 474 Architectural Design and Making Electives ³	6
ARCH 474 Architectural Design and Making Electives ³	6
Semester Hours	12
Total Hours:	104

¹ See current University of Illinois General Education requirements. (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) The General Education quantitative reasoning requirement I is satisfied by the required MATH 220 or MATH 221 course; the quantitative reasoning II requirement is satisfied by the MATH 231 or PHYS 101 course. Students considering a concentration in Building Structures or Structural Engineering should take MATH 231. The Advanced Composition requirement may be fulfilled by either a separate, approved Advanced Composition course or by an Advanced Composition course which also satisfies one of the general education distribution list requirements. If by the latter, electives would be taken to make up the credit deficiency. General Education foreign language requirement 0-12 hours: Students entering the University of Illinois as freshmen in fall 2000 or later need to complete the foreign language requirement in order to graduate. To satisfy this requirement, students must complete a third semester level college foreign language course. This requirement may also be satisfied by three years of the same foreign language in high school. Students entering the University of Illinois without three years of the same foreign language in high school must take a foreign language placement test to determine the courses in which to enroll.

² The Composition I requirement may be fulfilled by any of the following courses or course sequences (placement is determined by examination): ESL 111 and ESL 112; ESL 115, RHET 100, RHET 101, and RHET 102; or RHET 105; or CMN 111 and CMN 112.

³ For information about electives, see the Undergraduate Handbook at the FAA website (<https://faa.illinois.edu>). A maximum of nine hours may be taken as professional electives.

⁴ Architectural history: All students in the undergraduate program in architecture must fulfill the architectural history requirement: three courses in addition to ARCH 210. Select from: ARCH 222, ARCH 314, ARCH 402, ARCH 403, ARCH 407, ARCH 409, Section B (Barcelona only), ARCH 410, ARCH 411, ARCH 412, ARCH 413, ARCH 414, ARCH 415, ARCH 416, ARCH 417, or ARCH 418.

⁵ The UP 101 requirement can be fulfilled by substituting one of the following approved courses: ARCH 418, ARCH 468, GEOG 204, GEOG 210, and GEOG 483.

Minor in Architectural Studies

The minor in Architectural Studies allows non-architecture undergraduate students to gain an overview of architecture by taking a series of required courses in architecture. This is the only undergraduate minor offered by the School of Architecture.

Course Requirements

The architecture minor requires the successful completion of a minimum of 20 hours of architecture courses. Students entering the program with advanced credit for required courses must take courses from the Additional Courses list to attain the total hours needed for completion of the minor. All students in the minor must have at least 6 hours of 300- or 400-level courses.

Code	Title	Hours
Required Courses		
ARCH 101	Introduction to Architecture	3
ARCH 172	Drawing and Modeling	3
ARCH 210	Intro to the Hist of Arch	3
ARCH 231	Anatomy of Buildings	4
Additional Courses		

Select two of the following:

6-8

ARCH 341	Environment Tech HVAC
ARCH 342	Environment Tech Ltg & Acoust
ARCH 351	Statics & Dynamics
ARCH 352	Mech of Mat & Design Appl
ARCH 222	Islamic Gardens & Architecture
ARCH 314	History of World Landscapes
ARCH 402	Intro to Hist of Arch Theory
ARCH 403	Spec Topics in Arch History
ARCH 407	Rome: The Eternal City
ARCH 410	Ancient Egyptian & Greek Arch
ARCH 411	Ancient Roman Architecture
ARCH 412	Medieval Architecture
ARCH 413	Renaissance Architecture
ARCH 414	Baroque & Rococo Arch
ARCH 415	Neoclass & Nineteen Cent Arch
ARCH 416	Modern American Architecture
ARCH 417	Twentieth-Century Architecture
ARCH 418	Hist of the Urban Environment

Total Hours

19-21

Prerequisites

Students must comply with the prerequisite requirements of courses to be taken under this program. Some of these requirements may be satisfied while in the program.

Admission

Admission to the minor will be processed by the School of Architecture Undergraduate Programs Office. Students may enter the Minor in Architectural Studies from sophomore year until such time that allows the completion of the minor before graduating in their major area of study.

Advising

Advising of students in the minor will be conducted by the advisors in the Undergraduate Programs Office of the School of Architecture.

Certification of Successful Completion

The Associate Dean for Undergraduate Academic Affairs in the College of Fine and Applied Arts (FAA) will certify successful completion of the minor.

Students must declare their intentions and be admitted to the program to pursue the Minor in Architectural Studies.

ARCH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARCH>)

Courses

ARCH 101 Introduction to Architecture credit: 3 Hours.

An introduction to architecture, architectural education and the profession with emphasis on issues that influence architecture and the people and processes involved.

ARCH 164 Architecture as a 2nd Language credit: 3 Hours.

Unique to architects is the combination of thinking tools in a conceptual toolbox, a resource to which they have access at any time and in all situations. These tools can be thought of as a second language. Architecture as a Second Language is a hands-on, experiential online course in which students are immersed in challenging activities similar to those architects face. The course helps develop new perspectives, capabilities, and insights that can be applied to any calling or discipline.

ARCH 171 Inactive credit: 4 Hours.

inactive.

ARCH 172 Drawing and Modeling credit: 3 Hours.

Introduction to the architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts: freehand sketching, architectural delineation, and digital applications. Prerequisite: ARCH 171 or consent of instructor. Concurrent enrollment in ARCH 231 or consent of instructor.

ARCH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ARCH 210 Intro to the Hist of Arch credit: 3 Hours.

Visual and cultural analysis of selected buildings, urban spaces, and cities, from ancient Greece to modern times; emphasizes the architectural traditions of Western Civilization, especially as they affect the built environment of America and the Middle West. Prerequisite: Sophomore standing or consent of instructor.

ARCH 222 Islamic Gardens & Architecture credit: 3 Hours.

Same as LA 222. See LA 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

ARCH 231 Anatomy of Buildings credit: 4 Hours.

A holistic approach to the introduction of architectural technology. Enabling students to integrate technical material with design, this lecture/lab course addresses building codes, zoning, construction documentation and delivery, digital fabrication, and the impact of energy, sustainability, and environmental forces on building construction, comparing general principles of light frame and heavy construction materials, components, and systems. Students learn how to build virtually and physically, understanding the roles design and construction professionals play on integrated teams.

ARCH 232 Structural Fundamentals credit: 4 Hours.

The study of forces, their distribution, and their impact on building structure. Topics include: equilibrium of rigid bodies in two and three dimensions; trusses; shear and bending moments in beams; arches and frames; stresses, strains, and deformations in axially loaded members; direct shear and bearing stresses; torsion; beam stresses and deflections; introduction to the design of structural members; and architectural applications. Prerequisite: MATH 220 or MATH 221, and MATH 231 or PHYS 101.

ARCH 271 Graphics for Architects credit: 4 Hours.

Introduction to architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts: 1) freehand sketching; 2) architectural delineation; and 3) digital applications. Prerequisite: ARCH 101 and concurrent enrollment in ARCH 231.

ARCH 273 Representation credit: 3 Hours.

Develops understanding of the representation of ideas, values, and meaning in the built environment. Focuses on three topic areas: analysis, technical communication, and modeling. Exposure to multiple software tools and mastery of basic skills in each. Prerequisite: ARCH 172 or consent of instructor.

ARCH 274 Strategies of Architectural Design credit: 3 or 4 Hours.

Focuses on understanding architecture as holistic synthesis of principles, technology and form. Content is arranged in six areas: Research and Analysis, Typology Analysis, Street Analysis, Block Analysis, Neighborhood Analysis, and Development and Presentation. Students work both on individual assignments and in teams on design projects. Emphasis on combining graphic and modeling skills with analytical skills. Exercises require demonstration of skills and concepts introduced in earlier design and technology courses. Prerequisite: ARCH 273 or consent of instructor.

ARCH 300 Ind Studies in Urban Design credit: 3 Hours.

The individual study of selected topics involving the history, design, and function of significant European cities. Prerequisite: One year of history of architecture or Art History; consent of instructor.

ARCH 314 History of World Landscapes credit: 4 Hours.

Same as LA 314. See LA 314.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

ARCH 321 Environment, Architecture, and Global Health credit: 3 Hours.

This course surveys current research at the intersection of the built environment, health, and well-being. It emphasizes relationships among people and multiple scales of the environments they inhabit and the health and well-being consequences of these relationships. It comparatively examines these relationships within a broad range of Western and Non-Western cultures and contexts by introducing significant historical and contemporary theories, data of relevance, research processes, and applications in environmental design and planning processes. To improve person-environment fit, the roles of social groups, institutions, and organizations in the person-environment-health/well-being nexus within various cultural and geographic contexts are examined and compared.

ARCH 341 Environment Tech HVAC credit: 4 Hours.

Study of the control of thermal environment, mechanical and related building sub-systems, and their integration into the overall building design. The specific topics include: thermal comfort and behavioral implications; fundamentals of thermal behavior of buildings; the principles of heat and moisture in buildings; indoor air quality and "Sick Building Syndrome"; energy and sustainability implications of building design; and mechanical systems including HVAC and plumbing systems. Prerequisite: ARCH 233.

ARCH 342 Environment Tech Ltg & Acoust credit: 4 Hours.

Study of the control of luminous and sonic environments, the supporting building systems, and their integration into the overall building design. Specific topics include: lighting fundamentals; light sources; effects of lighting on comfort and performance; lighting calculations and design; energy economy and sustainability; acoustic fundamentals; room acoustics; noise control; and basic electrical and sound systems. Prerequisite: ARCH 233.

ARCH 351 Statics & Dynamics credit: 4 Hours.

Study of equilibrium of rigid bodies in two and three dimensions; trusses; shear and bending moments in beams; arches and frames; cables; friction; introduction to dynamics; architectural applications. Prerequisite: MATH 220 or MATH 221; and MATH 231 or PHYS 101.

ARCH 352 Mech of Mat & Design Appl credit: 4 Hours.

Study of stresses, strains, and deformations in axially loaded members; direct shear and bearing stresses; torsion; beam stresses and deflections; stresses under combined loading; column buckling; design of structural members; introduction to statically indeterminate structures; architectural applications. Prerequisite: ARCH 351.

ARCH 373 Arch Design and the Landscape credit: 5 Hours.

Building design in a landscape setting; creation of place; schematic building design and site planning issues, universal design and accessibility; principles of energy efficient building design; human-environment relationship issues; and architectural design and presentation methods; required field trips. Prerequisite: ARCH 272.

ARCH 374 Arch Design and the City credit: 5 Hours.

Building design in the community setting; creation of place; introductory urban design and site planning issues, including universal design and accessibility; human-built environment relationship issues; architectural design and presentation methods; required field trips. Prerequisite: ARCH 373.

ARCH 399 Study in Versailles, France credit: 0 to 18 Hours.

Study in the University of Illinois Architectural Program at Versailles, France. Approved for S/U grading only. Prerequisite: Concurrent registration in the Versailles, France Study Abroad Program.

ARCH 400 Senior Honors in Architecture credit: 1 to 4 Hours.

For candidates for honors in Architecture. Independent guided study and research in a selected area of architecture. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours with consent of Director of School. Prerequisite: Senior standing in architecture, a University grade-point average of 3.0 or, in special cases, consent of Director of School.

ARCH 401 Independent Study credit: 0 to 4 Hours.

Independent guided study and investigation in a selected area of architecture. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated. Prerequisite: Junior standing in architecture, written proposal approved by a sponsoring faculty member and the approval of the Director of the School.

ARCH 402 Intro to Hist of Arch Theory credit: 3 Hours.

Architectural theory, criticism, and historiography from antiquity to the present. Based on close readings of texts from antiquity to the present day. 3 undergraduate hours. 3 graduate hours. Prerequisite: Sophomore standing.

ARCH 403 Spec Topics in Arch History credit: 3 Hours.

Special topics in Architectural History courses. Topics and subject matter to be published in course listings. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARCH 210 and sophomore standing.

ARCH 407 Rome: The Eternal City credit: 3 Hours.

Considers the architecture and urbanism of the city of Rome across time. Special focus will be placed on critical strategies for understanding urban sites. 3 undergraduate hours. 3 graduate hours. Prerequisite: Sophomore standing.

ARCH 409 Special Topics in Spanish Arch credit: 3 Hours.

Explores aspects of the architecture and urban design of Spain from antiquity until the present. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: ARCH 210.

ARCH 410 Ancient Egyptian & Greek Arch credit: 3 Hours.

Architecture and urban form in Egypt and the Greek world through the Hellenistic period. Same as CLCV 410. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 111 or CLCV 131.

ARCH 411 Ancient Roman Architecture credit: 3 Hours.

Architecture and urban form in the ancient Roman world from the Etruscans through the Late Antiquity. Connections between Roman Late Antique, Early Christian, and Byzantine Architecture will be considered. Same as CLCV 411. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210; ARTH 111, CLCV 131, or CLCV 132.

ARCH 412 Medieval Architecture credit: 3 Hours.

Explores aspects of the architecture and urban design of medieval Europe from late antiquity to the late Middle Ages (approximately 300-1400). Same as MDVL 412. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 111.

ARCH 413 Renaissance Architecture credit: 3 Hours.

Developments in architecture, urban design, and garden art in Italy and northern Europe in the fifteenth through the sixteenth centuries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 414 Baroque & Rococo Arch credit: 3 Hours.

Developments in architecture, urban design, and garden art in Italy, France, Germany, and England in the seventeenth and eighteenth centuries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 415 Neoclass & Nineteen Cent Arch credit: 3 Hours.

Evolution of Continental and British architecture and urban planning from 1750 to World War I; includes some reference to American architecture of the same period. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.

ARCH 416 Modern American Architecture credit: 3 Hours.

Development of American architecture and urban planning from the seventeenth century to the present. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 417 Twentieth-Century Architecture credit: 3 Hours.

Developments in Western architecture and urban design from 1900 to the present; examines the rise of modernism in Europe and after World War II; includes work in the United States, India, Japan, and Australia. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.

ARCH 418 Hist of the Urban Environment credit: 3 Hours.

Examines the evolution of town planning and urban design in Western civilization from prehistory to the present; studies cultural and technical advancements affecting the form of the urban environment. 3 undergraduate hours. 3 graduate hours.

ARCH 419 Historic Building Preservation credit: 3 Hours.

Introduces historic preservation: legal, financial, and administrative assistance, graphic examination of restored buildings and sites, and application of conservation technology. 3 undergraduate hours. 3 graduate hours.

ARCH 423 Soc/Beh Factors for Design credit: 3 Hours.

Research-oriented introduction to existing social and behavioral knowledge, methods, and tools for relating man to his physical and social environment, with implications for theories and a philosophy of architectural design. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 424 Gender & Race in Contemp Arch credit: 3 Hours.

Analyzes how the built environment reflects social attitudes towards gender and race. Identifies the work of women and people of color in architecture and related disciplines as consumers, critics, and creators of the environment. Provides links with valuable professional networks in Chicago and elsewhere. Same as GWS 424. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 433 Design of Steel and Reinforced Concrete Structures credit: 4 Hours.

Loads and load combinations; design methods/structural safety; steel as a structural material; design of structural steel members subject to tension, compression, bending, shear, and combined forces as well as bolted and welded joints. Reinforced concrete as a structural material; transformed sections; design for bending, shear, and serviceability; design of one-way slabs and columns. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ARCH 433 and ARCH 451; credit is not given for both ARCH 433 and ARCH 452. Prerequisite: ARCH 232.

ARCH 434 Environmental Control Systems I credit: 5 Hours.

Study of the control of thermal, luminous, and sonic environments with an emphasis on passive means of controls. Specific topics include: thermal comfort and behavioral implications; fundamentals of thermal behavior of buildings; the principles of heat and moisture in buildings; lighting fundamentals; light sources; effects of lighting on comfort and performance; energy economy and sustainability; acoustic fundamentals; room acoustics; noise control; basic electrical, plumbing, vertical transportation, and life safety systems. 5 undergraduate hours. 5 graduate hours. Prerequisite: Concurrent enrollment in ARCH 374 or consent of instructor.

ARCH 435 Structural Systems and Construction Methods credit: 4 Hours.

Presents a unified approach to architectural structures and construction technology to enable students to integrate design, engineering, and construction, while providing an understanding of how material/component/system decisions impact the work of architects, engineers, and constructors. Using a series of case-studies and project-based assignments, students learn about the various structural systems and construction methods used in the design of buildings. The evolution and state-of-the-art in structure and construction strategies will be discussed to provide requisite breadth and depth. Topics covered include: structural and building codes; structural systems and their layout planning; foundation systems; construction methods and technologies in wood, steel, concrete, and masonry; sustainability considerations; detailing; and digital modeling. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 231 and ARCH 232.

ARCH 441 Heat and Moisture in Buildings credit: 3 Hours.

Provides information and skills necessary for the designer to deliver dry, durable and healthful buildings. First half covers theory, including heat transfer, psychrometrics, steady-state diffusion and conduction analysis, and transient analysis. Second half covers building applications: roofs, walls, windows, foundations, and mechanical systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 341 or equivalent.

ARCH 451 Theory & Design Steel & Timber credit: 4 Hours.

Analysis and design of steel and timber structures for buildings. Steel columns, beams, trusses, connections, roof and floor framing systems; timber beams, columns, roof and floor framing systems. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 452 Theory of Reinforced Concrete credit: 4 Hours.

Concrete materials; behavior of reinforced concrete construction; behavior and design of structural elements, one-way slabs, beams, and girders; columns; ACI code requirements; and introduction to continuity in reinforced concrete structures. Course Information: 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 460 International Architecture credit: 4 Hours.

Interdisciplinary opportunity to focus on, study, and record the design and planning of cities and rural settlements in other cultures. Through directed study and participation in the intellectual environment of a foreign university, students analyze unfamiliar settings, developing insights to enrich their professional development. 4 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Junior standing or higher in the School of Architecture, Department of Landscape Architecture, or the Department of Urban and Regional Planning.

ARCH 461 Critical Travel Documentation credit: 4 Hours.

Modern and historic city forms and rural practices are analyzed while experiencing the realities of daily life traveling in another culture. Journals include drawings and writings that record buildings, environs, and landscapes. 4 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Junior standing or higher in the School of Architecture, the Department of Landscape Architecture, or the Department of Urban and Regional Planning.

ARCH 468 Overseas Architectural Studies credit: 3 Hours.

This course is designed to enrich the professional development of students in a study abroad location. Students participate in thematic workshops, seminars, lectures and field trips focused on understanding and analyzing architectural and urbanistic landmarks and settings on site through both directed and independent assignments. 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Senior standing in the School of Architecture.

ARCH 471 Fundamentals of Arch Design credit: 6 Hours.

Basic architectural design methods, fundamentals, principles and concepts including creative problem solving in two- and three-dimensions. 6 undergraduate hours. 6 graduate hours. Prerequisite: Limited graduate standing in Architecture and concurrent enrollment in ARCH 231.

ARCH 472 Arch Des in Landscape & Cities credit: 6 Hours.

Intermediate architectural design methods, fundamentals, principles and concepts focusing on buildings in landscape and urban contexts. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 471 and concurrent enrollment in ARCH 233.

ARCH 473 Architectural Design and Performance credit: 6 Hours.

Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building: materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 371 and ARCH 372.

ARCH 474 Architectural Design and Making credit: 6 Hours.

Building design that emphasizes the creative process of making, experimentation, and theories of contemporary methods and materials. Projects focus on translating design ideas at multiple scales into reality through computation, representation, or production, utilizing fabrication processes. Outcomes foreground entrepreneurial design thinking and team-based learning. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 473.

ARCH 475 Arch Design & Development credit: 6 Hours.

Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building; materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 374 or ARCH 472.

ARCH 476 Arch Design & Exploration credit: 6 Hours.

Exploration of boundaries of architecture and the built environment. Focused exploration into specific design topics, such as issue-oriented building problems, urban design theory, intermediate building design and site planning theory, human-environment relationship theory, interdisciplinary design, and architectural design and presentation methods. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 475.

ARCH 490 Special Topics in Contemporary Architecture credit: 1 to 4 Hours.

Selected topics in and applications of contemporary architecture; see Class Schedule or department office for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms up to 12 undergraduate hours or 8 graduate hours, if topics vary. Prerequisite: Consent of instructor. For majors only.

ARCH 491 Arch Professional Internship credit: 0 Hours.

Full-time or part-time professionally supervised field experience in design intended to introduce students to the practice of architecture in a commercial firm or agency of government. Students work in the school-approved firm or agency of their choice. Written work reports and reflective experiential learning reports are required. 0 undergraduate hours. 0 graduate hours. Approved for S/U grading only. May be repeated in separate terms a maximum of 3 times. Prerequisite: Graduate standing or upper-level undergraduate standing, or consent of instructor. For students enrolled in the BSAS and M.Arch. programs of study only.

ARCH 498 Directed Research in Arch credit: 1 to 4 Hours.

Participation in on-going research projects which may include energy management, environmental perception, facilities development, building science, and other topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Approval of written proposal by instructor and Director of School.

ARCH 499 Off-Campus Study credit: 0 to 12 Hours.

Provides opportunity for approved off-campus study. Detailed proposal for study off campus must be submitted for approval to the appropriate committee in the School prior to such study. Final determination of credit and its application toward the degree is made after a review of the student's off-campus work by the above committee and the Director of School. 0 to 12 undergraduate hours. 0 to 12 graduate hours. Approved for both letter and S/U grading. Prerequisite: Senior or graduate standing in architecture and approval of program prior to registration.

Art and Design, School of

The School of Art and Design offers bachelor of fine arts degrees in art education, crafts, graphic design, new media, the history of art, industrial design, painting, photography, and sculpture. All major's

first-year experience will include courses in drawing, 2D, 3D, and 4D practices. Specialization begins in the second year.

Courses in the history and appreciation of art and certain courses in studio work are open to students from other colleges of the University. A field of concentration in art history is also offered in the College of Liberal Arts and Sciences. The school occupies studios, computing labs, workshops, classrooms, and offices in several different University buildings.

A portfolio review is required for admission.

-
-
- Art and Design - Foundation Year (p. 264)
 - Art Crafts (p. 263)
 - Art Education (p. 264)
 - Art History (p. 265)
 - Graphic Design (p. 266)
 - Industrial Design (p. 266)
 - New Media (p. 268)
 - Painting (p. 269)
 - Photography (p. 269)
 - Sculpture (p. 270)

 - Minor in Art + Design (p. 267)
 - Minor in Art History (p. 319)
 - Minor in Community Based Art Education (p. 267)

ART Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ART>)

Art Courses

ART 100 Understanding Visual Culture credit: 3 Hours.

Interdisciplinary methods in recognizing and understanding meaning of a wide range of visual messages in the arts, design, and culture, with emphasis on critical thinking and analysis. Topics include: visual perception, visual persuasion, the visual interpretation of time and space, humor. Contemporary art and design are explored through the use of semiotics and historical, cultural and ethical aesthetic and technical perspectives.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 102 Drawing for Non-Majors credit: 3 Hours.

Students will work with a wide variety of drawing materials, methods and strategies in a studio art context. Students will explore drawing concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate as well as those who may have significant knowledge and experience. Not open to students majoring in art and design. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 103 Painting for Non-Majors credit: 3 Hours.

Students will work with a wide variety of painting materials, methods and strategies in a studio art context. Students will explore painting concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate along with those who have significant knowledge and experience. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 104 Sculpture for Non-Majors credit: 3 Hours.

Students will work with a wide variety of sculptural materials, methods and strategies in a studio art context. Students will explore sculpture concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate along with those who may have significant knowledge and experience. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 105 Visual Design for Non-Majors credit: 3 Hours.

This course utilizes lectures, exercises, and projects to help students heighten their visual literacy, improve their ability to communicate in an increasingly visually oriented world, and gain a better understanding of the processes and methodologies that designers use. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 140 Introduction to Art credit: 3 Hours.

A creative and expressive exploration of multiple art media, including but not limited to drawing, painting and design elements. This course is an introduction to the art making process with weekly interactive lectures and hands on studio sections. Additional fees may apply. See Class Schedule. Not open to students in art and design and architecture.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 150 Introduction to Drawing credit: 2 Hours.

This is an introductory drawing course with an emphasis on heightening visual awareness and utilizing basic elements of technique and concept. Media such as pencil and charcoal will be used through a variety of technical and conceptual exercises. This course is designed for students who have little to no prior experience with drawing. Approved for Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 151 Black & White Film Photography credit: 3 Hours.

Course offers a foundation in black & white film photography. Camera use, film exposure & processing, and printing processes will be explained and demonstrated. Provides a technical & conceptual understanding of photography as a visual medium for expression and communication of ideas. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Enrollment is restricted to students in Living Learning Communities and minors in Art + Design.

ART 152 Experimental Photography credit: 3 Hours.

Introduces students to a variety of alternative photographic media and image making practices, including: photograms, pinhole cameras and paper negatives, Diana medium format cameras, orthochromatic film, cyanotype and VanDyke brown printing, solarizing/specialty print developers and print toners. Approved for both Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 153 Digital Photography Seminar credit: 2 Hours.

Course offers a foundation in digital photography. Camera use and digital editing will be explained and demonstrated. Elements of visual composition for effective photographs will also be included. Course is taught as a service-learning project with the Champaign County Humane Society. Weekly field trips to photograph at CCHS are a component of the class schedule. Approved for both Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 154 Digital Video credit: 2 Hours.

This is an introductory course for those who have little or no experience working in digital video formats. Students will explore the tools and techniques of moving image production through individual and team projects, as well as view and discuss existing films and videos. Students will learn basic camera functions and the use of professional editing programs for video and sound. Projects will focus on the creation of time-based media with an emphasis on technique, documentation, narrative, and context. Approved for both Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 155 Introduction to Graphic Design - Unit One credit: 3 Hours.

This course introduces non-graphic design majors to visual literacy, composition, and the creative process. Students will solve real world visual communication problems in a hands-on studio environment using Adobe Creative Suite (Illustrator, Photoshop, and InDesign). Students will receive instruction in the elements of visual grammar and establish a foundation for visual literacy based on design principles. Using hands-on exercises and problem-solving projects, students will work through the creative process and learn industry standards necessary to function in today's commercial art field. Approved for Letter and S/U grading. Prerequisite: Enrollment is restricted to students of Living-Learning communities and minors in Art + Design.

ART 191 Unit One Studio/Seminar credit: 1 to 3 Hours.

Topics vary; consult Unit One office. Approved for both letter and S/U grading. May be repeated if topics vary.

ART 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

ART 201 Art in Early Childhood credit: 2 Hours.

Philosophical and practical foundations for teaching art in early childhood settings. Lectures, discussions and class activities focus on the value of art in the curriculum, artistic development and instruction, observation and guided teaching practice. Additional fees may apply. See Class Schedule. Prerequisite: Not open to students majoring in art and design.

ART 202 Art in the Elementary Grades credit: 2 Hours.

Introductory laboratory experiences with the elements of design in the visual arts and with processes, materials, and activities appropriate for the elementary grades. Additional fees may apply. See Class Schedule. Prerequisite: Not open to students majoring in art and design.

ART 205 Experience & Meaning in Design credit: 3 Hours.

Introduces students to the cultural impact of graphic design by connecting graphic design theory to the everyday experience of meaningful design. Graphic design will be studied as a mediating factor between culture and cognitive processing. The course utilizes a weekly pattern of assigned readings, online presentations, design assignments delivered online, and peer review. The reading and presentations will connect the students to major concepts. The assignments will allow students to demonstrate understanding of those concepts.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

Cultural Studies - Western

ART 206 Mining the University/Community credit: 3 Hours.

Mining the University/Community is an hybrid/online course allowing students to assemble their own intellectual experience by finding and attending creatively-stimulating public events outside of their majors. Students are charged to find challenging events each week (lectures, performances, screenings, discussions of intellectual value), contribute these 'finds' to a class calendar full of possibilities, attend one of those events and then post a written evaluation of their chosen event each week to the class blog on Compass. Each student creates a collection of 14 different intellectual experiences with observations and responses shared with all class members as well as a final class post to summarize the evolution of the collection.

ART 208 Digital Art and Sustainability credit: 3 Hours.

The course will explore the social and environmental impacts of art-making practices that rely heavily on computer and Internet technologies. We will examine the wide range of artistic practices that employ computer and internet technologies and will introduce students to artists and artistic practices that criticize computer and Internet technologies and their impacts. Students will research the source of materials and labor used to manufacture computer and Internet related technologies, the facilities that support the infrastructure of the Internet and the social, political and economic systems that impact end of life management of electronic waste. From this base of research, students will employ digital or Internet technologies to produce a final project that explores how they understand the impact of their use of these technologies in scholarly pursuits including research, writing and making art.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ART 210 Special Topics for Non-Majors credit: 3 Hours.

Allows students to explore a revolving series of genres, specializations, and /or interdisciplinary practices. Possible subjects include, but are not limited to, site-specific public art, recycled and sustainable materials, performance, sound, or emerging technology. Topics and subject matter to be published in course listings. May be repeated to a maximum of 6 hours in separate terms.

ART 221 Visual Culture of Fandoms credit: 3 Hours.

The course will involve writing and art making as two modes of interpretation and response to mediated imagery. We will consider the idea that students may become so closely entwined with their own fandoms that it affects their sense of self, personal/societal relationships, and memory. We will also focus on the importance of imagination in creating/sustaining fandoms and fan art. The framework of this course will be supported by academic literature on fandoms as well as visual methodologies. Students will briefly learn about elements and principles of design; the codes and conventions that structure the image; the viewers and how they interpret or experience the image; and the contexts in which an image is exhibited and viewed.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 240 Learning Through Contemporary Art credit: 3 Hours.

By looking at how contemporary artists research, strategize, and make, students in this class will learn about arts-based approaches to research, study, and learning. Students will respond to the work examined through their own video production instead of traditional writing.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 280 Exploring Visual Culture credit: 3 Hours.

Introduces key concepts for understanding the wide range of imagery that has come to characterize contemporary everyday life in the 21st century. Explores concepts drawn from the literature of visual culture studies. Analyzes images from popular culture, fine arts, and vernacular arts, with contemporary mass media, such as music videos and television dramas, being considered alongside historical paintings and sculpture.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ART 299 Special Topics in Art credit: 1 to 3 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Sophomore standing.

ART 310 Design Thinking credit: 3 Hours.

Introduces design literacy and promotes an understanding of the field of contemporary design. Explores design thinking as a common thread that connects all disciplines concerned with the making of things, the solving of problems, and the organization of information. Through a series of lectures, case studies, and simple design projects, this course offers an extensible framework of tools and strategies that can be applied across multiple disciplinary boundaries.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 350 Writing with Video credit: 3 Hours.

Students will engage in a comprehensive exploration of creative inquiry, self-reflection, social engagement, and media production. They will adapt the basic, traditional principles of critical writing and analysis, to communicate effectively using image production and post-production. Directed writings in concert with video production projects will allow students to experience an integrated process of thinking, creating, and problem-solving.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ART 375 Capstone Studio for Non-Majors credit: 3 Hours.

Non-majors with prior studio experience will identify and pursue project-based creative work, either individually or as part of a collaborative team. Students work closely with the instructor to identify individual interests and formulate a suitable semester-long project. Prerequisite: Two prior studio courses.

ART 499 Special Topics in Art credit: 1 to 4 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same term to a maximum of 6 undergraduate hours or 6 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: Senior standing or consent of instructor.

ARTD Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTD>)

Art--Design Courses**ARTD 101 Introduction to Industrial Design credit: 3 Hours.**

Introduction to problem-finding and problem-solving processes in the design of products. This course teaches foundational industrial design skills, methods, philosophies, and design thinking. Creation of 3-dimensional products begins with a simplified design process, adding steps until a final project is completed that incorporates all components of the design process. This course satisfies the 3D requirement in the new Art + Design Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For Art + Design majors only.

ARTD 151 Introduction to Graphic Design credit: 3 Hours.

An introductory course for students considering graphic design as their major. This course teaches design as a critical thinking and problem solving process that will be applied to class projects. Topics will include principles of visual perception, visual communication theory, precedents in design history, and technical skills common to the practice of graphic design and which relate to image making, surface design, typography, layout, design systems and their applications. This course satisfies the 2D requirement for the new Art + Design Foundation curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTD 160 The Image World credit: 3 Hours.

Explores photography and video as the most powerful media in today's image-saturated world. Students will look at, think about, discuss, and write about a diverse array of photography and video. They will study examples of historical and contemporary art, design, journalism and advertising, in various and numerous contexts. Students will make their own images, create their own videos, conduct visual research, and produce media-based projects. Students will also build their own individual social media sites for sharing their work with both their classmates and the world. This course satisfies the 2D requirement in the new Art+Design curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design majors only.

ARTD 201 Industrial Design I credit: 4 Hours.

Introduction to the creative process and methods involved in industrial design; research, modeling, form giving, prototyping and communication with emphasis on user centered design. Projects of escalating scale and complexity complemented by lectures and demonstrations. Additional fees may apply. See Class Schedule. Prerequisite: Concurrent registration in ARTD 224 or ARTD 225.

ARTD 202 Industrial Design II credit: 4 Hours.

Studio design problems of increasing complexity involving structures and mechanisms. Lectures and discussions to explore design issues affecting contemporary culture and aesthetics perceptions. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 201. Concurrent registration in ARTD 224 or ARTD 225. Sophomore standing in Industrial Design major.

ARTD 209 Chado (The Way of Tea) credit: 3 Hours.

Explores the Japanese Tea Ceremony and its relevance to everyday life. Students will acquire a better understanding of Japanese culture and a new appreciation of their own cultures through the study of the Tea Ceremony and the Zen worldview that informs it. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTD 215 Introduction to Typography credit: 3 Hours.

This introductory studio functions as a survey of media-based affordances on typography. Students relate typographic form to reading conventions and reader expectations, as well as human cognitive and perceptual limitations. Internal consistency is established as a primary criterion for quality in design solutions. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in graphic design curriculum or consent of instructor.

ARTD 216 Introduction to Image Making credit: 3 Hours.

This introductory studio functions as a survey of representational strategies through image reproduction technology. Discussions center around the reader's construction of meaning through still and moving images. Students develop an authorial voice in visual practice. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in graphic design curriculum or consent of instructor.

ARTD 217 Graphic Design for Non-Majors credit: 3 Hours.

Introduces students to the field of graphic design in theory and practice. Examines what graphic designers make and the methods that are employed in contemporary design practice. Emphasis is placed on the organization and visual presentation of relevant content across media and their effect within systems. Additional fees may apply. See Class Schedule.

ARTD 218 Intro to Web Technologies credit: 2 Hours.

This half semester, fully online course introduces students to the standards-based languages of the web (HTML, CSS, and JavaScript) through directed study, quizzes, and technically oriented design exercises.

ARTD 222 Typographic Practice credit: 3 Hours.

This introductory studio functions as a survey of typographic practice across media platforms. Students relate typographic form to reading conventions and reproduction technologies. Additional fees may apply. See Class Schedule.

ARTD 225 Design Drawing credit: 3 Hours.

Introduction to rapid drawing methods and tools used by designers. Focuses on theory and application of orthographic and perspective drawing for communication of design ideas. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Concurrent registration in ARTD 201 or ARTD 202.

ARTD 228 Computer Applications credit: 3 Hours.

Concepts, methods and applications of computer-aided industrial design to the design of products for mass manufacture. Rendering and lighting techniques to communicate product forms. Additional fees may apply. See Class Schedule. Prerequisite: Industrial Design major, sophomore standing or consent of instructor. Concurrent registration in ARTD 201 or ARTD 202.

ARTD 230 Design Thinking/Need-Finding credit: 3 Hours.

Design thinking, a term with origins in industrial design practice, describes a human-centered approach to design and innovation in products and services, addressing the tri-partite requirements of feasibility, desirability and viability. With this focus on determining user needs, a variety of processes, including observation, empathy, ideation, prototyping and modeling, are used to discover people's needs and opportunities for design thinking, along with the communication of design outcomes by diagrammatic and narrative means. Design thinking is best done in teams, hence the project team basis for this course. This course concentrates on need-finding rather than the full resolution of design proposals. Same as TE 230. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design or Engineering majors only.

ARTD 240 eWaste: Sustainable Design credit: 3 Hours.

Examines the topics of electronic waste, or eWaste, within the context of sustainable design. Students will learn about sustainable and "green" electronic product design practices and develop the ability to assess a variety of products according to these criteria. Case studies will be supplemented by assigned readings, directed writing, and group discussion.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTD 251 Graphic Design Toolbox credit: 2 Hours.

This studio introduces students to the field of graphic design in theory and practice. The course examines what graphic designers make and the methods that are employed in contemporary design practice. Emphasis is placed on the organization and visual presentation of relevant content across media and their effect within systems.

ARTD 260 Basic Photography credit: 3 Hours.

Investigates basic image making and meaning. Student works with digital camera, exposure meter and learns digital printing. Student must furnish camera. Additional fees may apply. See Class Schedule. Prerequisite: Freshman standing in Art and Design or in Art History major or minor; or consent of instructor.

ARTD 261 Photography II credit: 3 Hours.

Uses digital process to express content with emphasis on the development of a personal aesthetic. Student must furnish camera. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 260. For Art majors only.

ARTD 262 View Camera credit: 3 Hours.

Includes work with camera movements, exposure, black and white film development and basic wet process silver printing as tools of creative expression. Most equipment furnished. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARTD 261 or consent of instructor.

ARTD 263 Digital Photographic Output credit: 3 Hours.

Explores the potential of color printing and output in digital media as a form for creative expression. Student must furnish camera. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARTD 260.

ARTD 270 Design Methods credit: 3 Hours.

A hybrid studio and seminar that introduces students to the principles and process of human-centered design through a focus on research and observation outside of the studio. This approach will allow students to address the social and cultural contexts in which designers intervene. Through a series of exercises and projects, students will begin to develop competencies in conducting research in specific environments in order to inform and inspire the direction of their design projects. Students will also learn how to iterate design solutions and prototypes based on expert input, testing and user feedback. Students will better understand and articulate the tools and methodologies shared by all design disciplines as it relates to a variety of actions and outcomes: visual communication and the design objects, services, interactions and experiences. Additional fees may apply. See Class Schedule.

ARTD 299 Spec Topics in Design Courses credit: 1 to 5 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTD 301 Industrial Design III credit: 4 Hours.

Design of user centered products for mass production; experience in the iterative problem solving processes and methods. Addresses practical constraints such as sustainability, environmental factors/ergonomics, manufacturing and materials, social and political and economic. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 202.

ARTD 302 Industrial Design IV credit: 4 Hours.

Industrial design problems of increasing complexity, scope and size. Continuation of ARTD 301. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 301.

ARTD 310 Intermediate Graphic Design I credit: 3 Hours.

This intermediate studio expands student knowledge of contemporary research methodologies that focus on user experience, collaboration, sustainability, and social responsibility. Projects are designed to provide students with the basic knowledge to become agents of positive social and commercial change. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design curriculum and ARTD 215, ARTD 216, and ARTD 217.

ARTD 311 Intermediate Graphic Design II credit: 3 Hours.

This intermediate studio tasks student teams analyze a system of designed products or services and propose/manage an intervention strategy. Students develop inclusive practices with stakeholders, who are addressed with empathy as co-creators. This topic studio changes in content with each semester. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design curriculum and ARTD 310.

ARTD 318 Digital Interaction credit: 3 Hours.

This studio explores the construction of compelling user experiences that incorporate the use of digital media. Students investigate both the theoretical and practical aspects of interaction through exercises involving information architecture, interface design, and creative code. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design or consent of instructor.

ARTD 326 Sustainability & Manufacturing credit: 3 Hours.

Exploration of environmental origins, theory and practice of sustainable product design. Environmentally-responsive design methodologies and topics such as industrial ecology, dematerialization, design for disassembly, design for recycling and life-cycle assessment. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 328 Human-Centered Product Design credit: 3 Hours.

Principles of human-centered design and usability applied to products, product systems, and product environments to enhance the user experience; strategies to enhance independent learning for professional development, to further research, and to acquire new skills. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 333 Type & Image credit: 3 Hours.

This studio extends typographic study with representational strategies for image reproduction technology. Students engage in practices for incorporating existing and created imagery into typographic systems. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 222.

ARTD 351 Graphic Design Inquiry credit: 1 to 4 Hours.

A series of topical studios that touch upon the myriad practices of graphic design. Students produce and analyze form and content according to each individual topic. Media engagement varies across sections. Additional fees may apply. See Class Schedule. May be repeated up to 8 hours.

ARTD 360 Photography III credit: 3 Hours.

Explores creative expression through various media but primarily photography. Students select format based on prior experience; group critiques held weekly; initial opportunity to experiment in personally selected directions and assignments which will be refined and amplified in ARTD 460. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing in Photography or consent of instructor.

ARTD 362 Photography Workshop credit: 3 Hours.

Advanced course on a special topic: see Class Schedule section note for description. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: Junior or senior standing in art and design; or consent of instructor based upon announced criterion that varies with topic.

ARTD 363 RAW Photography credit: 3 Hours.

An advanced Photoshop course for the student interested in a digital approach to Fine Art Photography. Students will explore the use and conversion methods of the RAW digital process, and learn how to extract, control, and enhance digital image files. Over the course of the semester, an effective and personal workflow within the Photoshop environment will be developed. Access to a digital SLR camera is required. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Junior or above standing in Art and Design, or consent of the instructor. ARTD 260 and ARTD 261 are suggested.

ARTD 371 Graphic Design Practicum credit: 2 Hours.

This analytical studio prepares students for entry into the field of graphic design. Professional practice is parsed into areas of opportunity, to which students ultimately align themselves and by which they structure their preparatory endeavors. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 207 and ARTD 333. For majors only.

ARTD 391 Special Problems in Design credit: 1 to 4 Hours.

Directed independent creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Art and Design; and consent of instructor, advisor, and associate director of the School. A contract must be completed & approved by the instructor & advisor. Must be Junior. 3.3 GPA, & only 6 hours total Ind. Study.

ARTD 393 Contemporary Art and Ideas credit: 3 Hours.

Advanced study of photographic issues and the creative process. Discusses creativity, aesthetics, criticism, and current imagery, as well as photography's relationship to other media. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Photography or consent of instructor.

ARTD 399 Internship in Design credit: 1 to 4 Hours.

Internships to be pre-approved for variable credit. Students will be required to document work completed during the internship with verification of supervisor. Supervisor will also be required to fill out a questionnaire either by mail or on-line. Faculty members will assess work and questionnaires to assign a grade. Approved for S/U grading only. Prerequisite: Junior standing in School of Art and Design.

ARTD 401 Industrial Design V credit: 4 Hours.

Advanced design projects in the context of the business environment in which product design and development takes place; marketing, branding, merchandizing, entrepreneurship within the context of globalized marketing and manufacturing. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 302.

ARTD 402 Industrial Design VI credit: 4 Hours.

Capstone project integrating all aspects of the design process from concept through final design, documentation and presentation; reconciliation of user centered constraints such as socio-economic, environmental-sustainability, manufacturability, health and safety and ethical. Standard approach that of an entry level industrial design professional. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 401.

ARTD 410 Advanced Graphic Design I credit: 4 Hours.

This advanced studio challenges students to seek and define problems within a shared topic. Emphasis is placed on the articulation of self-initiated narratives and consequent development of appropriate design strategies. This studio promotes a deeper understanding of design as a change agent within societal and economic systems that will lead to a comprehensive plan for the capstone project undertaken in ARTD 411. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 311 and senior standing in graphic design; for graduate credit - consent of graphic design program chair.

ARTD 411 Advanced Graphic Design II credit: 4 Hours.

This capstone studio continues design investigations in the interest of understanding and confidently articulating individual interests and abilities. This studio also focuses on the refinement of a comprehensive portfolio; self, peer, faculty, and outside review of student work; and an enhanced study of the field in preparation for professional practice. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 410 and senior standing in graphic design; for graduate credit - consent of graphic design program chair.

ARTD 415 Ninth Letter credit: 3 or 4 Hours.

Students develop, design, and produce issues of the national literary and arts journal, Ninth Letter. Also involves students in curating and designing content for the companion website, ninthletter.com. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 8 graduate hours. Prerequisite: Consent of instructor.

ARTD 418 Digital Interaction Sandbox credit: 2 Hours.

This advanced studio immerses students in design investigations that stimulate awareness of emergent digital interaction paradigms. Potential areas of exploration include design and development for both mobile devices and interactive environments. Additional fees may apply. See Class Schedule. 2 undergraduate hours. 2 graduate hours. Prerequisite: ARTD 318. Junior standing.

ARTD 420 Disability Design credit: 3 Hours.

Focuses on user-oriented, collaborative approaches to designing new products and services, with special emphasis on designing for people with disabilities. Students gain an understanding of the product development process by exploring empathic design research approaches, while working directly with prospective clients. Course work centers on designing products for mass production, and on recognizing opportunities to re-engineer existing products. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

ARTD 426 Product Innovation credit: 3 Hours.

Presents an overview of the product development process from concept generation to design for manufacturing and project management. Emphasis on product definition, innovation, the early phases of development and the role of designer in new product development. 3 undergraduate hours. 3 graduate hours.

ARTD 444 Typographic Systems credit: 3 or 4 Hours.

Students engage with complex typographic systems across varied media in a studio setting. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 318 and ARTD 333. Junior standing required.

ARTD 445 Seminar in Design credit: 3 or 4 Hours.

Investigation of special problems and current topics in industrial and/or graphic design. Students will conduct original research which will be shared through papers, presentations, and discussions. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 448 Professional Design Practice credit: 3 Hours.

Concentrates on developing presentation and communication skills that form the basis of a successful design career. Students will engage in portfolio reviews, plan and install exhibitions, prepare client presentations, and rehearse job interviews. Written work will include CV preparation. Emphasis will be placed on familiarizing students with professional practices and contexts. 3 undergraduate hours. No graduate credit.

ARTD 451 Graphic Design Problems credit: 1 to 4 Hours.

A series of topical studios that present complex problems of graphic design practice. Individual sections address professional, theoretical, or exploratory problems. Media engagement varies across sections. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours in the same term and 12 hours in separate terms. Prerequisite: ARTD 333.

ARTD 452 Interaction Design Problems credit: 1 to 4 Hours.

This series of topical studios presents complex problems of user experience through interactive media. Individual sections address professional, theoretical, or exploratory problems. Technological engagement varies across sections. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Prerequisite: ARTD 222 and ARTD 318.

ARTD 460 Advanced Photography credit: 3 Hours.

Concentrated use of photographic processes for creative expression with emphasis on professionalism and the production of a photographic portfolio. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing in Photography, or consent of instructor.

ARTD 471 Graphic Design Capstone credit: 3 Hours.

Students in this advanced studio articulate individual interests and conduct corresponding investigations to develop specialized expertise. The coursework represents the student's final preparation for practice in graphic design. Additional fees may apply. See Class Schedule. 3 undergraduate hours. No graduate credit. Prerequisite: ARTD 444 and ARTD 451. For majors only.

ARTD 490 Senior Honors credit: 2 to 5 Hours.

Independent creative activity, guided study, or research for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Industrial Design, a cumulative grade point average of 3.0; and consent of instructor and department.

ARTD 499 Special Topics in Design credit: 1 to 4 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated as topics vary to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: Senior standing or consent of instructor.

ARTE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTE>)

Art--Education Courses**ARTE 101 Art, Design, and Society credit: 2 Hours.**

This course provides an introductory forum for beginning artists, designers, art historians, and art educators to think through the motivation(s) behind their/our creative work(s), research, and practices. Through topical examinations of contemporary art, craft, design, art history scholarship, art education scholarship, and interdisciplinary projects, developing artists will sift through pertinent issues around sustainability, ethics, ecologies, pedagogies, and civic engagement in order to inform our own burgeoning motivations and creative practices. Additional fees may apply. See Class Schedule. Prerequisite: For Art +Design majors only.

ARTE 201 Foundations of Art Education credit: 3 Hours.

Provides students with philosophical foundations for teaching art including in public schools. The primary emphasis will be on understanding recent and contemporary orientations through readings and practical activities. Particular emphasis will be placed on emerging trends in Art Education, especially the use of technology and the value of visual culture in student lives. It is envisaged that this course will provide the primary theoretical foundation for further practical and pre-service teaching courses in Art Education. Additional fees may apply. See Class Schedule.

ARTE 202 Methods of Teaching Art credit: 3 Hours.

Considers how competencies identified by the Illinois State Board of Education and the National Art Education Association inform the development of knowledge, dispositions, and resources for teaching art in a culturally diverse society, with particular attention to current theories and approaches to teaching art in Pre-School to Grade 12 settings. Emphasis is placed on professional development and reflective practices that engage inquiry-based teaching strategies. Teaching strategies for both making and appraising images are emphasized. Additional fees may apply. See Class Schedule.

ARTE 203 Everyday Arts Lab credit: 3 Hours.

This class examines community-based art projects that partner undergraduates with youth (K-12) in non-university settings including community centers and schools. Through this course, students will design and teach arts and public engagement projects. They will explore their identities as artists, educators, and citizens. Students will learn how to assess impact of their projects and teaching. The course welcomes all students; no prior teaching or community-based education experience necessary. Additional fees may apply. See Class Schedule.

ARTE 204 Practicum Teaching Experience credit: 4 Hours.

Provides undergraduate and graduates seeking certification in Art Education structured and supervised teaching experience in the Saturday Art School program, held 10 Saturday mornings during the semester. Professional development in personal communication skills, lesson plan delivery, organizational abilities, use of technology in instruction, and art classroom management will comprise the goals of the course. Must be taken in conjunction with ARTE 203. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 202.

ARTE 260 Museums in Action credit: 3 Hours.

Considers how scholarly discourse in museum interpretation and educational program development are translated into practices that engage culturally diverse audiences. Readings, research, and professional activities provide students with opportunities for examination of museum interpretive practices, programming decisions, and public engagement activities, along with analysis of Krannert Art Museum's presence on the university campus, in the larger community, and on the World Wide Web.

ARTE 299 Spec Topics in Art Education credit: 3 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours in a semester or, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTE 301 Early Field Art Teaching credit: 3 Hours.

Early field experience in local elementary schools one half day weekly; includes identification, instruction, methods, and practicum on the psychology of the exceptional child. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 203 and ARTE 204; Art education majors only.

ARTE 302 Public School Art Programs credit: 3 Hours.

The selection and arrangement of content for different educational levels; study and evaluation of curricula, equipment, and supplies; and program supervision. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 301 or junior standing in art, or consent of instructor.

ARTE 350 Creative Dance for Children credit: 3 Hours.

Same as DANC 350 and HDFS 361. See DANC 350.

ARTE 391 Independent Study credit: 1 to 4 Hours.

Directed independent research or creative activity. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in art and design; and consent of instructor, advisor, and associate director of the School.

ARTE 401 Teaching Seminar credit: 4 Hours.

Examines responsibilities, methods, and techniques specific to teaching art in elementary and secondary schools; includes the psychology of the exceptional child in conjunction with methods of instruction and student teaching experience. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTE 302; concurrent registration in EDPR 438 and EDPR 442, art education sections only.

ARTE 402 Artistic Development credit: 3 or 4 Hours.

Historical and contemporary perspectives on children's artistic development, emphasizing relationships between general intellectual growth and the ability to create and respond to works of art. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing, and PSYC 100 and EPSY 201.

ARTE 475 Art Exhibition Practices credit: 3 or 4 Hours.

Explores issues pertaining to the preparation, installation and conservation of visual art. Students will learn how to organize, design, spot and install an exhibition; develop exhibition graphics; address conservation issues; handle works of art; and learn the business of art. Field trips and guest lectures by conservators, preparators, curators and exhibition designers will add further depth to the class. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing in Art and Design.

ARTE 480 Popular Visual Culture credit: 3 or 4 Hours.

Focuses primarily on contemporary popular culture, but also draws upon fine art, folk art, and indigenous art from both the past and the present. Considers the often troubled relationships between the pleasures of visual culture and its ideologies. Students examine the literature of visual culture studies and develop research skills by examining a specific site of visual culture of their own choosing in terms of aesthetic pleasures and ideology including but not limited to sexism, class, ethnicity, religion, homophobia, and xenophobia. Theories of the body, consumerism, and globalization, among others will be considered. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 6 undergraduate hours or 8 graduate hours.

ARTE 490 Senior Honors credit: 2 to 5 Hours.

Independent guided research and study for honors. Additional fees may apply. See Class Schedule. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in art education, a cumulative grade point average of 3.0; and consent of instructor, advisor, and associate director of the School.

ARTF Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTF>)

Art--Foundation Courses**ARTF 101 Contemporary Issues in Art credit: 2 Hours.**

Exposes the first year student in an interactive lecture/discussion format to contemporary issues and disciplines in the visual arts. Course requirements include attendance of course lectures, field trips, visiting artist presentations, keeping of a journal and the writing of a paper. Additional fees may apply. See Class Schedule.

ARTF 102 Observational Drawing credit: 3 Hours.

Theory and practice in observational drawing with emphasis on fundamental principles such as mark/line, shape/form, space/composition, linear/perspective, scale/proportion, value/tonal range, and pattern/texture. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTF 103 Design I credit: 3 Hours.

Theory and practice in the elements, processes and principles of design. Course content is organized under three headings: COLOR, a study of the visual, material and psychological nature of color; COMMUNICATION, an introduction to the fundamentals of visual communication using primarily digital media; and 3D CRAFT, a survey of fabrication techniques using three-dimensional media. Additional fees may apply. See Class Schedule. Prerequisite: This course is open to Art and Design Majors only.

ARTF 104 Expressive Drawing credit: 3 Hours.

One of a suite of three drawing courses, this class includes the following drawing concepts: narrative, conceptual, applied, non-objective, format, process, seriality and collage. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTF 105 Design II credit: 3 Hours.

Theory and practice in the elements, processes and principles of design. Course content is organized under three headings: RESEARCH, an introduction to methods used in research-driven project; TIME, an examination of the formal and technical aspects of temporal media such as sound, video or animation; and 3D EXPLORATION, a process-driven exploration of three-dimensional space and form. Additional fees may apply. See Class Schedule. Prerequisite: ARTF 103.

ARTF 106 Visualization Drawing credit: 3 Hours.

This studio course introduces students to the graphic representation techniques of visualization utilized within the fields of design and arts, as well as teaches drawing as a tool for thinking. Lectures and studio projects examine the language of three-dimensional form and deal with a wide range of analysis and representation of form, including mechanical drawing, freehand sketching and various means of rendering. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design majors only.

ARTF 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule.

ARTF 201 Issues in Visual Communication credit: 2 Hours.

Survey ideas and movements that have had important impact on visual culture over the last century. Readings, discussions, presentations, and research projects, will introduce significant modern and contemporary theories, and the artists and designers who have exemplified and furthered those ideas. Students will gain an understanding of issues that have influenced visual art and design in recent history, improve their ability to analyze images, expand their concepts of how meaning gets attached to images and objects, and increase their ability to engage in debate and discussion about art and design practices.

ARTF 301 Art + Design Matters credit: 3 Hours.

Students attend a weekly lecture series featuring well-known artists, designers, art historians, and art educators. Provides an opportunity to hear leading contemporary practitioners talk about the ideas, concepts, and agendas behind their work. Lectures are supplemented by weekly online directed writing assignments that further explore issues and ideas raised in the lectures. As a final project, students research and write about a contemporary artist or designer of their choosing. Prerequisite: Junior standing.

ARTH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTH>)

Art--History Courses

ARTH 110 Introduction to the History of Art and Visual Culture credit: 3 Hours.

This course introduces participants to foundational questions that shape the disciplines of art history and visual studies. It is not a comprehensive survey. Rather, it provides students critical frames for examining the visual world from various temporal, geographic, and methodological perspectives. Students will investigate the history, interpretation, and criticism of selected cultural objects, images, places, and spaces across time and around the globe.

ARTH 111 Ancient to Medieval Art credit: 4 Hours.

Development of the visual arts in Western Europe and the Near East in their cultural contexts from prehistoric times until the early fifteenth century; includes Egyptian, Greek, Roman, and medieval art and architecture. Same as MDVL 111.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 112 Renaissance to Modern Art credit: 4 Hours.

Development of the visual arts in Western Europe and the United States in their cultural contexts from the early fifteenth century to the present.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 113 Introduction to African Art credit: 4 Hours.

An introduction to the arts of Africa. Sculpture, textiles, architecture, body adornment, and performance will be examined on the basis of aesthetic, religious, political, and social contexts. The main emphasis will be on traditional art, although the course will address many changes and continuities within African art as evidenced in the late 20th century. The course will proceed geographically from western through central to eastern and southern Africa. Videos, music, and museum visits will complement the lectures.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 114 Introduction to East Asian Art credit: 4 Hours.

Thematic introduction to the visual arts of China and Japan, including calligraphy and painting, woodblock prints, sculpture, gardens and architecture. Same as EALC 114.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 115 Art in a Global Context credit: 4 Hours.

Introduces students to basic concepts necessary for understanding the visual arts. It orients students to the visual arts in a variety of international contexts, and in particular in our current globalizing world.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ARTH 211 Design History Survey credit: 3 Hours.

The historical, social and cultural context of design concentrating on manufactured products, communication, media and design from the Industrial Revolution to the present. Lectures, seminars and individual research projects.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 215 Greek Art credit: 3 Hours.

Survey of architecture, sculpture, and painting of the Greek world from the geometric period to the beginning of the Christian era. Same as CLCV 217.

ARTH 217 Development of Ancient Cities credit: 3 Hours.

Same as CLCV 231. See CLCV 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ARTH 218 Ancient Greek Sanctuaries credit: 3 Hours.

Same as CLCV 232 and REL 232. See CLCV 232.

ARTH 222 Medieval Art credit: 3 Hours.

The arts of Byzantium and Western Europe from the early Christian era to the Renaissance. Same as MDVL 222.

ARTH 230 Italian Renaissance Art credit: 3 Hours.

Architecture, painting, and sculpture of Italy during the Renaissance.

ARTH 231 Northern Renaissance Art credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of Europe outside Italy in the fifteenth and sixteenth centuries. Same as MDVL 231.

ARTH 235 Art, Power and Culture in 17th-Century Europe credit: 3 Hours.

Explores the diverse functions of the visual arts in Europe in a period of religious strife; expanding global trade; the rise of early capitalism, and the consolidation of absolutist regimes.

ARTH 240 Art of the Nineteenth Century credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of France, Germany, Spain, and England in the nineteenth century.

ARTH 241 Modern Art, 1880-1940 credit: 3 Hours.

This course examines the ways in which artists reconceived how art should look and function in response to the many changes – social, political, and technological – that accompanied the modernization of Europe from 1880 to 1940. Topics to be covered include the avant-garde, modernism's relationship to "primitivism," pure abstraction, art's responses to the political upheavals of World War I and the Russian Revolution, the advent of design, and the politics of realism and representation. Although primarily focused in Europe, the course also touches on related modern movements globally.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 242 Art Since 1940 credit: 3 Hours.

The scope of this course begins amidst the devastation and geopolitical shifts that followed World War II and ends with the effects of globalization in the 1990s and 2000s. We will ask the same questions that faced artists and critics in between: Should art focus on its own material processes or open its borders to historical flux? Is it art's job to create the cultural myths that bind society together, or to deconstruct them? Who participates in modern and contemporary art, and who doesn't? What kinds of production should be considered art? How are specific formal strategies informed by the perspectives of different subject positions? What politics underwrite them? We will consider, and reconsider, the existing narratives about art during this period with a dual aim: first, to better understand the historical positions of the artists in question, and, second, to piece together a prehistory of the moment in which we currently find ourselves.

ARTH 249 American Visual Humor credit: 3 Hours.

Investigates the mechanics of visual humor in nineteenth-century American visual and material culture, including graphic satire, painting, sculpture, comics, and early film. Considers this material in the context of social and political attitudes, styles of communication, consumer culture, literary comedic strategies, aesthetic theory, and humor theory more generally. Incorporates in-class screenings of contemporary comedians, visits to the Rare Book Room at the University library, and visits to the Krannert Art Museum.

ARTH 250 American Art credit: 3 Hours.

Surveys American art and architecture from the colonial period to the present.

ARTH 257 History of Photography credit: 3 Hours.

Examines a history of photography from its origin to the present, including both documentary and artistic approaches; considers relationships with other arts.

ARTH 260 Graffiti and Murals credit: 3 Hours.

From Bronx walls to the Berlin Wall, from ancient palatial decorations to spray-can art, murals and graffiti have been revolutionary political tools, objects of aesthetic contemplation, and vehicles for identity formation. Primarily a lecture course that examines ancient and early modern cases from different cultures, as well as focusing on modern examples from Latin America and the USA. Same as LLS 260.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ARTH 299 Spec Topics in Art History credit: 3 Hours.

Special topics in Art History Courses. Topics and subject matter to be published in course listings. May be repeated up to 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTH 310 African Art and Society I credit: 3 Hours.

Introduces the arts of Black Africa, i.e., dance, drama, songs, and poetry, as expressed in a multi-media framework and a social-religious context; surveys the art styles of the Dogon, Senufo, Mende, and Ashanti peoples.

ARTH 312 Central African Art credit: 3 Hours.

A one-semester introduction to the arts of central Africa. Sculpture, pottery, architecture, body adornment, contemporary art, and performance will be examined and discussed on the basis of aesthetic, religious, political, and social contexts. Discusses many changes and continuities within African artistic traditions as evidenced in late twentieth-century urban, popular, and political arts of central Africa. We shall also investigate some central African artistic influences found in African American arts. Same as AFST 312.

ARTH 313 Modern and Contemp African Art credit: 3 Hours.

Examines how multiple "modernisms" emerged from African independence movements, and thereby influenced the development of African and African-American art from the 1960s to the present. Same as AFST 313.

ARTH 342 Arts of Colonial Latin America credit: 3 Hours.

Introduction to the major art historical, stylistic and iconographic developments of several Latin American countries of the late sixteenth through eighteenth centuries. Themes to be investigate include: the pictorial representation of race; indigenous workshops, traditions, and the birth of European art academies; the constructions of gender; as well as the translation of styles. The course includes field trips to local museums and libraries. Previous introductory level art history or Latin American history course recommended. Same as LAST 342.

ARTH 343 Arts of Modern Latin America credit: 3 Hours.

This course is an introduction to the major visual materials, monuments, and critical debates of the arts of Latin America, from the 19th to the early 20th century. It studies a wide range of artistic media, including drawings, paintings, popular prints, performance, photography, film, murals, architecture, and urban planning, especially as they pertain to definitions of "Latin America". The course pays particular attention to constructions of race and gender in representing the modern nation. Same as LAST 343.

ARTH 344 Spanish Modern Art credit: 3 Hours.

Introduction to the rich visual cultures of Spain beginning with the Bourbon dynasty in the eighteenth century through the early decades of the twentieth century. The course examines a variety of themes: from the mythologized loves of Goya, to the grandeur of canvases recreating Spain's history; from Spanish Romanticism to the rise of vanguard movements and the advent of Pablo Picasso. 3 undergraduate hours. Prerequisite: Previous introductory level art history course recommended, but not required.

ARTH 345 Realism to Postimpressionism credit: 3 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting.

ARTH 350 American Art 1750-1900 credit: 3 Hours.

Studies the two major directions of art in the United States from independence to the centennial, with focus on major figures and the scientific and philosophical movements which influenced them. Prerequisite: One year of art history or consent of instructor.

ARTH 351 Early American Modernism credit: 3 Hours.

Examines American art, particularly painting and sculpture, 1876-1940, against its cultural background and the relation of the American artist to Europe in an attempt to isolate the roots of Modernism in the United States. Prerequisite: One year of art history or consent of instructor.

ARTH 360 Women and the Visual Arts credit: 3 Hours.

Explores the complex interconnections of women with the visual arts in Europe and North America from the classical era to the present, including the modes of artistic production and the representation of women in western society. Same as GWS 360.

ARTH 391 Individual Art History Topics credit: 1 to 4 Hours.

Directed independent research. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in art and design; and consent of instructor, advisor, and associate director of the School.

ARTH 395 Junior Seminar in Art History credit: 3 Hours.

Offers Art History majors grounding in the discipline's historiography and exposure to diverse historical methods. Provides students with experience in a range of research techniques as preparation for their Senior Seminar. Prerequisite: Junior standing in Art History curriculum or in Art History minor.

ARTH 402 Ways of Seeing in Edo Japan credit: 3 or 4 Hours.

Focuses on modes of seeing and technologies of vision manifest in the visual arts of Edo Japan, 1615-1868. At the time, imported European instruments of seeing, such as the microscope, made possible unusual visual experiences; revivals of classical Japanese painting manipulated different ways of recreating and visualizing the past. A variety of themes, organized chronologically, will demonstrate the importance of seeing in painting and calligraphy, ceramics, woodblock prints, and architecture. Same as EALC 402. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ARTH 114, or equivalent background in Japanese history or literature. Junior standing or consent of instructor.

ARTH 403 Word and Image in Chinese Art credit: 3 or 4 Hours.

Study of the diverse correlations between verbal texts and visual images in Chinese art and art theory from the twelfth through seventeenth centuries. Same as EALC 403. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 410 West African Art and Ideas credit: 3 or 4 Hours.

Study of West African art styles in chronological and cultural perspectives with a special interest in the use of interdisciplinary source materials. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 413 Sacred African Diaspora Arts credit: 3 or 4 Hours.

Explores African diaspora arts grounded in the diverse aesthetic, philosophical, historical, political, and religious consciousnesses of peoples of African descent living in the Caribbean and the Americas. Focuses on the preservation and ongoing transformations of African visual and religious cultures surviving in African diaspora communities from the period of the trans-Atlantic slave trade to the present. Same as AFST 421. 3 undergraduate hours. 4 graduate hours.

ARTH 415 The Archaeology of Greece credit: 3 Hours.

Same as CLCV 443. See CLCV 443.

ARTH 416 The Archaeology of Italy credit: 3 Hours.

Same as CLCV 444. See CLCV 444.

ARTH 423 Romanesque Art credit: 3 or 4 Hours.

Art and architecture of the Romanesque period. Same as MDVL 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 424 Gothic Art credit: 3 or 4 Hours.

Arts of western Europe from the end of the Romanesque period until the Renaissance. Same as MDVL 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 430 Topics: Italian Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and architecture of Italy during the Renaissance selected for intensive study. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 431 Topics: Northern Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and minor arts of France, Germany, Spain, and England during the Renaissance selected for intensive study. Same as MDVL 431. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 432 Sixteenth-Century Italian Art credit: 3 or 4 Hours.

Painting, sculpture, and architecture in Italy from 1500 to 1580. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 433 Fifteenth-Century Italian Art credit: 3 or 4 Hours.

Study of Italian painting, sculpture and architecture from circa 1300 to 1500. Same as MDVL 433. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 435 Italian Baroque Art credit: 3 or 4 Hours.

Italian painting and sculpture during the period 1580-1700, with particular emphasis on art in Rome. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 436 17th-Century Dutch & Flemish Art credit: 3 or 4 Hours.

Explores the functions of visual arts in the Netherlands in relation to shifting political and religious contexts; evolving notions of privacy, domesticity and subjectivity; the study of nature; and the expanding capital-based wealth of Northern Europe founded upon global trade. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 439 18th Century European Art credit: 3 or 4 Hours.

Critical survey of the major developments in European painting of the eighteenth century. Emphasis is placed on French artists, but major figures in England, Spain, and Italy are also considered. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 440 Romantic Art credit: 3 or 4 Hours.

Studies English, French, and German art from the end of the eighteenth century through 1840; focuses on revivalist movements, historicism, landscape art, and changing conceptions of art and artist during the period. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 441 Realism to Post-Impressionism credit: 3 or 4 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 445 European Art Between the Wars credit: 3 or 4 Hours.

Study of the leading personalities and movements in European painting, sculpture, and architecture, with emphasis on painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 447 France and Its Others credit: 3 or 4 Hours.

Examines the relationship between art and colonialism in nineteenth-century France. Topics include orientalism, primitivism, and exoticism; the central figures include Delacroix, Flaubert, Gerome, and Gauguin. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 460 Museum Management credit: 3 or 4 Hours.

This course is concerned with advanced theoretical issues of art museum work, taught by the professional staff of a museum. Topics covered include collections, curatorial issues, educational program planning, trustee relations, public outreach, fundraising, budgeting, and staff organization. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 462 Museum Theory and Practice credit: 3 or 4 Hours.

Same as ANTH 462 and LA 472. See ANTH 462.

ARTH 489 Senior Art-History Honors-BA credit: 2 to 5 Hours.

Independent guided research and study in a selected area of art history for candidates for the Bachelor of Arts in Art History with departmental distinction. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. (Counts for advanced hours in LAS). Prerequisite: Senior standing in the art history curriculum; a cumulative grade point average of 3.25; an art history grade point average of 3.5; and consent of instructor, department advisor, and associate director of the School.

ARTH 490 Senior Art-History Honors-BFA credit: 2 to 5 Hours.

Directed independent research and study for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Fine and Applied Arts art history, a cumulative grade point average of 3.0, and consent of instructor, advisor, and associate director of the School.

ARTH 491 Topics in Art History credit: 1 to 4 Hours.

Variable content; consult the Class Schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Junior standing or consent of instructor.

ARTH 495 Senior Seminar in Art History credit: 3 Hours.

Required seminar for undergraduate majors that offers students practical experience in research techniques. Focuses on a specialized theme of the professor's choice, and will incorporate extensive reading in a specific field of Art History and the completion of a substantial research paper. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 undergraduate hours. Prerequisite: ARTH 395.

ARTS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTS>)

Art--Studio Courses**ARTS 200 Introduction to Book Arts credit: 3 Hours.**

Creative expression and communication through the production of a variety of unique and limited edition books. Students will learn the tools and techniques of binding books by hand while studying the physical and narrative properties of books. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in Art and Design, in an Art History major, or in the Art History minor.

ARTS 201 Crafts Design credit: 3 Hours.

This course will provide students the opportunity to 1) explore craft practice as a medium of personal aesthetic expression 2) develop skills and a technical competency in working with a variety of craft materials to include glass, metal, paper, clay, enamel, wood 3) design objects of utility 4) experience creative and technical experimentation 5) establish an awareness of historical and contemporary movements in craft practice. This course includes field trips to the studios of practicing craft artist and visits to Krannert Art Museum and local art galleries. Patience, determination, fine motor skills, critical thinking, and problem solving skills will be developed and exercised in the course. This course satisfies the 3D requirement in the new Art + Design Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 205 Introduction to Printmaking credit: 3 Hours.

Introduction to the materials and techniques of printmaking, including intaglio, relief, lithography, and screenprint. Over the course of several projects, students will develop a familiarity with print processes while learning about the unique history and conceptual concerns of print media. Composition and technique are emphasized, and projects that relate to work developed in other studio and design areas are encouraged. Additional fees may apply. See Class Schedule.

ARTS 210 Ceramics Sculpture I credit: 3 Hours.

Introduction to materials and techniques involved in the ceramic process. By achieving technical expertise using clay, students can begin to develop a personal artistic language employing clay as an art medium. Students will explore a variety of assignments employing hand-building techniques, as well as investigating various firing processes. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing or consent of instructor. For Art majors only.

ARTS 230 Jewelry/Metals I credit: 3 Hours.

Design and execution of jewelry and related objects through fabrication, focusing on surface embellishment, joining, and finishing processes; exploring metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing or consent of instructor. For Art majors only.

ARTS 231 Jewelry/Metals II credit: 3 Hours.

Additional experience and experimentation in designing and executing jewelry and related objects through fabrication, refinement of surface embellishment, joining, and finishing skills; further exploration of metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 230.

ARTS 250 Life Drawing credit: 3 Hours.

Representational and interpretive drawing from life explored through close observation and structural analysis of the human figure and other subject matter. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTF 102 and ARTF 104. For Art majors only.

ARTS 251 Beginning Painting credit: 3 Hours.

This studio course familiarizes students with basic oil painting materials, techniques, and concepts. Topics to be addressed include composition, color theory, historical painting techniques, illusionistic space, and paint handling and application. Exploration and discussion of the ways in which paintings make meaning. This course satisfies the 2D requirement in the Art Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 252 Making and Meaning credit: 3 Hours.

Introduction to the relationship of material, method, and process to meaning in art practice. Through research, critique, and application of concepts in material studio processes, students will explore a diverse range of methods of achieving meaning in an artwork. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 102 and ARTS 104.

ARTS 254 Painting II credit: 3 Hours.

Continuation of ARTS 251. Further develops the materials, skills, and issues introduced in that course; also considers additional painting media; explores and examines traditional and contemporary issues in painting. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 251.

ARTS 280 Beginning Sculpture credit: 3 Hours.

Introduction to basic concepts, processes, and materials in sculpture, with an emphasis on the relationship among these three aspects of producing works of art. Materials including wood, plaster, and clay will be used additively to fabricate, model and cast forms. Subtractive methods utilizing carving, and the making of meaning via materials, methods and context are also discussed. This course satisfies the 3D requirement in the Art Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 281 Sculpture II credit: 3 Hours.

Continuation of ARTS 280. Explores the relationship of sculptural materials and media to meaning; research into the historical, contemporary, and contextual semiotics of materials in order to generate meaning. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 280.

ARTS 299 Spec Topics in Studio Art credit: 3 Hours.

Special topics in Studio Art Courses. Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated up to 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTS 310 Ceramics Sculpture II credit: 3 Hours.

Students will develop more sophisticated techniques and processes necessary to develop their personal voice and take more responsibility for concept, process and material in their work. Emphasis will stress processes related to creating ceramic sculpture such as hand construction techniques, kiln firing, clay and glaze experimentation. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 210.

ARTS 330 Jewelry Metals III credit: 3 Hours.

The design and production of jewelry and related objects with additional experience in manipulative techniques such as casting, electroforming, surface decoration, enamelling, complex construction and forming. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 231 and enrollment in the crafts curriculum. For Art majors only.

ARTS 331 Jewelry Metals IV credit: 3 Hours.

Expands the general techniques of ARTS 330 with emphasis on experimentation and development of personal style through advanced techniques of hollowware, complex construction, enamelling, electroforming and plating, forging and the use of varied materials. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 330. For Art majors only.

ARTS 332 Metal Technology credit: 2 Hours.

Understanding of the working properties of nonferrous metals. Experimentation with little known processes of metalwork to be subjects of individual research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 4 hours. Prerequisite: ARTS 330 and junior standing in crafts, or consent of instructor. For Metals majors only.

ARTS 333 Enamelling credit: 3 Hours.

Exploration and experimentation in image development and color through traditional enamelling processes; emphasis on cloisonne, champleve, bassetaille, plique-a-jour, limoges, and grisaille; exploration of enamel and metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 9 hours. Prerequisite: ARTS 230 or consent of instructor.

ARTS 334 Metalsmithing credit: 3 Hours.

Experience and experimentation in designing and executing hollowware through traditional forming processes; emphasis on sinking, angle raising, crimping, stretching, seaming and snarling, cold forging, tube and spiculum forming, planishing, surface embellishment, and patination; exploration of metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: ARTS 230 or consent of instructor.

ARTS 340 The Art of 3D Imaging credit: 3 Hours.

Investigation of the three-dimensional modeling capabilities of 3D Studio Max software through a series of original tutorials, class projects and individual problems. The emphasis will be on quality of form and content rather than technical expertise. The end result will culminate in the understanding and production of limited edition digital prints. Additional fees may apply. See Class Schedule. This course may not be repeated for credit.

ARTS 341 Image Practice credit: 3 Hours.

Looks at the production and reception of images through a combination of historical, theoretical and practical perspectives. A variety of contexts from contemporary art, design and popular culture will be explored through research and visual projects. Special consideration will be given to current forms of reproduction, with students learning and utilizing common methods for rendering and realizing still images, including both print and screen-based output. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing.

ARTS 343 Time Arts I credit: 3 Hours.

Explores the potential of time-based media for creative expression and communications within the context of visual art and design. Classroom discussion will focus on historical and contemporary examples of time arts, written materials, and student work. Hands-on projects will introduce tools, issues and strategies particular to creating and analyzing work based in time. Additional fees may apply. See Class Schedule.

ARTS 344 Interaction I credit: 3 Hours.

Introduction to the conceptualization and construction of interactive experience for art and design. Interaction will be examined as technical, structural, social, and historical. Work will include practice, research, discussion, and lecture. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing.

ARTS 350 Intermediate Studio I credit: 4 Hours.

Combined painting, sculpture and new media studio. Self-directed arts practice. Individual and group critique; includes seminars, discussions, demonstrations, visiting artists and critics, and field trips. Interaction and collaboration among students in painting, sculpture and new media. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 254 or ARTS 281 or ARTS 240. For Art majors only.

ARTS 351 Intermediate Studio II credit: 4 Hours.

Continuation of ARTS 350. Combined painting, sculpture and new media. Self-directed arts practice. Individual and group critique; includes seminars, discussions, demonstrations, visiting artists and critics, and field trips. Interaction and collaboration among students in painting, sculpture and new media. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 350. For Art majors only.

ARTS 391 Independent Study credit: 1 to 4 Hours.

Directed independent creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Art and Design; and consent of instructor, advisor, and associate director of the School. For Art majors only.

ARTS 392 Current Art Issues Seminar credit: 3 Hours.

Seminar with readings, lectures, discussions on ideas and issues affecting contemporary art. Attendance is required at visiting artists' and scholars' lectures and field trips. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Fine and Applied Arts or consent of instructor.

ARTS 399 Internship in Studio Arts credit: 1 to 4 Hours.

Internships to be pre-approved for variable credit. Students will be required to document work completed during the internship with verification of supervisor. Supervisor will also be required to fill out a questionnaire either by mail or on-line. Faculty members will access work and questionnaires to assign a grade. Approved for S/U grading only. Prerequisite: Junior standing in School of Art and Design.

ARTS 400 Advanced Book Arts credit: 3 or 4 Hours.

Advanced study of the history and techniques of hand bookbinding. Variations on binding structures and emphasis on creative expression through mixed media, collage, painting, photography, and writing. Field trips to book collections. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARTS 200, and junior standing in Art and Design or consent of instructor.

ARTS 405 Special Topics in Printmaking credit: 3 or 4 Hours.

Advanced exploration of specific printmaking processes. Students will develop skills through a progression of projects, while increasing their awareness of conceptual concerns unique to printmaking through discussion and field trips. Projects that relate to work developed in other studio and design areas are encouraged. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours if topics vary. A student registered in one or more Art & Design course(s) exhibiting this message, will be assessed a \$95 facility use fee once each term. Prerequisite: ARTS 205. Junior standing or higher in Art & Design required.

ARTS 410 Advanced Ceramics Sculpture credit: 3 or 4 Hours.

Students will develop more sophisticated techniques and processes necessary to develop their personal ideas. Emphasis will be placed on processes related to creating ceramic sculpture such as kiln firing, clay and glaze experimentation. At this level, the student begins to take more responsibility for concept, process and material in their work. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated up to 15 undergraduate hours or 20 graduate hours. Prerequisite: ARTS 210 and ARTS 310.

ARTS 412 Ceramics credit: 2 to 4 Hours.

Ceramic design with emphasis on the development of professional style and personal expression. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

ARTS 430 Jewelry Metals V credit: 5 Hours.

Expands the general techniques of ARTS 331 with emphasis on experimentation and development of personal style. Additional fees may apply. See Class Schedule. 5 undergraduate hours. No graduate credit. Prerequisite: ARTS 331.

ARTS 431 Jewelry Metals VI credit: 5 Hours.

Continuation of ARTS 430; emphasis on experimentation and development of personal style, a portfolio, and a senior exhibition. Additional fees may apply. See Class Schedule. 5 undergraduate hours. No graduate credit. Prerequisite: ARTS 430. For Art majors only.

ARTS 443 Time Arts II credit: 3 or 4 Hours.

Provides semester-long, in-depth explorations of single time arts topics. Using the ideas and basic tools from Time Arts I, students will study the advanced concepts and techniques particular to individual time arts genres while producing their own work. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 343 or consent of instructor.

ARTS 444 Interaction II credit: 3 or 4 Hours.

Further exploration of interaction, with an increased emphasis on realization and application of designed interactive experience, and depth of exposure to particular technical platforms. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate or 8 graduate hours. Prerequisite: ARTS 344 and consent of instructor.

ARTS 445 Special Topics in New Media credit: 3 or 4 Hours.

Course will explore one specialization within the field of New Media. Topics will rotate through each semester; possible subjects include Performance, Sound, Radio, Public Art, and Social Media. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 undergraduate hours or 16 graduate hours as topics vary. Prerequisite: Junior standing.

ARTS 449 Advanced Seminar in New Media credit: 3 Hours.

Students will explore current issues in New Media with the goal of understanding their own artwork in a disciplinary context. Through reading, writing, research and discussions, students will be exposed to significant work in their field. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 undergraduate hours. Prerequisite: Open to New Media majors or consent of instructor.

ARTS 450 Advanced Studio I credit: 4 Hours.

First of two capstone courses in studio arts practice, individualized study for painting, sculpture, and new media majors. Explores and develops conceptual and aesthetic interests, topics, and projects; expands and refines material knowledge and expertise; develops research strategies and methodologies. Includes individual and group critiques, dynamic interaction with faculty and peers. Additional fees may apply. See Class Schedule. 4 undergraduate hours. No graduate credit. Prerequisite: ARTS 351 Intermediate Studio II. For Art majors only.

ARTS 451 Advanced Studio II credit: 4 Hours.

Continuation of ARTS 450. Second of two capstone courses in studio arts practice, providing individualized study for painting, sculpture, and new media majors. Explores and develops conceptual and aesthetic interests, topics, and projects; expands and refines material knowledge and expertise; develops research strategies and methodologies. Includes individual and group critiques, dynamic interaction with faculty and peers. Additional fees may apply. See Class Schedule. 4 undergraduate hours. No graduate credit. Prerequisite: ARTS 450. For Art majors only.

ARTS 454 Advanced Drawing credit: 3 Hours.

An advanced studio course that considers a variety of activities defined traditionally, historically and contemporarily as drawing. Students will investigate the questions of what drawing is and how it communicates meaning. They will use and experiment with a wide variety of materials and concepts as they work on in-class projects and outside assignments, investigate the work of contemporary artists to see how the practice of drawing is being redefined, and consider the influence drawing has had on design and visual culture. Students will be encouraged to experiment, innovate, and develop new visual vocabularies. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Two prior courses in drawing; junior standing.

ARTS 455 Advanced Painting credit: 3 Hours.

An advanced studio course focusing intensively on the practice of painting. Students will research contemporary painting and its recent history, discuss its relevance and place in contemporary art, and investigate and articulate their own conceptual motivations in using painting media. Topics will include the relationship of the history of painting to how its use generates meaning in a contemporary context. Students will engage in self-generated studio practice; this work will be the basis of group and individual discussion and critique. 3 undergraduate hours. No graduate credit. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 251 and ARTS 254; junior standing.

ARTS 456 Advanced Sculpture credit: 3 Hours.

Advanced studio course designed to integrate basic sculpture and other 3-D studio skills with advanced knowledge of contemporary sculptural practices and materials, along with an understanding of concepts and theories influencing contemporary sculptural art. Studies will investigate topics including site specificity, context, and criticality as they develop research and studio production methods that allow them to generate work that is relevant to current and future discourse in the field. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 280 and ARTS 281; junior standing.

ARTS 457 Art in Context credit: 3 Hours.

Focuses on the relationship between artworks and their historical, institutional, spatial, geographic, architectural or other contexts for the purpose of engaging in a critical analysis of artworks, as well as developing informed, intentional studio production. Students will encounter topics related to a critical and ethical understanding of context including site-specificity, phenomenology, public art, Situationism, relational aesthetics, and the production of space through social and political process such as building and mapping. The goal is to investigate and understand the dynamic relationship between art and its context. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing.

ARTS 490 Senior Honors credit: 2 to 5 Hours.

Independent creative activity, guided study, or research for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Art & Design, a cumulative grade point average of 3.0; and consent of instructor, advisor, and associate director of the School. For Art majors only.

ARTS 499 Special Topics in Studio Art credit: 1 to 3 Hours.

Special topics in studio arts. Topics and subject matter to be published in course listings. Additional course materials fee may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours if topics vary. Prerequisite: Senior standing or consent of instructor.

Art Crafts

Alan Mette

143 Art and Design Building, 408 East Peabody

PH: (217) 333-0855

<http://art.illinois.edu>

For the Degree of Bachelor of Fine Arts in Crafts

The curriculum in Crafts consists of a concentration in Metal. The BFA program focuses on the development of individual artistic and design capabilities, critical perceptions, and the mastery of comprehensive technical skills. The program emphasizes strengths in conceptual and material specialization. The curriculum supports professional training for the self-sustaining visual artist and provides the skills necessary for students to pursue an advanced degree in the arts. The curriculum in Crafts requires 122 credit hours.

Students in the School of Art and Design must complete the Campus General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>). Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Contact: Mark Avery

Coordinator of Undergraduate Academic Affairs

140 Art and Design Building, 333-6632, mavery@illinois.edu

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		
ARTH 111	Ancient to Medieval Art	3
ARTH 112	Renaissance to Modern Art	3
ARTH 113	Introduction to African Art	3
ARTH 114	Introduction to East Asian Art	3
ARTH 115	Art in a Global Context	3
Advanced art history (200-level or above)		6
Total Hours		14

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Concentration in Metal

Code	Title	Hours
Metal Requirements		
ARTS 230	Jewelry/Metals I	3
ARTS 231	Jewelry/Metals II	3
ARTS 330	Jewelry Metals III	3
ARTS 331	Jewelry Metals IV	3
ARTS 332	Metal Technology (repeat twice)	4
ARTS 430	Jewelry Metals V	5
ARTS 431	Jewelry Metals VI	5
ARTS 333	Enamelling	3
ARTS 334	Metalsmithing	3
ARTS 210	Ceramics Sculpture I	3
ARTS 310	Ceramics Sculpture II	3
ARTS 250	Life Drawing	3
ARTD 260	Basic Photography	3
Select one of the following:		6-8
ARTS 280 & ARTS 281	Beginning Sculpture and Sculpture II	6
ARTD 201 & ARTD 202	Industrial Design I and Industrial Design II	6
Electives		
Supportive electives (see advisor)		9
Open electives as needed to total 122 hour degree		
Total Hours		59-61

Art Education

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign

PH: (217) 333-0855

<http://art.illinois.edu>

For the Degree Bachelor of Fine Arts in Art Education

The curriculum in art education requires 130 credit hours and prepares students for positions as teachers of art in the public and private schools, grades kindergarten through twelve. The program places emphasis on theory, methods, materials, processes, and practice teaching in Illinois schools. For teacher education requirements applicable to all curricula, see the Council on Teacher Education (<http://www.cote.illinois.edu/> programs).

Council on Teacher Education policy requires that all candidates for a teacher education program pass one of the Illinois-approved basic skills tests prior to admission. The Illinois State Board of Education approved basic skills testing options include the ACT Plus Writing/SAT or the Test of Academic Proficiency. Detailed information is available at cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf. In order to be recommended for licensure, candidates are required to maintain a UIUC cumulative grade-point average of 2.5, content area course GPA of 3.0, and professional education course GPA of 3.0 (A=4.0). Candidates should consult their art education advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Contact: Mark Avery

Coordinator of Undergraduate Academic Affairs

School Office: 140 Art and Design Building, Champaign, 333-6632, mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>). Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Art Education Requirements

Art education courses are applicable to professional education requirements for teacher certification.

Code	Title	Hours
Art Education Requirements ¹		
ARTE 201	Foundations of Art Education	3
ARTE 202	Methods of Teaching Art	3
ARTE 203	Everyday Arts Lab	3
ARTE 204	Practicum Teaching Experience	4
ARTE 301	Early Field Art Teaching	3
ARTE 302	Public School Art Programs	3
Professional Education		
PSYC 100	Intro Psych	4
EPS 201	Foundations of Education	3

EPSY 201	Educational Psychology	3
Student Teaching		
ARTE 401	Teaching Seminar	4
EDPR 438	Educational Practice in Special Fields	5
EDPR 442	Educational Practice in Secondary Education	5
Art Foundation		
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Art and Design Requirements		
ARTS 250	Life Drawing	3
ARTS 251	Beginning Painting	3
ARTS 254 or ARTS 252	Painting II Making and Meaning	3
Art History		
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Advanced art history (200-level or above)		3
Electives		
Art and Design electives (Art and Design courses not in Art Education requirements or used in Arts and Design requirements) ¹		18
Open electives as needed to total 130 hour degree in consultation with advisor		
Total hours		130

¹ Must be completed prior to Student Teaching.

Art Foundation

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign

PH: (217) 333-0855

<http://art.illinois.edu>

Foundation Year for All Art and Design Curricula

The School of Art and Design offers bachelor of fine arts degrees in art education, crafts, graphic design, new media, the history of art, industrial design, painting, photography, and sculpture. All major's first-year experience will include courses in drawing, 2D, 3D, and 4D practices. Specialization begins in the second year.

Courses in the history and appreciation of art and certain courses in studio work are open to students from other colleges of the University. A field of concentration in art history is also offered in the College of Liberal Arts and Sciences. The school occupies studios, computing

labs, workshops, classrooms, and offices in several different University buildings.

A portfolio review is required for admission to the School of Art and Design.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs
School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Foundation Program for All Art and Design Curricula

First Year

First Semester

	Hours
ARTH 111, Ancient to Medieval Art 112, 113, 114, or 115 ¹	4
ARTF 101 Contemporary Issues in Art	2
RHET 105 ² Writing and Research	4
ARTF 102 Observational Drawing	3
ARTF 103 Design I	3
Semester Hours	16

Second Semester

ARTH 111, Ancient to Medieval Art 112, 113, 114, or 115 ¹	4
ARTF 104 Expressive Drawing	3
ARTF 105 Design II	3
Open Electives	6-8
Semester Hours	16
Total Hours:	32

¹ ARTH 111, ARTH 112, ARTH 113, ARTH 114, and ARTH 115 all meet a general education requirement. See www.courses.illinois.edu (<http://www.courses.illinois.edu>). Credit will not be given for both ARTH 112 and ARTH 115.

² Students are assigned to a Composition I course for either fall or spring semester. Students will take a general education elective during the semester they are not taking their Composition I course.

Art History

Alan Mette
143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855
<http://art.illinois.edu>

For the Degree Bachelor of Fine Arts in the History of Art

The curriculum in the history of art requires 122 credit hours and offers a broad cultural education that unites academic and studio training. The curriculum provides sound preparation for the graduate study required for museum work or teaching at the college level.

To be eligible for distinction, a student must earn a 3.25 overall GPA, and 3.50 GPA in Art History. The Student will complete at least 4 semester hours of independent research to write a senior research paper. See the undergraduate adviser for further details.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs
School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>). Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Students must complete a fourth-level college foreign language course or its equivalent for graduation with a B.F.A. in Art History.

Art History Requirements

Code	Title	Hours
Select three of the following (credit will not be given for both ARTS 112 and ARTH 115):		
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art ¹	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context ¹	
ARTH 395	Junior Seminar in Art History	3
ARTH 495	Senior Seminar in Art History (offered fall semester only)	3
One advanced Art History (200-400 level) course each from the following categories:		12
African or East Asian Art		
Art History before 1700		
Art History after 1700		
Advanced Art History (course not used elsewhere)		
Total Hours		30

Humanities Electives

Code	Title	Hours
Students are required to complete a minimum of 6 hours of electives in a single area from the following options: ancient and modern literatures, classics, anthropology, history, and philosophy. Students should select these courses with the FAA Art History Advisor's consent.		
Total Hours		6

Art and Design Requirements

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6

Art (ARTD and/or ARTS) electives	12
Total Hours	26

Open Electives

Code	Title	Hours
Open electives as needed to total 122 hour degree.		

Graphic Design

Alan Mette
143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855
<http://art.illinois.edu>

For the Degree Bachelor of Fine Arts in Graphic Design

The curriculum in graphic design requires 122 credit hours and prepares the student for entrance into the professional practice of design visual communications. Studio work addresses graphic design fundamentals (typography and image making), design history and contemporary practices, research methods, user experience, and social responsibility. Students engage with complex problems and are asked to identify opportunities where design can intervene. In addition, students have the opportunity to develop their personal interests by taking advantage of a highly interdisciplinary selection of elective courses offered by the School of Art + Design, including photography, video, traditional printmaking, sustainability, advanced interaction design, and the design of *Ninth Letter* (<http://www.ninthletter.com>), a nationally-distributed and award-winning literary arts journal.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs
School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>). Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Graphic Design Requirements

Code	Title	Hours
ARTD 218	Intro to Web Technologies	2
ARTD 222	Typographic Practice	3
ARTD 270	Design Methods	3
ARTD 318	Digital Interaction	3
ARTD 333	Type & Image	3
ARTD 351	Graphic Design Inquiry	6
ARTD 371	Graphic Design Practicum	2
ARTD 418	Digital Interaction Sandbox	2
ARTD 444	Typographic Systems	3
ARTD 451	Graphic Design Problems	4

ARTD 471	Graphic Design Capstone	3
Total Hours		34

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following 100-level courses (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
ARTH 211	Design History Survey	3
Advanced art history (200-level or above)		3
Total Hours		14

Electives

Code	Title	Hours
Art and Design electives (art and design courses not in graphic design requirements)		12
Open electives as needed to total 122 hour degree		

Industrial Design

Alan Mette
143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855
<http://art.illinois.edu>

For the Degree Bachelor of Fine Arts in Industrial Design

The curriculum in industrial design requires 122 credit hours and provides education in the design of products for mass production to meet the needs of people and their environment. Emphasis is placed on the awareness of the market demand for design, experience in the problem solving process and methods and materials of production and their relative costs, creation of designs that are in visual harmony with their environment and that are satisfying to the consumer, and responsiveness to the changes in technology and cultural patterns.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs
School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements. Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Industrial Design Requirements

Code	Title	Hours
ARTD 201 & ARTD 202	Industrial Design I and Industrial Design II	8
ARTD 301 & ARTD 302	Industrial Design III and Industrial Design IV	8
ARTD 401 & ARTD 402	Industrial Design V and Industrial Design VI	8
ARTD 225	Design Drawing	3
ARTD 228	Computer Applications	3
ARTD 326	Sustainability & Manufacturing	3
ARTD 328	Human-Centered Product Design	3
ARTD 426	Product Innovation	3
ARTD 448	Professional Design Practice	3
Total Hours		42

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
ARTH 211	Design History Survey	3
Advanced art history (200-level or above)		3
Total Hours		14

Electives

Code	Title	Hours
Art + Design courses (art and design courses not in industrial design requirements or used as industrial design electives)		12
Open electives as needed to total a minimum of 122 hours.		

Minor in Art and Design

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855

<http://art.illinois.edu>

The Art and Design Minor provides students with the opportunity to integrate creative art and design practices with other academic or research pursuits. Students selecting the Art and Design Minor do not necessarily wish to pursue a career as a practicing artist or designer, but do want the chance to work creatively in the visual arts and design, and develop related skills. Students can choose to focus on one particular art form (e.g., photography) or a variety of different media (e.g., photography, typography, and ceramics).

Applicants for admission to the Minor in Art+Design should submit a personal essay explaining their interest in art and design to the Minor Advisor. A minimum cumulative GPA of 2.00 is required.

Contact: Guen Montgomery

Art and Design Minor Advisor

129 Art and Design Building, 333-0855, montgo@illinois.edu

Course Requirements

Students must meet the following course requirements for a total of 18 hours.

Students will be required to have passed one of the approved courses for non-majors (ART 102-105, 140) for entry into the Minor.

Code	Title	Hours
Distribution of Courses		
A minimum of 2 courses from the academic course menu. Academic courses include: ART 100, ART 140, ARTE 260, ARTE 475, ARTE 480, and any 100, 200, 300, or 400 level ARTH course. ¹		6
A minimum of 3 courses from the studio course menu. Studio courses include: ART (except 100, 140), ARTD, ARTE (except 260, 475, 480), ARTF, and ARTS courses. ²		9
At least 1 additional course in either an academic or studio course menu.		3
A minimum of six hours must be completed at the 300 or 400 level.		
Total Hours		18

¹ At least one of these courses must be chosen from the following: ARTH 111, ARTH 112, ARTH 113, ARTH 114, ARTH 115, or ART 100.

² High demand Industrial Design and Graphic Design courses are typically not available to minors.

Minor in Community-Based Art Education

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855

<http://art.illinois.edu>

The Community-Based Art Education Minor is designed for students who seek to study the role of the visual arts in a variety of locations including cultural centers, museums, hospitals, nursing homes, adult day care centers, schools, recreation centers, and other community settings. In addition to the completion of the required art education foundation courses, students choose electives in art education, art history, design, and art studio. Throughout their course of study, students will engage Art Education as it meets the challenges of the 21st century, including emerging technologies, new social formations, and new forms of cultural expression.

This minor does not lead to Illinois State Board of Education K-12 certification to teach art.

Contact: Jennifer O'Connor
Community-Based Art Education Minor Advisor
129 Art and Design Building, Champaign, 244-7467, bergmar1
(bergmar1@illinois.edu)@illinois.edu (mavery@illinois.edu)

Course Requirements

Students must meet the following course requirements for a total of 18 hours.

A minimum of six hours must be completed at the 300 or 400 level.

Code	Title	Hours
ARTE 201	Foundations of Art Education	3
ARTE 202	Methods of Teaching Art	3
Electives from Art Education Division Offerings		
Select 6 to 12 hours from the following:		6-12
ART 140	Introduction to Art	
ARTE 260	Museums in Action	
ARTE 402	Artistic Development	
ARTE 480	Popular Visual Culture	
Electives from the School of Art and Design in the following areas: ART, ARTD, ARTE, ARTH, ARTS		0-6
Total Hours		18

New Media

Alan Mette
143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855
<http://art.illinois.edu>

For the Degree of Bachelor of Fine Arts in New Media

The curriculum in New Media requires 122 credit hours. Students are trained in the production and critique of works for art or design that explore forms and technologies identified as new or emerging. Students receive instruction in technical execution, formal composition, historical precedents and theoretical framing. Advanced course work produces both assigned and self-directed projects that utilize time-based, interactive, physically networked and performative media, and address emerging practices in art and design.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs

School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements. Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

New Media Requirements

Code	Title	Hours
MACS 326	New Media, Culture & Society	3
ARTS 341	Image Practice	3
ARTS 343	Time Arts I	3
ARTS 344	Interaction I	3
ARTS 443	Time Arts II (take twice)	6
ARTS 444	Interaction II (take twice)	6
ARTS 445	Special Topics in New Media (take twice)	6
ARTS 449	Advanced Seminar in New Media (take twice)	6
Total Hours		36

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Advanced Art History (200-level or above)		6
Total Hours		14

Electives

Code	Title	Hours
Art + Design electives (art and design courses not in new media requirements)		12
Open electives as needed to total 122 hour degree		

Painting

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign

PH: (217) 333-0855

<http://art.illinois.edu>

For the Degree of Bachelor of Fine Arts in Painting

The curriculum in painting requires 122 credit hours and provides extensive training in preparation for professional practice as an artist.

The first year is devoted primarily to the study of design, composition, and the acquisition of both representational and abstract drawing skills. The second year concentrates on introducing the student to beginning painting skills and techniques with further studies in drawing and composition. The last two years are devoted to the development of individual creative expression in painting and other media.

When followed by a program leading to a degree of Master of Fine Arts in Painting, this curriculum is recommended as preparation for a career as an artist and as a teacher of painting and drawing and related subjects at the college level.

Contact: Mark Avery

Coordinator of Undergraduate Academic Affairs

School Office: 140 Art and Design Building, Champaign, 333-6632,

mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements. Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Painting Requirements

Code	Title	Hours
ARTS 250	Life Drawing	3
ARTS 251	Beginning Painting	3
ARTS 254	Painting II	3
ARTS 252	Making and Meaning	3
ARTS 392	Current Art Issues Seminar	3
ARTS 350	Intermediate Studio I	4
ARTS 351	Intermediate Studio II	4
ARTS 450	Advanced Studio I	4
ARTS 451	Advanced Studio II	4
Total Hours		31

Painting Electives

Code	Title	Hours
Select two of the following:		
ARTS 454	Advanced Drawing	6
ARTS 455	Advanced Painting	
ARTS 456	Advanced Sculpture	

Code	Title	Hours
ARTS 457	Art in Context	6
Total Hours		6

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Advanced art history (200-level or above)		6
Total Hours		14

Electives

Code	Title	Hours
Art + Design electives (art + design courses not in painting requirements or used as painting electives)		12
Open electives as needed to total 122 hour degree		

Photography

Alan Mette

143 Art and Design Building, 408 East Peabody, Champaign

PH: (217) 333-0855

<http://art.illinois.edu>

For the Degree of Bachelor of Fine Arts in Photography

The curriculum in photography requires 122 credit hours; its purpose is to encourage the study of photographic media for personal expression, to explore the social implications of pictures, and to develop the skills needed for careers in photography. General art requirements and electives provide a broad foundation in the visual arts, and photography courses provide a strong background in the history, theory, and practice of photography as art.

Contact: Mark Avery

Coordinator of Undergraduate Academic Affairs

School Office: 140 Art and Design Building, Champaign, 333-6632,

mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements. Some Art and Design courses will also apply

toward the General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements.

A portfolio review is required for admission to the School of Art and Design.

Photography Requirements

Code	Title	Hours
ARTH 257	History of Photography	3
ARTD 260	Basic Photography	3
ARTD 261	Photography II	3
ARTD 262	View Camera	3
ARTD 360	Photography III	3
ARTD 460	Advanced Photography	3
ARTD 393	Contemporary Art and Ideas	3
Total Hours		21

Photography Electives

Code	Title	Hours
Select 18 hours from the following:		18
ARTS 391	Independent Study	
ARTS 341	Image Practice	
ARTD 262	View Camera	
ARTD 263	Digital Photographic Output	
ARTD 362	Photography Workshop (May be repeated up to 12 hours)	
ARTD 363	RAW Photography	
Total Hours		18

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Advanced art history (200-level or above)		9
Total Hours		17

Electives

Code	Title	Hours
Art + Design electives (art + design courses not in photography requirements or used as photography electives)		15
Open electives as needed to total 122 hour degree		

Sculpture

Alan Mette
143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855
<http://art.illinois.edu>

For the Degree of Bachelor of Fine Arts in Sculpture

The curriculum in sculpture requires 122 credit hours and provides a broad and solid foundation in the fundamental disciplines of drawing, design, and painting, including both traditional and contemporary concepts. The student is encouraged to experience a wide range of materials, techniques, methods, and styles.

Contact: Mark Avery
Coordinator of Undergraduate Academic Affairs
School Office: 140 Art and Design Building, Champaign, 333-6632,
mavery@illinois.edu

Students in the School of Art and Design must complete the Campus General Education (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements. Some Art and Design courses will also apply toward the General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>).

A portfolio review is required for admission to the School of Art and Design.

Sculpture Requirements

Code	Title	Hours
ARTS 252	Making and Meaning	3
ARTS 280	Beginning Sculpture	3
ARTS 281	Sculpture II	3
ARTS 392	Current Art Issues Seminar	3
ARTS 350	Intermediate Studio I	4
ARTS 351	Intermediate Studio II	4
ARTS 450	Advanced Studio I	4
ARTS 451	Advanced Studio II	4
Total Hours		28

Sculpture Electives

Code	Title	Hours
Select two of the following:		6
ARTS 454	Advanced Drawing	
ARTS 455	Advanced Painting	
ARTS 456	Advanced Sculpture	
ARTS 457	Art in Context	
Total Hours		6

Art Foundation

Code	Title	Hours
ARTF 101	Contemporary Issues in Art	2
ARTF 102 & ARTF 104	Observational Drawing and Expressive Drawing	6
ARTF 103 & ARTF 105	Design I and Design II	6
Total Hours		14

Art History

Code	Title	Hours
Select two of the following (all meet a general education requirement; credit will not be given for both ARTH 112 and ARTH 115):		8
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	
ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Advanced Art History (200-level or above)		6
Total Hours		14

Electives

Code	Title	Hours
Art + Design electives (art + design courses not in sculpture requirements or used as sculpture electives)		15
Open electives as needed to total 122 hour degree		

Dance, Department of

Jan Erkert
9071/2 W. Nevada Street
Urbana, IL 61801
PH: (217) 333-1010
<http://www.dance.illinois.edu>

dance@illinois.edu

The Department of Dance, a unit in the College of Fine and Applied Arts, offers a small, personalized program within the context of a large university setting. The resident faculty of eleven full-time members is augmented by part-time faculty and artists-in-residence. The teaching staff includes ten graduate teaching assistants who teach dance in the general education program. The department is an accredited institutional member of the National Association of Schools of Dance.

Program focus in the MFA and the BFA is on the professional preparation of performers, choreographers, and teachers with a breadth of understanding in the discipline. The choreographic and performance emphasis is in contemporary dance; ballet is included as an integral component of training. Classes in yoga, jazz, tap, and world dance forms are offered in the major curriculum. The field of dance science is addressed through courses in Bartenieff movement fundamentals, Laban movement analysis, dance kinesiology, and the Alexander Technique. Additional courses are taught in dance for the camera, dance technology, and other topics of current import. The BA in Dance has a broader, more interdisciplinary scope and is geared toward students who wish

to explore careers related to dance and/or create interdisciplinary performance works.

The performance component of the department is housed in the Krannert Center for the Performing Arts, utilizing the exceptional performing, production, and teaching resources of this world-class facility. Additional studio and classroom facilities and the faculty and administrative offices are housed in two adjacent buildings in close proximity to the Krannert Center. Four department concerts per year are produced in the theatres of the Krannert Center, including two concerts of student choreography. The resident lecture-demonstration company performs in community schools, and additional performing opportunities are provided in concerts presented in the dance studio/theatre, in operas and music performances, in University and community musicals, and in regional and national college dance festivals.

Bachelor of Arts in Dance

The BA curriculum in dance is designed to provide an integrated and individualized approach to undergraduate studies of dance. The degree is designed for students who want to explore interdisciplinary approaches to art-making, and/or simultaneously pursue a minor or major in another discipline. Students will study three core areas in Dance: Technique, Creative Process, and Dance Academics. Students will identify at least one other key area of interest such as Theater, Music, Anthropology, Business, Art & Design, Environment, Film, Gender Studies, Cultural Studies, etc., and will choose a Major, Minor or Focused Electives in this area of study under consultation with an advisor. Under the mentorship of a faculty member, students will create a BA Capstone Project in their senior year as a synthesis of the studies within dance and another area of study.

Students pursuing a Dance degree at the University of Illinois must be admitted to the BFA in Dance (audition required). Once admitted, those desiring a broader education may choose to apply for admittance into the BA in Dance, rather than continuing in the BFA.

A total of 120 hours is required for this degree.

- Bachelor of Arts in Dance (p. 277)

Bachelor of Fine Arts in Dance

The BFA curriculum in dance is an intensive program of study for the dedicated student, offering coursework in the areas of technique, composition, and performance. The curriculum also includes requirements in production, improvisation, music theory and literature for dance, teaching, history, movement sciences, and repertory. Electives may be taken in additional ballet and modern classes, tap, jazz, improvisation, contact improvisation, global dance forms, yoga, Alexander Technique, partnering and Laban movement analysis, Labanotation, screendance, choreographer-composer workshop, dance technology, and independent study.

Program requirements include core daily technique classes consisting of three modern and two ballet classes per week each semester in residence, plus elective technique classes for a minimum of one additional credit hour per semester. A minimum of two courses in additional dance forms (jazz, tap, world dance, etc.) is required. Majors must achieve the advanced technical level in modern and the intermediate level in ballet for a minimum of two semesters prior to graduation. The improvisation/composition sequence consists of a minimum of 11 hours of studio courses culminating in the performance of a senior choreographic project. A minimum of 6 hours of credit is

required in performance/repertory courses. The curriculum includes as much as 20 hours of credit in professional electives, which may be taken in professional dance courses and/or related arts and sciences.

Evaluation of majors is an ongoing process. Continued enrollment in the program is contingent upon satisfactory performance. A student is expected to maintain a minimum 2.75 grade point average in all professional course work and a 3.0 cumulative average in studio classes in order to remain in good standing in the department.

It is possible for transfer students to complete degree requirements in a three-year period contingent upon prior completion of general education requirements and the fulfillment of the advanced technique requirement for two semesters prior to graduation.

A total of 130 hours is required for this degree.

- Bachelor of Fine Arts in Dance (p. 278)

Common Requirements

In addition to the degree-specific requirements listed above, students in either the BA or the BFA in Dance are required to complete the courses in the table below.

Code	Title	Hours
General Education Requirements		
Composition I		4-6
Advanced Composition		3-4
Humanities & the Arts		6-8
Social & Behavioral Sciences		6-8
Cultural Studies: Non-Western/U.S. Minority Culture(s)		3-4
Cultural Studies: Western/Comparative Culture(s)		3-4
Natural Sciences & Technology		6-10
Quantitative Reasoning		6-9
The Language Requirement may be satisfied by:		
-Successfully completing a third-semester college-level course in a language other than English;		
-Successful completion, in high school, of the third year of a language other than English; or		
-Demonstrating proficiency at the third-semester level in a language proficiency examination approved by the College of Liberal Arts and Sciences and the appropriate department.		
Foundation Courses		
FAA 101	Arts at Illinois	1
DANC 150	Orientation to Dance	2

DANC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/DANC>)

Courses

DANC 100 Intro to Contemporary Dance credit: 3 Hours.

Overview of major works, figures, and trends responsible for shaping dance as an evolving contemporary art form. The course will have lecture, viewing, discussion and experiential (studio participation) components. For non-dance majors.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

DANC 101 Modern Dance I credit: 2 Hours.

Introduction to basic dance technique and movement improvisation; the study of motion as an art, group relationships in improvisation, and discussion of choreographic ideas. For non-dance majors. May be repeated to a maximum of 8 hours.

DANC 102 Modern Dance II credit: 2 Hours.

Intermediate dance technique and improvisation. For non-dance majors. May be repeated to a maximum of 8 hours. Prerequisite: DANC 101 or consent of instructor.

DANC 103 Contact Improvisation credit: 2 Hours.

Introduction to basic elements of Contact Improvisation through learning skills such as weight sharing, falling, rolling, responding to touch, momentum, gravity and disorientations. Course work will include dancing, dance making, viewing dance, in-class discussions and short writing assignments. Concert attendance is required. May be repeated to a maximum of 8 hours. Prerequisite: For Non-dance majors.

DANC 104 Making Dances credit: 2 Hours.

Introduction to basic choreographic elements. Course work will include dancing, dance making, viewing dance, in-class discussions and short writing assignments. Concert attendance is required. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 105 Jazz Dance I credit: 2 Hours.

Introduction to basic dance technique and stylistic work in the jazz idiom. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 106 Jazz Dance II credit: 2 Hours.

Progressive development of the concepts and skills in DANC 105. May be repeated to a maximum of 8 hours. Prerequisite: DANC 105 or equivalent; or consent of instructor. For non-dance majors.

DANC 107 Ballet I credit: 2 Hours.

Introduction to ballet for non-dance majors. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 108 Ballet II credit: 2 Hours.

Progressive development of the concepts and skills in DANC 107; for the non-dance major. May be repeated to a maximum of 8 hours. Prerequisite: Two semesters of DANC 107 or equivalent or consent of instructor. For non-dance majors.

DANC 109 Ballet III credit: 2 Hours.

Intermediate level of Ballet technique for non-dance majors. Course is a continuation and development of the skills in DANC 108. May be repeated to a maximum of 8 hours. Prerequisite: Two semesters of DANC 108 or equivalent or consent of instructor. For non-dance majors.

DANC 111 Cultural Dance Forms credit: 2 Hours.

Provides students with the physical study of various world dance forms. Topics reflect specializations of faculty, such as Capoeira, African dance, Balinese dance, and Chinese forms. May be repeated to a maximum of 4 hours in the same term and 8 hours in separate terms.

DANC 112 Hip Hop credit: 2 Hours.

Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. May be repeated in separate terms up to 8 hours.

DANC 120 Tap Dance I credit: 2 Hours.

Introduction to basic tap technique for non-dance majors. Emphasis is on a conceptual understanding of tap style and the development of the specific skills needed for performance. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 121 Tap Dance II credit: 2 Hours.

Intermediate level of tap dance technique for non-dance majors. Course is a continuation of DANC 120, emphasizing a progression in movement vocabulary, style, rhythm, and performance quality. May be repeated to a maximum of 8 hours. Prerequisite: DANC 120 or equivalent, or consent of instructor.

DANC 131 Production Practicum I credit: 1 or 2 Hours.

Practical experience in the production of dance concerts mounted in the Krannert Center for the Performing Arts. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term).

DANC 150 Orientation to Dance credit: 2 Hours.

Survey of the field including dance as a theatre art, careers, injury prevention and nutrition. Also serves to orient incoming students to the faculty, programs, and policies of the Department of Dance, and the production and performing resources in the Krannert Center for the Performing Arts. Prerequisite: Major standing in Dance or consent of instructor.

DANC 160 Beg Contemp Modern Tech Core credit: 1 to 3 Hours.

Elementary technique for majors with emphasis on a conceptual understanding of movement principles and the development of technical skill and performance sensitivity. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 166 Beginning Ballet Tech Core credit: 1 or 2 Hours.

Elementary ballet for dance majors; emphasizes placement, refinement of adagio, pirouette, jumps, and connecting steps. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 167 Beginning Ballet Tech Elect credit: 1 or 2 Hours.

Elementary ballet for dance majors; emphasizes placement, refinement of adagio, pirouette, jumps, and connecting steps. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 9 hours.

DANC 200 Explore Music through Dance credit: 3 Hours.

In-depth study of musical form, history, culture, and styles, taught from a physical learning, i.e., dance, perspective. Musical and dance forms will be studied across cultures and time periods, from both a technical and a cross-cultural perspective. Content will be delivered as a series of video lectures and performances, and online readings. Students will create movement studies that mirror the musical forms being analyzed, produce video documentation of these works, engage in peer review of other students' performance work, and complete exams that cover the cultural and historical aspects of the examples studied. This course satisfies the General Education Criteria for: Humanities - Lit Arts

DANC 209 Lyric Theatre Dance credit: 2 Hours.

Designed for Lyric Theatre Students, this course will introduce a broad variety of movement techniques used in the collaborative singing-acting industry. Through integrative cognitive and physical instruction, students will learn to optimize kinesthetic awareness, expressiveness, breath control, and governance of the singing actors' physical instrument. Classes will include: physical exercises and improvisations, group collaborations, and analysis of movement choices in theatrical performances. Dance styles ranging from Baroque opera and ballroom dance forms to contemporary musical theatre will be covered within this course. May be repeated once in separate semesters. Prerequisite: For Dance or Lyric Theater majors only or by consent of the instructor.

DANC 210 Int Jazz Technique credit: 1 Hour.

Introduction to basic dance techniques and stylistic work in the jazz idiom for experienced dancers. Emphasis on a conceptual understanding of jazz style (as related to America's own cultural diversity) and the development of the specific skills necessary for performance and teaching. May be repeated to a maximum of 2 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 211 Int Hip Hop Technique credit: 1 Hour.

Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. May be repeated in separate terms for a maximum of 8 hours. Prerequisite: For majors only.

DANC 212 Musical Theater Dance credit: 1 Hour.

Introduction to basic dance techniques and stylistic work in the Musical Theater idiom for experienced dancers. Emphasis is on a physical and conceptual understanding of a variety of Musical Theater styles as related to America's own cultural diversity and the development of the specific skills necessary for performance and teaching. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Audition required. Primarily for Dance and Music Majors with a Concentration in Lyric Theater. Students with sufficient skills from other majors may be accepted with approval from instructor.

DANC 215 Int Tap Dance Technique credit: 1 Hour.

Introduction to basic tap technique for experienced dancers. Emphasis on a conceptual understanding of tap style and the development of the specific skills necessary for performance and teaching. May be repeated to a maximum of 2 hours. Prerequisite: Major standing in Dance, or consent of instructor.

DANC 220 Perf Pract Student Works I credit: .5 to 2 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision. Approved for S/U grading only. May be repeated to a maximum of 16 hours, in separate terms. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 221 Performance in Grad Thesis I credit: .5 to 3 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision performed in MFA Thesis concert. May be repeated to a maximum of 16 hours, in separate terms. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 222 Perf Pract November I credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in November Dance. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 223 Perf Pract February I credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in February Dance. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 231 Production Practicum II credit: 1 or 2 Hours.

Practical experience in the production of dance concerts mounted in the Krannert Center for the Performing Arts. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term).

DANC 232 Repertory Company credit: 2 Hours.

Provides dance majors with diverse performing experiences in the community. Venues will include area schools, nursing homes, and special populations. Students will participate in the creation of lecture-demonstrations which may include improvisation and choreography. Participation in all performances is a requirement. May be repeated to a maximum of 6 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 240 Dance History credit: 3 Hours.

Introduction to major artistic movements in dance history from ancient Greece through the 20th century. Goal of the course is to gain a broad understanding of dance in relation to socio-political ideologies of gender, race, sexuality, and national identities. Prerequisite: Major standing in Dance or consent of instructor.

DANC 245 Introduction to Somatics credit: 1 Hour.

Introduction to the basic concepts and principles of somatic practices, or body-mind disciplines, as related to dance. Through reading, writing, and experiential work, students will learn basic tenets of a number of somatic practices such as Ideokinesis and Imagery, Body-Mind Centering, The Alexander Technique, Bartenieff Fundamentals, and the Feldenkrais Method. Exploration of the ways in which somatics has helped to shape current dance training practices by looking at common themes and distinguishing features of these modalities.

DANC 259 Contact Improv for Act/Mus/Dan credit: 1 Hour.

In this interdisciplinary course, performing arts students learn physical skills necessary for the practice of the contact improvisation (CI) partnering dance form as well as improvisational and performance skills. Encourages contemplation of the broader philosophical implications inherent in the form: community building and accepting difference. Content includes visits to lectures and events outside the Dance Department. May be repeated in separate terms to a maximum of 4 hours.

DANC 260 Int Contemp Modern Tech Core credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 160 and DANC 161, with emphasis on the qualitative and definitive performance of a variety of technical styles. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 160; or consent of instructor.

DANC 261 Int Contemp Modern Tech Elect credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 160 and DANC 161, with emphasis on the qualitative and definitive performance of a variety of technical styles. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 160; or consent of instructor.

DANC 262 Choreographic Process I credit: 2 Hours.

Theory and practice in principles of dance composition; emphasis on solo creative work using various approaches to composition. Prerequisite: DANC 259 or consent of instructor. Limited to dance majors.

DANC 266 Intermediate Ballet Tech Core credit: 1 or 2 Hours.

Intermediate ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 166 and DANC 167, with emphasis on technical development and extended movement combinations. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 166 or DANC 167; or consent of instructor.

DANC 267 Intermediate Ballet Tech Elect credit: 1 or 2 Hours.

Intermediate ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 166 and DANC 167, with emphasis on technical development and extended movement combinations. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 166 or DANC 167; or consent of instructor.

DANC 268 Music Theory for Dancers credit: 3 Hours.

Introduction to basic music theory with a concentration on rhythm. The first half of the term will concentrate on 1) learning, understanding, and being conversant in basic music parameters; 2) analytical listening; 3) notation; 4) transcripts; 5) reading notation/following a score; 6) performance of simple rhythm patterns. The second half will deal with form and formal analysis as it relates to choreography, as well as more advanced parameters of music theory. Prerequisite: Major standing in Dance or consent of instructor.

DANC 301 Yoga Practicum for Dancers credit: 1 Hour.

Introduces basic yoga asanas (postures) and brief overview of the 8-limb system of yoga. Focus will be on understanding correct alignment and developing inner awareness. Weekly home practice, journal, and discussions about yoga philosophy are required. May be repeated in separate terms to a maximum of 8 hours.

DANC 310 World Dance Forms credit: 1 Hour.

Provides students with the physical study of various world dance forms. Topics reflect specializations of faculty, such as Capoeira, African dance, Balinese dance, and Chinese forms. May be repeated in the same term to a maximum of 2 hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

DANC 330 Dance Documentation credit: 1 Hour.

This is a hands-on course for students interested in exploring the relationship between dance and camera and the fundamentals of dance documentation. Using critical and experiential approach, we will explore the technical and artistic capabilities of mini-DV cameras and film-editing software to create dance performance documentation. Students will learn to execute clear and effective camerawork in relationship to dance performance, and to utilize editing software to most clearly display the artistic intent of the choreographers and directors. May be repeated up to 8 hours in separate terms. Prerequisite: For majors only, or by instructor approval.

DANC 331 Production Practicum III credit: 1 or 2 Hours.

Practical experience in all aspects of the production of dance concerts mounted in the Krannert Center for the Performing Arts and within the Department of Dance. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term). Prerequisite: DANC 131, DANC 231 or equivalent, and consent of instructor.

DANC 340 Dancing Black Popular Culture credit: 3 Hours.

Introduces students to black dance aesthetics and its interconnectedness with American popular culture. By exploring its cultural, political and historical roots, coupled with theoretical concepts of "the popular" and ties to the vernacular, the course will be organized around significant markers that have shaped black dance's development. Same as AFRO 340.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

DANC 345 Dance Anatomy and Kinesiology credit: 3 Hours.

The study of human anatomy and kinesiology, specifically as applied to dance. The human musculoskeletal system, movement analysis, and conditioning principles are covered both theoretically and practically.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

DANC 350 Creative Dance for Children credit: 3 Hours.

Through lecture, discussion and practice, students develop skills to teach elements and concepts of dance to children ages 4-10. Course includes strategies for behavior and time management, spatial transitions, and how to organize and communicate creative concepts clearly and effectively. Students will observe master teaching and apply teaching techniques, acquire lesson plans that form the basis for a creative dance curriculum and the skills to implement them, and participate in all phases of a creative dance curriculum, including informal performance. Same as ARTE 350 and HDF5 361. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

DANC 360 Int/Adv Contemp Mod Tech Core credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 260 and DANC 261, with emphasis on virtuosity and versatility. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor; departmental placement.

DANC 361 Int/Adv Contemp Mod Tech Elect credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 260 and DANC 261, with emphasis on virtuosity and versatility. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor; departmental placement.

DANC 362 Choreographic Process II credit: 2 Hours.

Choreography for the experienced student; includes performance of at least one original work. May be repeated in separate terms to a maximum of 10 hours. Prerequisite: DANC 262 or consent of instructor.

DANC 363 Advanced Improvisation credit: 1 Hour.

Exploration of the physical skills and philosophical concepts at the base of improvisation practice. Students will develop individual and collective approaches to improvisatory structures, systems and performance contexts as well as look at the historical ways that improvisation has been used in contemporary performance. The course will culminate in performance in various public and private contexts. May be repeated in separate terms to a maximum of 4 credit hours.

DANC 366 Int/Adv Ballet Tech Core credit: 1 or 2 Hours.

Intermediate/Advanced ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 266 and DANC 267. For dancers of advanced technical level with the ability to execute the ballet vocabulary. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in dance or consent of instructor; or Departmental placement.

DANC 367 Int/Adv Ballet Tech Elect credit: 1 or 2 Hours.

Intermediate/Advanced ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 266 and DANC 267. For dancers of advanced technical level with the ability to execute the ballet vocabulary. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in dance or consent of instructor; or Departmental placement.

DANC 375 Production in Dance credit: 1 Hour.

Examines the theoretical and practical aspects of dance production. Includes lighting, costumes, scenery, props, audio, make-up, and management. Commitment outside of scheduled class includes participation in the production of the annual Senior Concert.

DANC 400 Viewing Dance credit: 1 Hour.

Overview of contemporary dance from the United States, Canada, and Europe focusing on the current works of significant emerging and established choreographers working in the field today. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated to a maximum of 4 hours.

DANC 401 Alexander Tech for Dancers credit: 1 Hour.

Introduces the Alexander Technique: a practical method for changing habitual movement patterns which interfere with coordination, ease, and efficiency of movement. The course focuses on learning the principles through hands-on work, readings, discussions, and application to dance. 1-3 individual lessons outside of class required per term. 1 undergraduate hour. 1 graduate hour. Prerequisite: Major standing in Dance or consent of instructor.

DANC 402 Alexander Technique Practicum credit: 1 or 3 Hours.

Facilitates conscious and reasoned control of the human organism as a psychophysical whole. Helps students recognize habits that constitute their daily activities and discard, through conscious control, those that impede open-minded enquiry and self-reliance. Through one-on-one work with certified teachers and trainees, students will learn to change habitual patterns of coordination. 1 undergraduate hour. 3 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours or 6 graduate hours.

DANC 410 Advanced Jazz Technique credit: 1 Hour.

Continuation of DANC 110, emphasizing the conceptual understanding of the jazz style and development of specific skills necessary for this idiom. No undergraduate credit. 1 graduate hour. May be repeated to a maximum of 4 hours. Prerequisite: Major standing in Dance or DANC 110 or equivalent and consent of instructor.

DANC 411 Adv Hip Hop Technique credit: 1 Hour.

Advanced Level Hip Hop Class. Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. No undergraduate credit. 1 graduate credit. May be repeated in separate terms up to 8 hours. Prerequisite: For majors only.

DANC 420 Perf Pract Student Works II credit: .5 to 2 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision. 0.5 to 2 undergraduate hours. 0.5 to 2 graduate hours. Approved for S/U grading only. May be repeated to a maximum of 16 hours in separate terms.

DANC 421 Performance in Grad Thesis II credit: .5 to 3 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision performed in MFA Thesis concert. 0.5 to 3 undergraduate hours. 0.5 to 3 graduate hours. May be repeated to a maximum of 16 hours.

DANC 422 Perf Pract November II credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in November Dance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

DANC 423 Perf Pract February II credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in February Dance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

DANC 424 Collaborative Performance credit: 1 or 2 Hours.

COLAB is an interdisciplinary class fusing improvisation, composition and collaborative projects for students in the departments of Music, Dance and Engineering. The class will be run along the lines of a professional performance company. Work in class will include sharing and adapting the principles and elements from each of these disciplines with a focus on producing material that will be presented in numerous public performances throughout the semester. 1 undergraduate hour. 2 graduate hours. May be repeated to a maximum of 3 undergraduate hours or 6 graduate hours in separate terms. Prerequisite: DANC 162 or DANC 259 or consent of instructor.

DANC 425 Dance Internship credit: 1 to 4 Hours.

Supervised field experience in community and/or professional organizations in a variety of danced-related areas. Provides students with work experience and exposure to professional situations. Written and/or video documentation and department presentation of internship activities required. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for S/U grading only. May be repeated to a maximum of 6 hours. Prerequisite: Major standing in Dance and consent of instructor.

DANC 431 Production Practicum IV credit: 1 or 2 Hours.

Practical experience in all aspects of the production of dance concerts mounted in the Krannert Center for the Performing Arts and within the Department of Dance. 1 or 2 undergraduate hours. 1 or 2 graduate hours. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term). Prerequisite: DANC 131 or DANC 231, or equivalent and consent of instructor.

DANC 441 Dance History Seminar credit: 3 Hours.

Survey of critical approaches in dance studies including feminist theory, poststructural, and postcolonial theory, historiography, and ethnographic research methods. Course topics will cover a variety of theatrical, popular, and social dance practices. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 9 graduate hours. Prerequisite: DANC 240 or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

DANC 445 Dance Kinesiology and Somatics credit: 4 Hours.

Introduction to human anatomy and kinesiology, specifically as applied to dance; introduction to the field of Somatics; approaches to improving the use of the body; exploration of the connections between the body, the mind, and movement. 4 undergraduate hours. 4 graduate hours. Prerequisite: Major standing in dance or consent of instructor.

DANC 450 Teaching Workshop credit: 3 Hours.

Methods and approaches to the teaching of dance technique in the modern, ballet, and jazz idioms. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing in Dance or consent of the instructor.

DANC 451 Ind Study and Special Topics credit: 1 to 4 Hours.

Special projects in research or creative investigation taught on an individual or class basis. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing in Dance and consent of instructor.

DANC 455 Supervised Teaching credit: 1 to 4 Hours.

Practical teaching experience under the supervision of a faculty member; weekly conference devoted to evaluation and planning. Teaching areas include major and non-major university courses and classes for community adults and children. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours with approval.

DANC 459 Contact Improv Act/Mus/Dan II credit: 1 or 2 Hours.

An interdisciplinary course in which performing arts students learn physical skills necessary for the practice of the contact improvisation (CI) partnering dance form as well as improvisational and performance skills. Encourages contemplation of the broader philosophical implications inherent in the form: community building and accepting difference. Content includes visits to lectures and events outside the dance department. 1 or 2 undergraduate hours. 1 or 2 graduate hours. May be repeated in separate terms to a maximum of 4 undergraduate hours or 6 graduate hours if topics vary.

DANC 460 Adv Contemp Modern Tech Core credit: 1 to 3 Hours.

Modern technique for advanced graduate students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor; or departmental placement.

DANC 461 Adv Contemp Modern Tech Elect credit: 1 to 3 Hours.

Modern technique for advanced graduate students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor; or departmental placement.

DANC 462 Composition Workshop credit: 2 Hours.

Structured creative utilization of formal choreographic elements in the creation, rehearsal, staging, and performance of original dance works. 2 undergraduate hours. 2 graduate hours. Approved for S/U grading only. Prerequisite: Graduate standing in dance or consent of instructor.

DANC 464 Composer-Chor Workshop credit: 2 Hours.

For experienced composers and choreographers; explores the many relationships between musical composition and choreography. Same as MUS 471. 2 undergraduate hours. 2 graduate hours. Prerequisite: For dance majors, DANC 263 or consent of instructor; for music majors, MUS 106 or equivalent, other compositional experience, and consent of instructor.

DANC 465 Screendance credit: 3 Hours.

Provides a comprehensive approach, from camera use to editing techniques, leading to a practical ability to develop and produce video projects on a basic level. Course focuses on developing choreographic projects designed specifically for the video/film format. 3 undergraduate hours. 3 graduate hours. Prerequisite: DANC 330. Non-dance majors admitted by audition on a space-available basis.

DANC 466 Advanced Ballet Tech Core credit: 1 to 3 Hours.

Ballet for advanced students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor or departmental placement.

DANC 467 Advanced Ballet Tech Elect credit: 1 to 3 Hours.

Ballet for advanced students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor or departmental placement.

DANC 495 Senior Career Seminar credit: 1 Hour.

Addresses survival strategies and the transition from academe to the profession. Course content includes research and discussion of career possibilities in performance, choreography, teaching, community dance work, therapy, and the dance-related fields of health/fitness/recreation. Students will research individualized projects in an area of interest. 1 undergraduate hour. No graduate credit. Prerequisite: Senior standing in Dance.

DANC 497 BA Capstone Project credit: 3 Hours.

The BA Capstone Project is a synthesis of dance studies with the student's selected focused area of study (focused electives, dual major, or minor), which results in a culminating presentation, performance, and/or written project. 3 undergraduate hours. No graduate credit. Approved for S/U grading only. Prerequisite: BA in Dance majors only, senior standing required.

DANC 498 Senior Thesis Production credit: 1 or 2 Hours.

The planning, design, and production of the Senior Capstone Project (DANC 499) for public performance. Students will work as a team to plan the Senior Concerts including designing and producing promotional materials and managing technical rehearsals and performances. 1 or 2 undergraduate hours. No graduate credit. May be repeated in separate terms. Prerequisites: DANC 375. Concurrent enrollment in DANC 499 is required.

DANC 499 Senior Thesis Project credit: 1 to 2 Hours.

The creation of a culminating choreographic/performance project. 1 to 2 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: DANC 362 and senior standing in Dance. Concurrent enrollment in DANC 498 is required.

Bachelor of Arts in Dance

Students in the BA in Dance must complete the Common Requirements (p. 271) and the courses listed below; a minimum of 120 hours is required for this degree.

Code	Title	Hours
Technique/Physical Practice		18
DANC 160	Beg Contemp Modern Tech Core (1-3 hours per enrollment, repeatable) ¹	4
DANC 260	Int Contemp Modern Tech Core (1-3 hours per enrollment, repeatable) ¹	4
Choose from the following:		10
DANC 160 Beg Contemp Modern Tech Core ¹		
DANC 166	Beginning Ballet Tech Core	

DANC 167	Beginning Ballet Tech Elect	
DANC 260	Int Contemp Modern Tech Core ¹	
DANC 210	Int Jazz Technique	
DANC 211	Int Hip Hop Technique	
DANC 215	Int Tap Dance Technique	
DANC 261	Int Contemp Modern Tech Elect	
DANC 266	Intermediate Ballet Tech Core	
DANC 267	Intermediate Ballet Tech Elect	
DANC 301	Yoga Practicum for Dancers	
DANC 310	World Dance Forms	
DANC 360	Int/Adv Contemp Mod Tech Core	
DANC 361	Int/Adv Contemp Mod Tech Elect	
DANC 366	Int/Adv Ballet Tech Core	
DANC 367	Int/Adv Ballet Tech Elect	
DANC 401	Alexander Tech for Dancers	
DANC 402	Alexander Technique Practicum	
DANC 410	Advanced Jazz Technique	
DANC 411	Adv Hip Hop Technique	
DANC 460	Adv Contemp Modern Tech Core	
DANC 461	Adv Contemp Modern Tech Elect (Modern-variable credit)	
DANC 466	Advanced Ballet Tech Core	
DANC 467	Advanced Ballet Tech Elect (variable credit)	
Creative Process/Performance and Production		11
DANC 262	Choreographic Process I	2
DANC 362	Choreographic Process II	2
Choose 2 from the following Improvisation courses:		
DANC 259	Contact Improv for Act/Mus/Dan	
DANC 363	Advanced Improvisation	
DANC 459	Contact Improv Act/Mus/Dan II	
Choose 2 from the following Performance courses:		2
DANC 232	Repertory Company	
DANC 220	Perf Pract Student Works I	
DANC 221	Performance in Grad Thesis I	
DANC 222	Perf Pract November I	
DANC 223	Perf Pract February I	
DANC 420	Perf Pract Student Works II	
DANC 421	Performance in Grad Thesis II	
DANC 422	Perf Pract November II	
DANC 423	Perf Pract February II (Variable)	
DANC 424	Collaborative Performance	
Choose 3 from the following Production courses:		3
DANC 131	Production Practicum I	
DANC 231	Production Practicum II	
DANC 330	Dance Documentation (variable credits)	
DANC 331	Production Practicum III	
DANC 431	Production Practicum IV	
Dance Academics		18
Choose 6 hours from the following History courses:		6
DANC 100	Intro to Contemporary Dance	
DANC 240	Dance History	

DANC 441	Dance History Seminar	
Choose 12 hours from the following Theory/Pedagogy/History courses:		12
DANC 441 Dance History Seminar, if not selected above		
DANC 340	Dancing Black Popular Culture	
DANC 400	Viewing Dance	
DANC 268	Music Theory for Dancers	
DANC 245	Introduction to Somatics	
DANC 345	Dance Anatomy and Kinesiology	
DANC 450	Teaching Workshop	
DANC 350	Creative Dance for Children	
DANC 375	Production in Dance	
DANC 199	Undergraduate Open Seminar	
DANC 451	Ind Study and Special Topics	
Senior Capstone Project ²		3
Hours in non-Dance classes, chosen in consultation with an advisor		15
Open electives as needed to total 120 hours minimum		120

¹ DANC 160 and 260 must be taken for at least 4 hours each but are repeatable beyond 4 hours.

² DANC 497, Senior Capstone Project, is a new course expected to be available by the start of the Fall, 2015 semester.

Bachelor of Fine Arts in Dance

Students in the BFA in Dance must complete the Common Requirements (p. 271) and the courses listed below; a minimum of 130 hours is required for this degree.

Code	Title	Hours
Technique/Physical Practice		32
DANC 160	Beg Contemp Modern Tech Core	1 to 3
DANC 166	Beginning Ballet Tech Core	1 or 2
DANC 167	Beginning Ballet Tech Elect	1 or 2
DANC 210	Int Jazz Technique	1
DANC 211	Int Hip Hop Technique	1
DANC 215	Int Tap Dance Technique	1
DANC 260	Int Contemp Modern Tech Core	1 to 3
DANC 261	Int Contemp Modern Tech Elect	1 to 3
DANC 266	Intermediate Ballet Tech Core	1 or 2
DANC 267	Intermediate Ballet Tech Elect	1 or 2
DANC 360	Int/Adv Contemp Mod Tech Core	1 to 3
DANC 361	Int/Adv Contemp Mod Tech Elect	1 to 3
DANC 366	Int/Adv Ballet Tech Core	1 or 2
DANC 367	Int/Adv Ballet Tech Elect	1 or 2
DANC 411	Adv Hip Hop Technique	1
DANC 459	Contact Improv Act/Mus/Dan II	1 or 2
DANC 460	Adv Contemp Modern Tech Core	1 to 3
DANC 461	Adv Contemp Modern Tech Elect	1 to 3
DANC 466	Advanced Ballet Tech Core	1 to 3
DANC 467	Advanced Ballet Tech Elect	1 to 3

Four credit hours per semester, to include core technique classes each semester in residence, consisting of three modern and two ballet classes per week (3 hours of credit), plus elective technique courses for a minimum of one additional credit hour per semester.

A minimum of two courses (two credit hours) in global dance forms (jazz, tap, world dance forms, etc.) is also required.

Creative Process/Performance and Production 17-20

Choose 1 of the following Improvisation courses:

DANC 259	Contact Improv for Act/Mus/Dan	1
Creative Process:		
DANC 262	Choreographic Process I	2

Choose a minimum of 3 courses from the following Advanced Creative Process courses. Courses listed below are repeatable:

DANC 362	Choreographic Process II	
DANC 363	Advanced Improvisation	
DANC 464	Composer-Chor Workshop	

Choose 6 hours from the following Performance courses:¹

DANC 220	Perf Pract Student Works I	
DANC 221	Performance in Grad Thesis I	
DANC 222	Perf Pract November I	
DANC 223	Perf Pract February I	
DANC 232	Repertory Company	
DANC 420	Perf Pract Student Works II	
DANC 421	Performance in Grad Thesis II	
DANC 422	Perf Pract November II	
DANC 423	Perf Pract February II	
DANC 424	Collaborative Performance	

Production

DANC 375	Production in Dance	1
----------	---------------------	---

Choose 4 hours from the following Production courses:

DANC 131	Production Practicum I	
DANC 231	Production Practicum II	
DANC 330	Dance Documentation	
DANC 331	Production Practicum III	
DANC 431	Production Practicum IV	

Dance Academics 20

Dance history/theory

DANC 240	Dance History	3
----------	---------------	---

Select one of the following:

ANTH 363	Anth of Dance/Movement	
DANC 340	Dancing Black Popular Culture	
DANC 441	Dance History Seminar	

Six hours of Music for Dance courses:

DANC 268	Music Theory for Dancers	3
----------	--------------------------	---

Select one of the following (both meet a general education requirement):

MUS 130	Introd to the Art of Music	
MUS 133	Introduction to World Music	

Four hours of Dance Sciences courses:

DANC 245	Introduction to Somatics	1
DANC 345	Dance Anatomy and Kinesiology	3

Choose 3 hours from the following Dance Education courses:

DANC 350	Creative Dance for Children	
DANC 450	Teaching Workshop	
Current issues and topics		
DANC 495	Senior Career Seminar	1
Senior Capstone Project		
DANC 498	Senior Thesis Production	1 or 2
DANC 499	Senior Thesis Project	1 to 2
Professional Electives ²		6-9
Focused Electives, chosen in consultation with an advisor. Additional courses in dance such as technique, choreography, performance, "non-categorized" courses in dance, coursework in Music, Theater, or Art.		
Electives as needed to reach a minimum of 130 hours		130

¹ A maximum of 16 hours may be accumulated toward degree requirements in DANC 220, DANC 221, DANC 222, DANC 223, DANC 420, DANC 421, DANC 422, DANC 423.

² A minimum of 6 - 9 hours must be taken in the area of professional electives, to bring total of Dance courses to 84 hours. It is strongly recommended that dance majors consider taking theatre/arts courses outside of the Department of Dance offerings.

Landscape Architecture, Department of

William C. Sullivan, Head of Department

101 Temple Hoyne Buell Hall, 611 East Lorado Taft Drive, Champaign
PH: (217) 333-0176

<http://landarch.illinois.edu>

Email: ladept@illinois.edu (LADept@illinois.edu)

101 Temple Hoyne Buell Hall
611 East Lorado Taft Drive
Champaign, IL 61820
(217) 333-0176
Fax: (217) 244-4568

The Department of Landscape Architecture offers a four-plus-year undergraduate curriculum, leading to the professional degree of Bachelor of Landscape Architecture as well as a minor in Landscape Studies. The degree is accredited by the Landscape Architecture Accreditation Board (LAAB).

The curriculum is a balanced program of technical, design, and general education courses that prepare the student with the necessary skills for entry-level professional practice in private offices or public agencies. Program requirements include design studio courses and classes in construction, plants, history, and design communication. Following the third year, students complete a professional internship to further advance their knowledge of built landscapes and the practice of landscape architecture. The curriculum also includes a minimum of 12 hours of credit in supporting electives that are taken in related art and science courses. A total of 124 semester hours of credit is required for graduation.

Bachelor of Landscape Architecture

A student must have and maintain a minimum 2.00 cumulative grade point average.

University of Illinois transfer applicants must have completed 30 or more semester hours of undergraduate course work with an earned GPA of at least 2.0 (A = 4.0). Transfer students from other institutions must have earned a GPA of at least 2.5 (A = 4.0). Prerequisite credits in composition and pre-calculus are required. Courses in physical geography and plant or environmental biology are highly recommended.

The department's administrative office, upper-level studios, faculty offices, and classrooms are located in Temple Hoyne Buell Hall. The sophomore studio is located in Mumford Hall.

Curriculum in Landscape Architecture For the Degree of Bachelor of Landscape Architecture

First Year		Hours
First Semester		
FAA 101	Arts at Illinois	1
LA 101	Introduction to Landscape Arch	2
GEOG 103, Earth's Physical Systems		3-4
GEOL 100, or GEOL 103 ¹		
RHET 105	Writing and Research	4
MATH 115	Preparation for Calculus	3
General Education Elective or Foreign Language		3
Semester Hours		17
Second Semester		
Social/Cultural Factors in Design Elective ³		3
IB 103 or 105 ¹	Introduction to Plant Biology	3
General Education Electives ²		9
Semester Hours		15
Second Year		
First Semester		
LA 233	Foundation Design Studio	5
LA 250	Environmental Site Analysis	3
LA 280	Design Communications I	3
UP 101	Introduction to City Planning	3
General Education Elective		3
Semester Hours		17
Second Semester		
LA 234	Site Design Studio	5
LA 241	Landform Design Construction	3
LA 281	Design Communications II	3
LA 314	History of World Landscapes	4
Semester Hours		15
Third Year		
First Semester		
LA 335	Community Open Space Studio	5
LA 342	Site Engineering	4
HORT 301	Woody Landscape Plants I	4

LA 346	Professional Practice	2
Semester Hours		15
Second Semester		
LA 336	Design Workshop Studio I	5
LA 343	Landscape Construction	4
General Education Elective		3
Supporting Elective ⁴		3
Semester Hours		15
Summer Semester		
LA 345	Professional Internship	5
Semester Hours		5
Fourth Year		
First Semester		
LA 437	Regional Design Studio	5
LA 452	Natural Precedent in Planting	3
Supporting elective ⁴		3
Quantitative Reasoning II		3
Semester Hours		14
Second Semester		
LA 438	Design Workshop Studio II	5
Supporting electives ⁴		6
Elective		2
Semester Hours		13
Total Hours:		126

¹ *IB 103 or IB 105 and GEOG 103/GEOL 100, GEOL 103 fulfill the natural sciences and technology general education requirements for this curriculum.*

² *General Education: See current University of Illinois General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>). Foreign Language Requirement 0 - 12 hours: Students entering the University of Illinois as freshmen in fall 2000 or later need to complete the foreign language requirement in order to graduate. To satisfy this requirement, students must complete a third semester level college foreign language course. This requirement may also be satisfied by three years of the same foreign language in high school. Students entering the University of Illinois without three years of the same foreign language in high school must take a foreign language placement test to determine the courses in which to enroll.*

³ *LA 221 Social/Cultural factors elective course options are LA 212, LA 218, LA 220, LA 221, LA 222, LA 242, LA 270, and LA 470.*

⁴ *A minimum of 12 credit hours of professionally related courses selected from the department's recommended list of supporting electives is required, with a minimum of three credit hours in each of the categories of history, communications, techniques, and environment.*

Landscape Studies Minor

The Minor in Landscape Studies enables students to gain considerable knowledge of the ecological, social, cultural and historical factors that have shaped landscapes of the western and non-western world. Students interested in integrative studies of the natural, cultural and built environment, and those concerned with landscape as context for art and design, will develop a comprehensive theoretical framework for work in their major field of study.

Course Requirements

A minimum of 17 credit hours from the following three categories is required for completion of the minor. A minimum of 6 hours at the 300-level is required.

Code	Title	Hours
Studies of the Professions Engaged in Landscape Inquiry		
LA 101	Introduction to Landscape Arch	2
Studies of the Professions Engaged in Landscape Inquiry		
Select a minimum of 6 hours from the following:		6
LA 212	Water and Society	
LA 250	Environmental Site Analysis	
LA 270	Behavioral Factors in Design	
LA 370	Environmental Sustainability	
Study of Historical and Cultural Landscapes		
Select a minimum of 9 hours from the following:		9
LA 218	S Asian Cultural Landscapes	
LA 220	Exploring African Cities	
LA 221	History of the Prison	
LA 222	Islamic Gardens & Architecture	
LA 242	Nature and American Culture	
LA 314	History of World Landscapes	
LA 315	History of Modern Landscape Arch	
LA 390	Independent Study	
LA 427	American Vernacular Cultural Land	
LA 470	Social/Cultural Design Issues	

Students are permitted to substitute one Landscape Architecture course from category 3 for one of the courses in category 2 upon the approval of the Undergraduate Studies Coordinator in the Department of Landscape Architecture.

Admission

University of Illinois students with a minimum GPA of 2.0 and completion of the campus Composition I and Quantitative Reasoning I requirements are eligible for admission. Applicants from other institutions must have a minimum GPA of 2.5. Students must declare their intentions and be admitted to the program by the Undergraduate Studies Coordinator in the Department of Landscape Architecture.

Prerequisites

Students must comply with any prerequisite requirements of courses to be taken under this program.

Advising

Advising of students in the minor will be conducted by the Undergraduate Studies Coordinator in the Department of Landscape Architecture.

Certification of Successful Completion

Completion of the Minor in Landscape Studies will be certified by the student's home college office.

LA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LA>)

Courses

LA 101 Introduction to Landscape Arch credit: 2 Hours.

Introduction to primary concepts and methods of landscape inquiry as a means to understand experiential qualities of landscape and to guide landscape design and planning projects.

LA 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

LA 212 Water and Society credit: 3 Hours.

A comparative investigation of built landscapes and hydraulic resources through history. Examines problems of water scarcity, abundance and changes in ecology, human social organization, economy, law, and cultural values related to natural water conditions and human management. Comparative case studies include the ancient Near East and modern Middle East, ancient and modern Egypt, the Roman empire, Peru, the Netherlands, South Asia, Illinois River basin, and the American West.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

LA 218 S Asian Cultural Landscapes credit: 3 Hours.

Survey of Hindu, Buddhist, and Islamic landscapes of South Asia. Examines urban structures, building typologies, and open space types through history as influenced by concepts of the natural, sacred, political, and social. Same as ASST 218.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

LA 220 Exploring African Cities credit: 3 Hours.

Examines the buildings, landscapes, and societies of pre-colonial, sub-Saharan African cities from the third century BCE until the nineteenth century CE. Same as ANTH 223.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

LA 221 History of the Prison credit: 3 Hours.

History of prison architecture, landscapes, and carceral regimes from ancient times until the present. Topics include: philosophy of punishment, the invention of the modern prison, the advent of mass incarceration, and 21st century geographies of incarceration. The course focuses on the western experience, but also includes international examples, e.g. from China, East Africa, and Japan. Interdisciplinary approach includes readings in architectural history, urban planning, sociology, philosophy, psychology, history, and landscape studies. Same as AFRO 221 and HIST 219.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

LA 222 Islamic Gardens & Architecture credit: 3 Hours.

Study of the formation, history, and meaning of the landscape and architecture of the Islamic world. Same as ARCH 222.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

LA 233 Foundation Design Studio credit: 5 Hours.

Introduction to the fundamentals of design, including studies in two- and three-dimensional abstract and applied problems, basic elements and procedures of design, and principles of landscape composition. Additional fees may apply. See Class Schedule. Open to Landscape Architecture majors only. Prerequisite: Credit or concurrent registration in LA 280 or consent of instructor.

LA 234 Site Design Studio credit: 5 Hours.

Site as the fundamental unit of landscape design. Involves ecological, cultural and experiential understanding of sites, and the creation of place-specific designs. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: LA 233 or consent of instructor.

LA 241 Landform Design & Construction credit: 3 Hours.

Introduction to landform design, drainage, stormwater management, surveying, and materials. Prerequisite: MATH 014 or 016.

LA 242 Nature and American Culture credit: 3 Hours.

Same as HIST 282, RST 242, and NRES 242. See RST 242.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

LA 250 Environmental Site Analysis credit: 3 Hours.

Principles and practices of identifying, analyzing, and recording landscape resources. Field trip required. Prerequisite: GEOL 100, 101, 103 or GEOG 103 or consent of instructor.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

LA 270 Behavioral Factors in Design credit: 3 Hours.

Introduces the impacts of cultural and social factors, such as age, gender, physical ability, economic status, ethnicity and how people interact with the environment. Reading assignments, short exercises, field trips, and evaluation of space will enable students to evaluate and potentially design more socially and ecologically responsive environments.

LA 280 Design Communications I credit: 3 Hours.

Fundamentals of visual communication in the design process and presentation for landscape architecture. Includes freehand and constructed drawing, color, media, and models. Open to Landscape Architecture majors only. Prerequisite: Concurrent registration in LA 233.

LA 281 Design Communications II credit: 3 Hours.

Advanced principles and techniques of visual communication in landscape architectural rendering, emphasizing computer-based techniques. Open to Landscape Architecture majors only. Prerequisite: Concurrent registration in LA 234; completion of LA 280 and completion of campus Composition I general education requirement or consent of instructor.

LA 301 Senior Honors credit: 1 to 6 Hours.

Independent guided study and research in a selected area of landscape architecture; for candidates for honors in landscape architecture. May be repeated to a maximum of 9 hours. Prerequisite: Senior standing in landscape architecture, a university grade-point average of 3.0, and consent of head of department.

LA 314 History of World Landscapes credit: 4 Hours.

Analysis of the development of landscape architecture as a result of environmental and cultural influences. Same as ARCH 314.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

LA 315 History of Modern Landscape Arch credit: 3 Hours.

A selected overview of developments in landscape architecture in the western world from 1900 to the present. Prerequisite: LA 314.

LA 335 Community & Open Space Studio credit: 5 Hours.

Development of design solutions at site and master plan scale relative to community, urban and open space problems; emphasizes development of analysis and design techniques to integrate physical context of place with social context. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: LA 234 or consent of instructor.

LA 336 Design Workshop Studio I credit: 5 Hours.

Project design at various scales utilizing problems of a wide range of complexity and subject matter; rural, community, and urban problems, housing, recreation, and natural areas; emphasizes problem analysis and generation of innovative design alternatives. Students select from several sections depending on specific interests. Additional fees may apply. See Class Schedule. Prerequisite: LA 335 or consent of instructor.

LA 342 Site Engineering credit: 4 Hours.

Principles of site engineering including landform design, stormwater management, site surveying, circulation systems and site utility planning. Prerequisite: LA 241 and college trigonometry; or consent of instructor.

LA 343 Landscape Construction credit: 4 Hours.

Construction methods, materials, and procedures related to the design of landscape structures; development of design details and cost estimating. Prerequisite: LA 342 or consent of instructor.

LA 345 Professional Internship credit: 0 to 10 Hours.

Professionally supervised field experience in design offices and public agencies intended to introduce students to practice. Students work in the department-approved firm or agency of their choice. Seventy five hours of employment is required for each one hour of course credit. Approved for S/U grading only. May be repeated to a maximum of 10 hours. Prerequisite: Upper division undergraduate standing or consent of instructor.

LA 346 Professional Practice credit: 2 Hours.

Study of the profession of landscape architecture including an introduction to modes of practice, career evolution, organizational theory, office procedures, project management and professional ethics. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing or consent of instructor.

LA 370 Environmental Sustainability credit: 3 Hours.

Explores the challenges of creating a sustainable world. Examines: a) trends and conditions of the earth's major ecosystems, b) ways in which our economic system has created levels of consumption that threaten sustainability, c) the extent to which equity and justice contribute to sustainable systems, and d) evidence demonstrating how human creativity and innovation can create a more sustainable world. Same as ENSU 300 and NRES 370.

LA 390 Independent Study credit: 1 to 6 Hours.

Supervised independent study, research, or special project in a selected area related to landscape architecture. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; consent of instructor and head of department prior to advance enrollment and registration.

LA 399 Off-Campus Study credit: 0 to 15 Hours.

Provides campus credit for off-campus study. Approved for letter and S/U grading. (Summer session, 0 to 6 undergraduate hours). Final determination of appropriate credit is made by a faculty review committee upon completion of the student's work. Maximum credit, 15 hours (summer session, 6 hours), all of which must be earned within one term. Prerequisite: Junior standing; prior review and approval of the student's written proposal by a faculty committee and the department head.

LA 427 Amer Vernacular Cultural Land credit: 4 Hours.

Focuses on vernacular structures in the cultural landscape, especially common houses, barns, and commercial and industrial structures; examines origin and geographical diffusion of vernacular architecture in the United States. 4 undergraduate hours. 4 graduate hours.

LA 430 Children and Nature credit: 2 Hours.

Same as HORT 430. See HORT 430.

LA 437 Regional Design Studio credit: 5 Hours.

Ecological design and planning studio emphasizing team approaches to design development and evaluation using current human and environmental research results. Projects require field work, analysis, problem-solving, and advanced design and presentation products. 5 undergraduate hours. 5 graduate hours. Prerequisite: LA 336 or consent of instructor.

LA 438 Design Workshop Studio II credit: 3 to 6 Hours.

Project design at various scales utilizing problems of a wide range of complexity and subject matter; rural, community, and urban problems, housing, recreation, and natural areas; and emphasizes problem analysis and generation of innovative design alternatives. The student selects from several sections depending on specific interests. Additional fees may apply. See Class Schedule. 5 undergraduate hours. 3 to 6 graduate hours. May be repeated. Prerequisite: LA 336 or consent of instructor.

LA 441 Land Resource Evaluation credit: 4 Hours.

Examines concepts for the value of land, land resource problems and policy responses, methods for evaluating land resource development and policy alternatives, and case studies of land resource evaluation. Same as UP 441. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate standing or consent of instructor.

LA 446 Sustainable Planning Seminar credit: 4 Hours.

Examines sustainability issues of concern to planners, such as resource conservation, urban growth, environmental justice, industrial development, social equity, sustainable agriculture, and economic development. Presents holistic approaches ranging from theoretical concepts to detailed case studies that combine urban and regional land use, physical design, and policymaking. Same as GEOG 446, NRES 446, and UP 446. 4 undergraduate hours. 4 graduate hours.

LA 450 Ecology for Land Restoration credit: 4 Hours.

Ecological implications of alternative land use patterns; equipment, field techniques, and nomenclature in current use by environmental consultants; and elements of a baseline ecosystem study. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

LA 452 Natural Precedent in Planting credit: 3 Hours.

Biogeography; identification of native species, uses of native plants in the landscape; and restoration and planting design projects. Field trips required. 3 undergraduate hours. 3 graduate hours. Additional fees may apply. See Class Schedule. Prerequisite: HORT 302 or consent of instructor.

LA 453 Cultural Precedent in Planting credit: 3 Hours.

Planting design issues; historic precedent and contemporary comprehensive design projects; management practices; technical documents; and plant use and identification. Field trips required. 3 undergraduate hours. 3 graduate hours. Prerequisite: LA 452.

LA 454 Landscape Archaeology credit: 3 or 4 Hours.

Same as ANTH 453. See ANTH 453.

LA 460 Heritage Management credit: 3 or 4 Hours.

Same as ANTH 460 and RST 459. See ANTH 460.

LA 466 Energy, Plng & Blt Environment credit: 4 Hours.

Same as UP 466. See UP 466.

LA 470 Social/Cultural Design Issues credit: 3 Hours.

Critical discussion of notions and theories pertaining to the reciprocal effects of landscape architectural design and human behavior. 3 undergraduate hours. 3 graduate hours.

LA 472 Museum Theory and Practice credit: 3 or 4 Hours.

Same as ANTH 462 and ARTH 462. See ANTH 462.

LA 480 Sustainable Design Principles credit: 2 Hours.

Introduction to key concepts for the sustainable design of buildings and landscapes, including concepts that form the core of the U.S Green Building Council rating system (LEED). Introduction to LEED accreditation. Same as UP 480. 2 undergraduate hours. 2 graduate hours.

Music, School of

Professor Jeffrey Magee

2040 Music Building, 1114 West Nevada, Urbana

PH: (217) 244-2676

<http://www.music.illinois.edu>

2040 Music Building

1114 West Nevada Street

Urbana, IL 61801

(217) 333-2620

The School of Music occupies the Music Building, Smith Memorial Hall, Harding Band Building, Music Annex, and space in the Krannert Center for the Performing Arts. These facilities include faculty studios, classrooms, and practice and rehearsal rooms; experimental electronic music, computer music, digital piano, two computer-assisted music instruction laboratories, and jazz multimedia practice rooms; and musical instruments, audio equipment, and several auditoriums used for concert, recital, opera, and musical theatre performances. The Music and Performing Arts Library boasts comprehensive holdings in Theatre and Dance, as well as one of the largest collections of music items in America.

The faculty and students of the school present more than 1,000 concerts, recitals, and stage performances throughout the year, both on and off campus. In addition, visiting artists and scholars from throughout the world present master classes and lectures that complement the concert and academic offerings provided on the Urbana-Champaign campus. The School of Music has been an accredited member of the National Association of Schools of Music since 1933.

The School offers two professional undergraduate degrees: the Bachelor of Music and the Bachelor of Music Education. Undergraduate students whose musical interests are in the broad historical, cultural, and theoretical aspects of music (rather than professional training) pursue the Bachelor of Arts in Music degree, also offered by the School of Music.

Graduate degrees are offered in a variety of fields of study in music at the master's and doctoral levels. The School also offers a post-Master's Artist Diploma degree.

Bands, choral ensembles, orchestras, jazz bands, new music ensembles, world music ensembles, lyric theatre (opera and musical theatre), and many other musical organizations are open by audition to music and non-music majors and members of the university and civic communities. Private lessons and courses in music history, world music, jazz history, theory, and music appreciation are open to all qualified students in the University. A minor in music for non-music majors is also available.

Admission to all School of Music degree programs is based on a composite review of both School of Music and University applications. For those degrees which require an audition, on-campus auditions are preferred, but taped auditions are acceptable under certain circumstances. In addition, applicants for music composition, music technology, and musicology majors must submit original scores or other pertinent writings or projects to substantiate their ability to pursue work in these areas. Applicants in music education, composition, musicology, open studies, and the Bachelor of Arts in Music must also complete an interview with faculty in those respective areas.

For complete information concerning audition schedules, special admission requirements, and curricula (including a minor in music), prospective students should visit the School's web site (<http://www.music.illinois.edu>) or contact the Music Admissions Office, School of Music, 1114 West Nevada Street, Room 2014, Urbana IL 61801. Phone: (217) 244-7899 | Email: musicadmissions@illinois.edu.

Bachelor of Arts with a Major in Music (p. 298)

Bachelor of Music Education (p. 300)

Bachelor of Music Specific Majors:

- Instrumental Performance Music (p. 299)
- Music Composition-Theory (p. 300)
- Musicology (p. 303)
- Vocal Performance (p. 304)
- Jazz Performance (p. 299)
- Open Studies (p. 304)

Curricula

For the Degree of Bachelor of Music

This degree requires 130 semester hours of credit for graduation.

Public performance is an integral part of the training in applied music, and all students, when sufficiently prepared, are required to participate in student recitals.

All students pursuing this degree are required to successfully complete at least one course in conducting (normally MUS 242) and must demonstrate keyboard competency by examination at the outset of their matriculation, or by enrolling in MUS 172 and/or MUS 173; keyboard performance majors must demonstrate competency by successfully completing MUS 454.

Foreign language study may be required according to the major chosen, experience in or study of languages prior to matriculation, and/or the results of language placement tests at the University.

For a semester-by-semester sequential listing of classes a student might take during a four-year course of study, please consult the Undergraduate

Music Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks-undergraduate>).

Students majoring in music should meet with their adviser at least once per semester and consult the Undergraduate Music Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks-undergraduate>), for clarification and explanations concerning the Bachelor of Music majors.

Common Requirements for all Bachelor of Music Degrees

Students in the School of Music must complete the Campus General Education requirements. Some Music courses apply toward the General Education requirements.

General Education

Code	Title	Hours
Composition I		4
Advanced Composition		3
Humanities and the Arts - fulfilled by MUS 313 and MUS 314		6
Cultural Studies: Western Comparative Culture(s)		3
Cultural Studies: Non-Western Culture(s)		3
Natural Sciences and Technology		6
Social and Behavioral Sciences		7
Quantitative Reasoning I and II		6
Foreign Language		0-12
Total Hours		38-50

Music Core Coursework

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201	Music Theory and Practice III	2
MUS 202	Music Theory and Practice IV	2
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207	Musicianship III	2
MUS 208	Musicianship IV	1
Advanced music theory at the 400-level		6
Music History and Literature Core		
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 313	The History of Music I ¹	3
MUS 314	The History of Music II	3
Advanced Music History at the 400-level		6
Required Music Courses		
Major Applied Subject Area (lessons) ²		12-32
Minor Applied Subject Area (lessons) ³		6-8
Ensembles ⁴		8
MUS 242	Elements of Conducting	2
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II ⁵	4
Total Hours		67-89

- ¹ Completion of both MUS 313 and MUS 314 meets the general education Humanities and the Arts requirement).
- ² Woodwind and percussion majors complete 32 hours; string majors complete 26 hours; brass and voice majors complete 24 hours; jazz, musicology, and composition-theory majors complete 16 hours; and open studies majors complete a minimum of 12 hours.
- ³ Students majoring in instrumental or vocal performance are required to study a minor instrument or voice for a minimum of eight semester hours. Piano majors are required to complete only six hours of minor applied music.
- ⁴ All students are required to enroll in at least one approved performance ensemble each semester in residence, with a maximum of 16 semester hours of such ensemble applicable to the Bachelor of Music degree. Jazz Performance majors must enroll in MUS 266.
- ⁵ Music Majors must demonstrate keyboard competency by examination at the outset of their matriculation or by enrolling in MUS 172 and MUS 173. Keyboard performance majors demonstrate keyboard competency by successfully completing MUS 454

Minor in Music

The School of Music offers non-music majors an exposure to music through courses in musicology and ethnomusicology, music theory, music composition, music technology, jazz history and studies, and performance studies (through applied lessons and ensemble). The Music Minor is intended for student musicians with previously established, fundamental musical experiences - individuals who wish to expand upon already obtained musical skills and related study - and is not intended to be an introduction to music.

Admission to the Music Minor

Prospective Music Minors must apply for acceptance into the program. For more information, please see <https://my.faa.illinois.edu/gradstat/login.asp>, or contact the Music Admissions Office (musicadmissions@illinois.edu) (in Music Building Room 2018) for general instructions on how to apply for the minor.

Course Requirements

The Music Minor requires the successful completion of 21 semester hours of courses in music according to the following distribution:

1. Six to eight (6-8) credit hours in music core coursework, including either four (4) credits in Music Theory and Practice I and II (MUS 101 and MUS 102) or six (6) credits in Rudiments of Music Theory I and II (MUS 103 and MUS 104), plus two (2) credits in Introduction to Art Music (MUS 110);
2. At least six credit hours must derive from upper division or advanced music courses. This includes MUS 313 and MUS 314 (which also serve as General Education courses), or any other MUS 300-or 400-level music course with instructor approval;
3. Additional music elective credit hours may include private lessons (applied lessons) pending successful completion of an audition with the appropriate music professor and availability of teaching staff;
4. Up to three (3) credit hours of ensembles may be used for electives and can be selected from MUS 250, MUS 252-MUS 257, MUS 260-MUS 272;
5. Topics offered under MUS 199 or MUS 499 must be approved for credit toward by the music minor advisor.

Code	Title	Hours
Music Theory Core		
MUS 101 & MUS 102	Music Theory and Practice I and Music Theory and Practice II ¹	4
or		
MUS 103 & MUS 104	Rudiments of Music Theory I and Rudiments of Music Theory II ¹	6
Music Theory Core Total		4-6
Music History and Literature Core		
MUS 110	Introd Art Mus: Intl Perspect	2
Music History and Literature Core Total		2
Upper Division Music Courses		
Upper division or advanced courses at the 300-400 level. ^{2,3,4}		6
Music Electives		
Music electives to be taken from theory, aural skills, musicology, jazz history, applied lessons, music technology, conducting, composition, ensembles, etc. ^{5,6}		7-9
Note: Up to three (3) ensemble credits will apply toward the Music Minor. Approved ensembles include MUS 250, MUS 252-MUS 257, and MUS 260-MUS 272.		
Total Hours		21

¹ MUS 101 and MUS 102 are two (2) credits each. MUS 103 and MUS 104 are three (3) credits each. You cannot mix and match courses: MUS 101 and 102 are paired together; MUS 103 and 104 are paired together.

² 300-level courses open to Music Minors include MUS 313-314, MUS 317, MUS 339, and MUS 360-369.

³ MUS 400 and MUS 408 will be open only to Music Minors who have taken and passed MUS 201 and MUS 202.

⁴ Courses in the MUS 410-421 series will be open only to Music Minors who have taken and passed either MUS 313 or MUS 314; courses will be selected in consultation with the Music Minor advisor in accordance with their interests. Music Minors must obtain instructor permission to register for any course in the 410-421 series.

⁵ This includes both MUS 462-463 (Jazz Listening Seminar I and II) and MUS 464-465 (Jazz History I and II).

⁶ Students must audition, be accepted into a studio, and pay a nominal fee for applied lessons.

MUS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MUS>)

Courses

MUS 090 Seminar in Music Education credit: 0 Hours.

Seminar for students preparing to enter student teaching. Students should enroll in the semester prior to student teaching. Approved for letter and S/U grading. Prerequisite: Music education majors or consent of instructor.

MUS 101 Music Theory and Practice I credit: 2 Hours.

Fundamental theory including terminology and notation; visual analysis of music elements, procedures, and forms; written applications in short projects. Credit is not given for both MUS 101 and MUS 103. Prerequisite: Placement by examination.

MUS 102 Music Theory and Practice II credit: 2 Hours.

Continuation of MUS 101. Credit is not given for both MUS 102 and MUS 104. Prerequisite: MUS 101 or placement by examination.

MUS 103 Rudiments of Music Theory I credit: 3 Hours.

Introduces non-music majors to basic terminology, technology, notation and concepts of music, with a co-emphasis on digital audio. Credit is not given for both MUS 103 and MUS 101.

MUS 104 Rudiments of Music Theory II credit: 3 Hours.

Continuation of MUS 103. Includes study of modulation, chromatic harmony, form, and an introduction to twentieth-century composition and inter-disciplinary music techniques. Credit is not given for both MUS 104 and MUS 102. Prerequisite: MUS 103 or placement by examination; non-music majors only.

MUS 105 Computation and Music I credit: 2 Hours.

Applies foundational concepts in computer science to the composition and analysis of symbolic music information. Course proceeds in parallel with CS 125 (Introduction to Computer Science) and MUS 101 (Music Theory and Practice I) to integrate key CS techniques with music concepts. Course is run as a workshop presenting eight large programming projects in which students design and implement software systems that analyze and compose musical scores in different formats. Prerequisite: Concurrent enrollment with CS 125 and MUS 101. Restricted to entering CS+Music students and Music Technology students with strong programming experience, or consent of the instructor.

MUS 106 Beginning Composition credit: 2 Hours.

Class instruction in contemporary compositional practice at the beginning stages. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor on the basis of a student portfolio of composition submitted to the composition-theory faculty and accepted after evaluation.

MUS 107 Musicianship I credit: 2 Hours.

Beginning aural skills training in the areas of intervals, scales, chords, rhythm, melody, and harmony.

MUS 108 Musicianship II credit: 2 Hours.

Continuation of aural skills training from MUS 107. Development of performance, notational, and listening skills in the areas of rhythm, melody, harmony, counterpoint, and formal aspects of musical structure; emphasizes tonal pitch structures. Prerequisite: MUS 101 and MUS 107, or placement by examination.

MUS 110 Introd Art Mus: Intl Perspect credit: 2 Hours.

Surveys the history of European and American art music in an international context; examines major artistic styles, representative composers and works, and their relationship to pertinent non-western musical traditions and philosophies; reviews fundamental music concepts; strengthens aural analytical skills; familiarizes students with the music library, and research and writing techniques. Prerequisite: First year standing in music or consent of instructor.

MUS 120 English Diction credit: 1 Hour.

Phonetics applied to English song literature; individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Freshman standing in voice or consent of instructor.

MUS 121 Italian Diction credit: 1 Hour.

Phonetics applied to Italian song literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Freshman standing in voice or consent of instructor.

MUS 122 German Diction credit: 1 Hour.

German pronunciation applied to German vocal literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Sophomore standing in voice or consent of instructor.

MUS 123 French Diction credit: 1 Hour.

French pronunciation applied to French vocal literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: At least one semester of French or equivalent required, sophomore standing in voice, or consent of instructor.

MUS 125 English Diction and Dialects credit: 1 Hour.

English Diction and Dialects introduces students to the variety of sounds of spoken English throughout the world. Coursework will include study of recorded resources, IPA (International Phonetic Alphabet) transcription, and performance of monologues, scenes, and musical numbers in a variety of dialects. Transcription will consist of both written IPA and imitative listening and speaking. Coursework will consist of in-class presentations, quizzes, transcriptions, and assessments of video and audio resources. Prerequisite: Restricted to students majoring in Music, or by consent of instructor.

MUS 130 Intro to the Art of Music credit: 3 Hours.

Provides non-music majors with basic listening skills, the ability to discuss music intelligently, and an acquaintance with many types of music. Prerequisite: For non-music majors only.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

MUS 132 Popular Music Studies credit: 3 Hours.

Courses within this rubric provide an analytical and historical introduction to genres of popular music from the United States and around the world. Iterations of the course may focus on a specific genre, such as Rock, Reggae, or Afropop, or may deal with broader subjects, such as the continua of styles including R&B, Soul, Funk, and Hip Hop, or the pan-generic, international phenomenon of pop music globalization in the twentieth century.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

MUS 133 Introduction to World Music credit: 3 Hours.

A survey of various musical traditions from different regions and peoples of the world.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

MUS 134 History of Musical Events credit: 3 Hours.

Focuses on seminal performances of musical works such as, but not limited to, premiere performances and/or recordings. Prerequisite: For non-music majors only.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MUS 140 String Instrument Class credit: 2 Hours.

Class instruction to enable students to demonstrate proper technique and a characteristic sound on two bowed string instruments (violin or viola, and cello or double bass) in order to teach, via demonstration, beginning string students toward their maximum technical and musical development. May be repeated to a maximum of 4 hours. Prerequisite: For music education majors only, with two semesters required for music education string majors.

MUS 144 Supp WW Inst: Clarinet credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the clarinet. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for woodwind majors in the BME instrumental concentration.

MUS 146 Supp WW Inst: Flute credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the flute. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 147 Supp WW Inst: Oboe credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the oboe. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Oriented for music majors in the BME instrumental concentration.

MUS 148 Supp WW Inst: Saxophone credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the saxophone. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 149 Supp WW Inst: Bassoon credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the bassoon. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 151 Supp Brass Inst: Trumpet credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the trumpet. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for brass majors in the BME instrumental concentration.

MUS 153 Supp Brass Inst: Horn credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the horn. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 154 Supp Brass Inst: Trombone credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the trombone. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 155 Supp Brass Inst: Euph/Tuba credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the euphonium and tuba. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 158 Supp Percussion Instruments credit: 2 Hours.

Class instruction in the fundamentals of playing and teaching percussion instruments. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 160 Jazz Piano Improvisation I credit: 2 Hours.

Study of jazz theory, harmony, and improvisational techniques at the piano; includes experience in solo and ensemble situations, and a historical survey of jazz development from about 1910. Prerequisite: Completion of MUS 174 or equivalent; MUS 202 and MUS 208 or equivalent; consent of instructor.

MUS 161 Jazz Piano Improvisation II credit: 2 Hours.

Continuation of MUS 160. Study of jazz theory, harmony, and improvisational techniques at the piano; includes experience in solo and ensemble situations, and a historical survey of jazz development from about 1910. Prerequisite: MUS 160 or consent of instructor.

MUS 163 Jazz Keyboard Studies I credit: 2 Hours.

Prepares the student (through class participation) to perform one jazz standard on a functional level. Includes basic technique, chord voicing, comping, and lead sheet realization with functional fluency in all keys. Furnishes the student with class instruction on piano, focusing on jazz and improvisational idioms. An in-depth study of overall instrument technique, eminent styles, and other performance practices relevant to jazz piano and improvisation. Prerequisite: MUS 172 and MUS 173, or consent of the instructor.

MUS 164 Jazz Keyboard Studies II credit: 2 Hours.

Continuation of materials presented in MUS 163, focusing on improvisational idioms of jazz piano. Prepares the student (through class participation) to perform three jazz standards on a functional level. Emphasizes the blues form, minor II-V-I chord progressions with both hands, and introduces all major modes. Includes technique, chord voicing concepts, comping, and lead sheet realization with mid-level fluency in all keys. A continuing in-depth study of overall instrument technique, eminent styles, and other performance practices relevant to jazz piano and improvisation. Prerequisite: MUS 163, or placement exam, or consent of the instructor.

MUS 165 Applied Jazz Instruction credit: 2 to 4 Hours.

Instruction at the undergraduate level in voice or instruments normally associated with the jazz idiom. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Successful performance audition for the jazz faculty.

MUS 166 Class Jazz Improvisation I credit: 2 Hours.

Examines the dynamics of group improvisation at a fundamental level. Techniques of individual melodic development, group melodic development, and group contouring will be discussed and practiced. Requires preparation of group improvisations using the blues, a 32-bar song form, and a modal form, as well as class presentations and group demonstrations of basic group improvisational techniques.

MUS 167 Class Jazz Improvisation II credit: 2 Hours.

Continues to examine the dynamics of group improvisation as presented in MUS 166. Discussion and practical application of techniques of individual melodic development, group melodic development, and group contouring. Requires preparation of group improvisations using blues, 32-bar song form, and free group improvising forms, as well as class presentations and group demonstrations of more advanced improvisational techniques. Prerequisite: MUS 166.

MUS 169 Unit One Sem Instruct in Music credit: 0 to 2 Hours.

Experimental seminar courses to introduce non-music majors to contemporary ideas in music. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: For non-music majors only.

MUS 170 Grp Instr Pno NonMus Maj I credit: 2 Hours.

Beginning piano for non-music majors. Includes fundamentals of reading, technique, and creative activities; study and performance of simple solo and ensemble repertoire.

MUS 171 Grp Instr Pno NonMus Maj II credit: 2 Hours.

Continuation of basic skills presented in MUS 170. Elementary piano for non-music majors. Includes reading, technique, creative activities; simple solo and ensemble repertoire. Prerequisite: MUS 170 or equivalent.

MUS 172 Grp Instr Pno for Mus Major I credit: 2 Hours.

Group instruction in beginning piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Study of simple piano literature, development of skills in technique, sight reading, harmonization, transposition, improvisation, and analysis. This is the first of two courses that addresses the keyboard competency policy for non-piano majors.

MUS 173 Grp Instr Pno for Mus Maj II credit: 2 Hours.

Continuation of skills introduced in MUS 172. Group instruction in elementary piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Sight-reading, harmonization, transposition, and improvisation. Easy solos from the main historical periods with appropriate technical development; introduction to piano ensemble literature. This is the second of two courses that addresses the keyboard competency policy for non-piano majors. Prerequisite: MUS 101 and MUS 107; MUS 172 or equivalent; or consent of instructor.

MUS 174 Grp Instr Pno for Mus Maj III credit: 2 Hours.

Continuation of skills introduced in MUS 173. Group instruction in intermediate piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Study of intermediate level solos and ensemble compositions, harmonization with chromatic chords, sight reading, transposition of four-voice works, improvisation, and learning of patriotic songs. Prerequisite: MUS 102 and MUS 108; MUS 173 or equivalent; or consent of instructor.

MUS 175 Grp Instr Pno for Mus Maj IV credit: 2 Hours.

Continuation of skills introduced in MUS 174. Group instruction in moderately advanced piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Emphasis on solos, ensemble compositions, technical development, and more advanced work in sight reading, harmonization, improvisation, transposition, and aural skills. Prerequisite: MUS 201 and MUS 207; MUS 174 or equivalent; or consent of instructor.

MUS 178 Guitar credit: 2 to 4 Hours.

Instruction in guitar at the undergraduate level, predominantly classical. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 179 Harpsichord credit: 2 to 4 Hours.

Instruction in harpsichord at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 180 Piano credit: 2 to 4 Hours.

Instruction in piano at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 181 Voice credit: 2 to 3 Hours.

Instruction in voice at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 182 Organ credit: 2 to 4 Hours.

Instruction in organ at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 183 Violin credit: 2 to 4 Hours.

Instruction in violin at the undergraduate level. Music majors must register concurrently in MUS 250. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 184 Viola credit: 2 to 4 Hours.

Instruction in viola at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 185 Cello credit: 2 to 4 Hours.

Instruction in cello at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 186 Double Bass credit: 2 to 4 Hours.

Instruction in double bass at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 187 Harp credit: 2 to 4 Hours.

Instruction in harp at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 188 Flute credit: 2 to 4 Hours.

Instruction in flute at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 189 Clarinet credit: 2 to 4 Hours.

Instruction in clarinet at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 190 Oboe credit: 2 to 4 Hours.

Instruction in oboe at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 191 Bassoon credit: 2 to 4 Hours.

Instruction in bassoon at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 192 Saxophone credit: 2 to 4 Hours.

Instruction in saxophone at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 193 Trumpet credit: 2 to 4 Hours.

Instruction in trumpet at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 194 Horn credit: 2 to 4 Hours.

Instruction in horn at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 195 Trombone credit: 2 to 4 Hours.

Instruction in trombone at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 196 Euphonium credit: 2 to 4 Hours.

Instruction in euphonium at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 197 Tuba credit: 2 to 4 Hours.

Instruction in tuba at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 198 Percussion credit: 2 to 4 Hours.

Instruction in percussion at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours.

MUS 201 Music Theory and Practice III credit: 2 Hours.

Continuation of MUS 102. Gradually increased emphasis on contrapuntal techniques, dissonance in tonal music, and musical form. Prerequisite: MUS 102 and MUS 108, or placement by examination.

MUS 202 Music Theory and Practice IV credit: 2 Hours.

Continuation of MUS 201. Study of twentieth century compositional methods. Prerequisite: MUS 201 and MUS 207, or placement by examination.

MUS 205 Computation and Music II credit: 2 Hours.

A follow-up course to Computation and Music I that introduces students to programming music applications with special emphasis on issues related to real-time audio system design. The class will begin by introducing students to the fundamentals of real-time audio synthesis using a graphical audio language such as Max/MSP, and then turn to hands-on design of real-time audio systems using an industry standard language such as C++. The course content reinforces materials presented in CS 126 (Software Design), including GUI frameworks, prototyping, user interface design, code refactoring and debugging. Prerequisite: CS 125, CS 126, and MUS 101, or consent of instructor. Restricted to CS+Music students and Music Technology students with strong programming experience, or by consent of the instructor.

MUS 206 Intermediate Composition credit: 2 Hours.

Class instruction in contemporary compositional practice at the secondary stages. May be repeated to a maximum of 6 hours. Prerequisite: MUS 106 and consent of composition-theory faculty.

MUS 207 Musicianship III credit: 2 Hours.

Continuation of MUS 108. Emphasis on extensions of tonality by means of changing tonal centers and altered chords. Prerequisite: MUS 102 and MUS 108, or placement by examination.

MUS 208 Musicianship IV credit: 1 Hour.

Continuation of MUS 207. Emphasis on atonal pitch structures and complex rhythmic organization. Prerequisite: MUS 201 and MUS 207, or placement by examination.

MUS 209 Music, Sound, Technology credit: 3 Hours.

This course examines the role modern digital technology plays in musical performance, composition, listening, and analysis. The course is divided into three large subject areas each lasting approximately five weeks: (1) sound, sound fields, and digital recording, (2) digital technology in composition and performance, and (3) psychoacoustics and digitized music analysis. Within each subject area, students are first introduced to relevant acoustic and musical principles, then learn about their implementation in the digital domain, and lastly gain practical experience with the subject matter through hands-on projects involving the capture, creation, editing and analysis of musical sound using standard hardware and computer applications. Prerequisite: Restricted to Music Technology students, or by consent of instructor.

MUS 240 Orientation Mus Tchg Lrng K-HS credit: 1 Hour.

Provides guided practice in observing music teaching and learning in a variety of settings. Develops professional perspective and vocabulary for analyzing effective teaching, diverse learning styles, and patterns of music instruction in a variety of contexts. Includes early field experience hours. Must complete criminal background check prior to observing in schools. Prerequisite: Music education majors accepted into Teacher Certification Track.

MUS 242 Elements of Conducting credit: 2 Hours.

Fundamental elements of conducting, score analysis and preparation, transcription and transposition for choral and instrumental ensembles. Focused on development of conducting skills appropriate for use in public school teaching. A special section is offered for music majors not majoring in music education. Prerequisite: Music majors or consent of instructor.

MUS 243 Introductory Music Ed Tech credit: 2 Hours.

Overview and exploration of the ways that technology benefits music education. Opportunities for practical development of skills, work, and play with a variety of software and hardware, and group projects that tie multiple technologies together in larger curricular units. Recent research readings. Consideration of the appropriateness for technology with special learners, as well as in ensemble and early childhood settings. Prerequisite: Music education majors or consent of instructor.

MUS 244 Social Foundations of Music Ed credit: 3 Hours.

Explores the social and cultural contexts of music teaching and learning from multiple perspectives. Examines contemporary and historical American music education philosophy, practice, and policy as well as music education's place within broader systems of education. Special emphasis will be placed on issues of cultural diversity and social justice and problematizing dominant narratives and potential assumptions relevant to music education. Employs scholarship within and beyond music education concerned with critical theories, history, philosophy, and sociology. Prerequisite: MUS 240 and completion of campus Composition I general education requirement. For music education majors only.

This course satisfies the General Education Criteria for:
Advanced Composition

MUS 250 University Orchestra credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 252 Ethnomusicology Perf Ensembles credit: 1 Hour.

Instruction and experience in the performance of various non-Western and vernacular music traditions such as African mbira, Andean panpipes, North American string band, European traditional music, etc. Topics vary according to available instructors. May be repeated in the same or subsequent terms. Prerequisite: Consent of instructor.

MUS 253 Collegium Musicum credit: 1 Hour.

Performs medieval, renaissance, and baroque music; various small groups formed for the performance of sonatas and cantatas of Bach and Handel, wind serenades of Mozart, etc. Interested students may play on lute, harpsichord, and other instruments from the University's collection. May be repeated. Prerequisite: Consent of instructor.

MUS 254 String Ensemble credit: 1 Hour.

Participation in trios, quartets, quintets, etc., for the study of chamber music literature. May be repeated. Prerequisite: Consent of instructor.

MUS 255 Woodwind Ensemble credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 256 Brass Ensemble credit: 1 Hour.

Ensembles of mixed brasses in both small and large forms. May be repeated. Prerequisite: Consent of instructor.

MUS 257 Percussion Ensemble credit: 1 Hour.

May be repeated in the same term. Prerequisite: Consent of instructor.

MUS 258 Piano Ensemble credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 260 Oratorio Society credit: 1 Hour.

An advanced mixed-voice chorus open to students, faculty, and members of the community. Performance of oratorios and other major choral works in cooperation with the University Symphony Orchestra or Wind Symphony. May be repeated. Prerequisite: Consent of instructor.

MUS 261 Choral Ensemble credit: 1 Hour.

A mixed-voice chorus for average and beginning singers open to students, faculty, and members of the community. Performance of cantatas and other choral works. May be repeated. Prerequisite: Consent of instructor.

MUS 262 Women's Glee Club credit: 1 Hour.

Practical experience in the rehearsal and public performance of choral music of various periods and styles. Open to all women students. May be repeated. Prerequisite: Consent of instructor.

MUS 263 Men's Glee Club credit: 1 Hour.

Practical experience in the rehearsal and public performance of choral music of various periods and styles. Open to all men students. May be repeated. Prerequisite: Consent of instructor.

MUS 264 Concert Choir credit: 1 Hour.

A highly advanced group of competent student singers. Practical experience in mixed-voice singing of accompanied and unaccompanied music of various periods and styles. May be repeated. Prerequisite: Consent of instructor.

MUS 265 Opera credit: 1 Hour.

Preparation and public performance of grand or light opera. Includes only singing and acting (students desiring experience in costuming, stage management, scenery, publicity, etc., should apply to the University Theatre Department, which cooperates in the opera productions). May be repeated. Prerequisite: Consent of instructor.

MUS 266 Jazz Ensemble credit: 1 Hour.

Ensembles of various sizes designed to acquaint proficient instrumentalists with jazz compositions, arrangements, and improvisational procedures, and to promote a high degree of stylistic and technical competence in performance. May be repeated. Prerequisite: Consent of instructor.

MUS 267 Chamber Music credit: 1 Hour.

Students will be assigned to chamber groups that will be coached on a weekly basis by members of the faculty. One public performance per term may be required. May be repeated. Prerequisite: Music majors or consent of instructor.

MUS 268 Wind Symphony credit: 1 Hour.

Maintains a complete large wind ensemble instrumentation for the study and performance of band/wind ensemble/chamber wind literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the ensemble. May be repeated. Prerequisite: Consent of instructor.

MUS 269 Wind Orchestra credit: 1 Hour.

Maintains a large wind ensemble instrumentation for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 270 Harding Symphonic Band credit: 1 Hour.

Maintains a complete symphonic band instrumentation for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 271 Hindsley Symphonic Band credit: 1 Hour.

Maintains the instrumentation of a standard concert band. The literature studied and performed is of the highest caliber and technical difficulty. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 272 Concert Band credit: 1 Hour.

Maintains the instrumentation of a large concert band. The high quality band literature is technically less difficult than that of MUS 268-MUS 271. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 273 Marching Illini credit: 1 to 3 Hours.

Prepares and performs music of the highest available quality in at least six shows per football season. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 274 Basketball Band credit: 1 Hour.

Performs for home basketball games. May be repeated. Credit is given for spring term only. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. Prerequisite: Band Division audition during early October, or consent of instructor.

MUS 275 Brass Band credit: 1 Hour.

Maintains a complete British Brass Band instrumentation for the study and performance of all types and styles of brass band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the bands. May be repeated. Prerequisite: Concurrent registration in MUS 268, MUS 269, MUS 270, MUS 271, or MUS 272, and consent of instructor.

MUS 276 Summer Band credit: 1 Hour.

Maintains the instrumentation of the standard band for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 299 Thesis/Adv UG Honors in Music credit: 1 or 2 Hours.

Special individual research projects. Required of seniors in the history of music and music theory curricula; open also to advanced undergraduates, including James Scholars, who have achieved university or college honors and who desire to do research in specialized areas of music, including performance. May be repeated to a maximum of 4 hours. Counts for advanced hours in LAS. Prerequisite: Senior standing in the history of music or music theory curricula, or consent of instructor.

MUS 313 The History of Music I credit: 3 Hours.

Survey of music and its development in Western civilization to about 1750. Emphasis on an acquaintance with representative musical works and style, and on understanding musical concepts in the light of their historical and general cultural context. Prerequisite: MUS 110 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MUS 314 The History of Music II credit: 3 Hours.

Survey of the development of music as an art in Western civilization from about 1750 to the present. Emphasizes an acquaintance with formal and stylistic problems through the study of representative works and on understanding specific musical concepts in the light of their historical and general cultural context. Prerequisite: MUS 313 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MUS 317 Intro to Piano Literature credit: 3 Hours.

Overview of representative works for the piano, from Scarlatti to the present. Prerequisite: MUS 314.

MUS 320 Pre-Student Tchng Experience credit: 1 or 2 Hours.

Early Field Experiences in music teacher education. Includes supervised practicum work in observation, co-teaching, and individual teaching in local public schools. Twenty-seven (27) clock hours of EFE required for each hour of credit. May be repeated to a maximum of 4 hours, but only 2 hours may be applied toward the degree. Prerequisite: Music education majors or consent of instructor.

MUS 326 Practicum in Piano Teaching credit: 2 Hours.

Coordinates lesson planning for teaching pre-college piano pupils with extensive teaching experience; gives close examination to beginning and intermediate teaching literature.

MUS 330 Advanced Choral Conducting I credit: 2 Hours.

Laboratory/practicum course for review and development of choral conducting skills and their integration into the student's full complement of teaching skills and knowledge. Score analysis and preparation lead to the application of teaching and rehearsal skills. Prerequisite: Music education majors; MUS 242; concurrent registration in MUS 348 is required.

MUS 331 Advanced Choral Conducting II credit: 2 Hours.

Practicum course emphasizing teaching and rehearsal techniques, score preparation, and interpretation. Focuses on the integration of aural, vocal, keyboard, and conducting skills for the choral teacher/conductor. Prerequisite: MUS 330; music education majors, or consent of instructor.

MUS 332 Advanced Wind Band Conducting and Rehearsal Strategies credit: 3 Hours.

Develops skills in rehearsal techniques and aural skills. Application of teaching strategies and learning theory. Refinement of fundamental concepts of gesture; development of advanced conducting skills and score reading skills; development of score analysis techniques. Prerequisite: MUS 242; instrumental music education majors, or consent of instructor.

MUS 333 Cond/Teach Strings-Grp Setting credit: 3 Hours.

Survey of concert and training literature for school orchestras; refinement of fundamental concepts of gesture; development of advanced skills in conducting, score reading, and score analysis. Prerequisite: MUS 242; music education majors, or consent of instructor.

MUS 335 Elem and Mid Sch Instrum Music credit: 2 Hours.

Examines pedagogical and organizational techniques for teaching elementary and middle school instrumental music. Must be taken concurrently with MUS 320 WP or MUS 320 S, an Early Field Experience. Prerequisite: May only be taken one or two semesters prior to student teaching; music education majors, or consent of instructor.

MUS 336 Service Learning in Music Education credit: 3 Hours.

Service Learning and participatory action research in music education. Students facilitate music learning in cooperation with community partners in Champaign-Urbana, Illinois and surrounding communities. Collaborative planning, learning through inquiry, engaged scholarship, and democratic teaching practices. Student teams develop or work on ongoing projects with community teachers, musicians, or organizations. May be repeated in separate terms.

MUS 339 Princpls and Technqs in Mus Ed credit: 3 Hours.

Overview of music education in K-12 settings, emphasizing philosophy and history of music education, jazz education, methodologies commonly utilized in school curricula, music in special education, and classroom/rehearsal management. Five weeks are devoted to content exploring basic statistical techniques and procedures. Prerequisite: Senior standing in music education, or consent of instructor, plus 80 hours of early field experiences in the teaching of music; completion of the Quantitative Reasoning I requirement.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MUS 342 Music in Childhood credit: 3 Hours.

Provides a model of comprehensive musicianship in general music K-5. Considers musical and conceptual development of learners at various ages. Includes lesson planning and assessment strategies for classroom music instruction including listening, performing, and composing experiences. Prerequisite: MUS 240.

MUS 343 Music in Adolescence credit: 3 Hours.

Detailed consideration of the general music program in both middle school and high school. Emphasis on adolescent characteristics and alternative methods of instruction. Prerequisite: Restricted to Music Education majors or consent of instructor.

MUS 344 Wind Band Methods for Secondary Ensembles credit: 2 Hours.

Surveys concert and training literature for the high school band; develops administrative skills for organizing a school music program; increases skills in rehearsal techniques and addresses current issues in music education. Prerequisite: MUS 332; junior standing in instrumental music education; completion of campus Composition I general education requirement; approval of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

MUS 345 Mus Methods in Early Childhood credit: 2 Hours.

Approaches for teaching music to children ages 2 through 8 in preschool and early elementary school settings. Focuses on understanding the role of music in early childhood, developing musical concepts, and organizing appropriate learning experiences.

MUS 346 Choral Methods for Secondary Ensembles credit: 2 Hours.

Lecture/discussion methods course that addresses curriculum development, organization/administration, repertoire, vocal pedagogy and the changing voice, diction, and additional topics typical of secondary school choral music program. Prerequisite: Music education majors or consent of instructor. Concurrent enrollment in MUS 348 required.

MUS 348 Choral Literature credit: 1 Hour.

Exploration of choral literature appropriate for middle and high school music programs. Students carry out lesson plans through peer teaching/rehearsal sequences, culminating in public performance. May be repeated to a maximum of 2 hours. Prerequisite: MUS 242. Restricted to Music Education majors, or consent of instructor.

MUS 350 Music Teaching in Ens Settings credit: 5 Hours.

Emphasizing the collaborative nature of teaching and learning, this team-taught, comprehensive course engages students in teaching music through school ensembles of all kinds. Topics include comprehensive musicianship, creativity and composition, instructional planning, management structures and routines, and inclusive practices in music education. Prerequisite: MUS 240 and MUS 242. Music education majors only. Junior standing required.

MUS 352 Tchng Strings in Grp Settings credit: 3 Hours.

Organize and teach sequential string playing technique to students in a group setting to develop their aural skills and left hand and right hand technique; refresh and improve the string performance skills gained in MUS 140; survey materials for string classes; develop awareness of personal teaching delivery skills. Offered only in spring semesters. Prerequisite: Music Education major, completion of MUS 320S, or consent of instructor.

MUS 360 Jazz Improv:Theory and Prac I credit: 2 Hours.

Fundamentals of jazz improvisation, with an emphasis on aural recognition of jazz chord voicings, harmonic progressions, and scales. Includes interactive software related to jazz improvisation ear-training. Application of melodic, harmonic, and rhythmic materials with regard to improvisation. Prerequisite: MUS 102 and MUS 108; MUS 167; or placement by exam with consent of instructor.

MUS 361 Jazz Improv:Theory and Prac II credit: 2 Hours.

Continuation of MUS 360. Exploration of advanced harmonic procedures with an emphasis on aural recognition of advanced forms of jazz harmonic structures, scales, chord qualities, and chord progressions. Additional emphasis on scales, chord/scale relationships, and standard jazz harmonic forms such as blues, standard jazz tunes, and modal tunes. Prerequisite: MUS 360, or placement by exam with consent of instructor.

MUS 362 Jazz Arranging I credit: 3 Hours.

Fundamentals of jazz arranging with an introduction to techniques such as schematic design, score layout, analysis, voicing, section writing, and orchestration. Emphasis on arranging for rhythm section, along with part layout and forms, voicing techniques, and basic harmonic concepts. Three major written projects are required. Prerequisite: MUS 166, or placement by exam/portfolio with consent of instructor.

MUS 363 Jazz Arranging II credit: 3 Hours.

Advanced melodic, harmonic, and rhythmic arranging techniques as applied to jazz instrumentation. Emphasis on practice in analysis, voicing and orchestration techniques such as 4-way closed position double lead, 4-way closed-position drop-2 double lead, 4-way closed position drop-2, and 4-and 5-way closed position. Three major written projects are required. Prerequisite: MUS 362, or placement by exam/portfolio with consent of instructor.

MUS 364 Jazz Composition I credit: 2 Hours.

Examines the basic elements of jazz composition from melodic, harmonic, rhythmic, and tone color perspectives focusing on distinctive styles of jazz. Promotes a better understanding of various jazz compositional styles, jazz composers, creative elements and abilities, melody writing, harmonic systems, rhythmic compositional devices, and jazz reharmonization techniques. Prerequisite: MUS 363.

MUS 365 Jazz Composition II credit: 2 Hours.

Examines advanced elements of jazz composition such as melody construction, harmonic devices, and rhythmic devices used in modern jazz compositions as a continuation and expansion of materials presented in MUS 364. Melodic and harmonic contouring, asymmetrical forms, advanced chromatic-modal construction, and creative practices will be discussed and practiced through written assignments and projects. Prerequisite: MUS 364, or consent of instructor upon approval of a portfolio of jazz compositions.

MUS 368 Jazz Improvisation Styles I credit: 2 Hours.

Survey of improvisational/jazz artists. Students write and present four papers over the course of the semester, accompanied by four transcriptions of four major improvisational/jazz artists representing four distinct improvisational/jazz styles. All presentations will be done in class. Prerequisite: Consent of instructor.

MUS 369 Jazz Improvisation Styles II credit: 2 Hours.

A continuation of the survey of improvisational/jazz artists at an advanced level. Students write and present four papers and associated recording transcriptions of four advanced improvisational/jazz artists representing four distinct and advanced improvisational/jazz styles. All presentations will be done in class. Prerequisite: MUS 368 or consent of instructor.

MUS 400 Counterpoint and Fugue credit: 3 Hours.

Study of contrapuntal writing, including fugue, with emphasis on the works of J.S. Bach. Includes analysis of contrapuntal writing. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208, or consent of instructor.

MUS 404 Contemp Compos Techniques credit: 2 Hours.

Studies in specialized areas of composition for advanced undergraduates and graduates majoring in composition-theory. May be elected by others with consent of instructor. 2 undergraduate hours. 2 graduate hours. May be repeated. Prerequisite: MUS 106, MUS 202 and MUS 208, or consent of instructor.

MUS 405 Analytical Systems 20thC Mus credit: 3 Hours.

Study of various analytical techniques developed for music written in the twentieth century based on compositional procedures other than those derived from the common practice period. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208, or consent of instructor.

MUS 406 Advanced Composition credit: 3 Hours.

Individual instruction in contemporary musical practice. Students submit scores of their compositions to the composition faculty in order to obtain consent to register; consent is granted on the basis of the quality of the music the student has composed and the level of skill demonstrated in the work submitted. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: For undergraduates, MUS 206 and consent of composition faculty; for graduate students, consent of composition faculty.

MUS 407 Elect Music Techniques I credit: 3 Hours.

Introduces electroacoustic music, including historical background, music literature, techniques of notation and realization, sound synthesis, analog and digital recording, mixing and processing, and compositional application in the areas of musique concrete, electronic music, and Musical Instrument Digital Interface (MIDI) technology as applied to electroacoustic concert art music. Weekly lab times assigned. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing in music, or consent of instructor.

MUS 408 Analysis of Musical Form credit: 3 Hours.

Extensive study of the formal structure of representative musical compositions from various historical periods: (a) Renaissance and Baroque; (b) Viennese classical; (c) nineteenth century; (d) first half of twentieth century; and (e) since World War II. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: MUS 202 and MUS 208.

MUS 409 Elec Music Techniques II credit: 2 Hours.

Intermediate level study of Musical Instrument Digital Interface (MIDI) technology, sound design, digital audio engineering techniques, multi-track digital editing and audio processing in music composition, and the study of compositional, technical, and performance considerations as applied to electroacoustic concert art music. Weekly lab times are assigned. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 407 or placement by examination.

MUS 410 Period Studies in Musicology credit: 3 Hours.

Intensive study of the music of a specific historical period. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: MUS 313 and MUS 314, junior standing in music or consent of instructor.

MUS 411 Genre Studies in Musicology credit: 3 Hours.

Examination of one or more aspects of musical genre defined by composer(s), historical era, region, performance issues, philosophy, etc. Can include the study of the relationship between genre and performance, genre and pedagogy, genre and the creative process, genre and reception, etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314; junior standing; or consent of instructor.

MUS 412 Composer Studies in Musicology credit: 3 Hours.

Intensive study of the music of a specific composer. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topic varies. Prerequisite: MUS 313 and MUS 314, junior standing in music or consent of instructor.

MUS 413 Music and Performance credit: 3 Hours.

Examination of one or more aspects of musical performance defined by historical era, region, genre, philosophy, etc. Can include the study of the relationship between performance, improvisation and creative process; performance and publication; performance practices of a specific genre, period, or community; etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314, junior standing; or consent of instructor.

MUS 414 Music and Society credit: 3 Hours.

Examination of the social context, function and meaning of music/music-making in one or more communities, from one or more areas of the world, in one or more time periods. May address music in relation to such social issues as gender, ethnicity, politics, etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topic varies. Prerequisite: MUS 313 and MUS 314, and junior standing in music; or consent of instructor.

MUS 415 Music and Media credit: 3 Hours.

Intensive study of the impact of various media such as recordings, radio, film, television and/or computer technology on the creation, performance, dissemination and/or patronage of a given repertoire. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314; junior standing; or consent of instructor.

MUS 416 Anthropology of Music credit: 3 Hours.

Introduction to the anthropological study of music, including the role of music in the world's societies and non-Western musical systems and cultures. Same as ANTH 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 103 or consent of instructor.

MUS 418 Regional Studies in Musicology credit: 3 or 4 Hours.

Seminar devoted to intensive study in the music of specific peoples, states, or geographic regions from around the world. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: MUS 313 and MUS 314; junior standing; MUS 528A (for DMA or MM performance or composition students); or consent of instructor.

MUS 419 Sr Seminar in Musicology credit: 3 Hours.

Intensive capstone seminar for musicology majors directed at graduate school preparation, senior thesis or project development, professional portfolio design, and the cultivation of scholarly writing skills. Introduces advanced research methods and analytical paradigms. Addresses special topics or issues tailored to student interests and faculty expertise, as well as contemporary developments in the discipline or current musical events, from diverse perspectives. 3 undergraduate hours. No graduate credit. Prerequisite: For senior musicology majors (BA or BM) with senior standing, or consent of instructor.

MUS 420 The History of Opera credit: 3 Hours.

Surveys opera and related forms from the end of the 16th century to the present; studies representative works in some detail. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 314 or consent of instructor.

MUS 421 The Music of America credit: 3 Hours.

Study of chamber, choral, and orchestral music written by American composers from about 1850 to the present; jazz and its offshoots; folk and popular music; and experimental music in America. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing in music or consent of instructor.

MUS 422 Musical Theatre Repertoire credit: 2 Hours.

Musical Theatre Repertoire is a high-contact class, conducted in a studio setting. Methods of instruction include vocal exercises, studying and singing Musical Theatre repertoire, song memorization, studying and evaluating performances, and utilizing both class and individual evaluations. Vocal health and wellness are stressed as students become familiar with styles of singing in both classical and contemporary Musical Theatre. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours or 4 graduate hours. Prerequisite: Students must have two years of applied voice lessons (MUS 181) in order to register for this course. For Music majors, or by consent of instructor.

MUS 423 Intro to Piano Technology credit: 2 Hours.

Introduction to the mechanism and operation of the modern piano, including the historical development of keyboard instruments. Introduction to tuning and regulation, theory, and practice. No previous experience tuning or regulating pianos is necessary. 2 undergraduate hours. 2 graduate hours.

MUS 424 Musical Informatics credit: 3 Hours.

A 21st century approach to music theory: fundamental elements of music illustrated through logical and mathematical concepts, unencumbered by stylistic considerations. Defines the internal structure of sounds and presents a few general methods of organizing them into complex compositions. Intended for musicians having limited familiarity with mathematics, as well as scientifically inclined students with little musical background. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

MUS 426 Orchestration credit: 3 Hours.

A thorough study of writing for all of the orchestral instruments in combinations ranging from solo to varying sizes of chamber ensembles and full orchestra. Includes analysis of musical examples and composing short works for various instrumental ensembles. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208.

MUS 430 Applied Music Pedagogy credit: 2 Hours.

Survey of techniques, practices, and materials; presentation of group and individual instruction; an approach to teaching problems, tone production, musical styles, and interpretation for various age levels; actual teaching experience under faculty supervision. Required of performance majors in voice. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing in music or consent of instructor.

MUS 431 Piano Pedagogy I credit: 2 Hours.

Objectives, techniques, literature, and materials for teaching piano to children from about ages five through ten (elementary level); observation of lessons and supervised student teaching experience. 2 undergraduate hours. 2 graduate hours. Required of piano performance majors. Prerequisite: Senior standing in music or music education, or consent of instructor.

MUS 432 Piano Pedagogy II credit: 2 Hours.

Objectives, techniques, literature, and materials for teaching the young pianist from about ages 11 through 18 (middle school to pre-college level); teaching the adult beginner; observation of lessons and supervised student teaching experience. 2 undergraduate hours. 2 graduate hours. Required of piano performance majors. Prerequisite: Senior standing in music or music education, or consent of instructor.

MUS 433 Music Interdisciplinary Curriculum credit: 2 or 4 Hours.

This course focuses on the principles and processes of an interdisciplinary curriculum, with primary emphasis on music's relationship to other areas of study. The organizing framework for the course is grounded on the premise that music influences, and in turn is influenced by, complementary realms of human experience. The purpose is to enable music educators and other interested persons to create sound educative experiences in music built upon strong relationships among persons, ideas, artistic practices, and disciplines. 2 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Undergraduate music students with junior or senior standing. Graduate music students, or consent of instructor.

MUS 434 Assessment/Eval in Music Ed credit: 3 or 4 Hours.

Overview of assessment and evaluation techniques in music education, emphasizing the design of performance assessments, how to collect quality data in the music classroom, and how to use data to alter instruction. Five weeks devoted to context exploring basic statistical techniques, including how to interpret data. 3 undergraduate hours. 4 graduate hours. Prerequisite: Completion of Quantitative Reasoning I requirement. For Music Ed majors with Junior or Senior standing, graduate Music Ed students, or consent of instructor.

MUS 435 Jazz Aural Skills I credit: 2 Hours.

Jazz Aural Skills I is the first of two courses designed to equip students for the rigorous demands of a professional jazz musician. The course is designed to strengthen the student's ability to recognize chord progressions, scales, chord alterations, and common forms in order to react and integrate them into solo improvisation and group playing. Students learn how to strengthen their own relative pitch recognition through singing/and or playing their instrument(s), including piano. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 107, 108, 172 and 173, or by consent of instructor. This course is open to jazz majors, music majors, and interested students.

MUS 436 Jazz Aural Skills II credit: 2 Hours.

Jazz Aural Skills II is a continuation of ear training for the jazz musician and composer. The ability to hear all parts of a tune - chord changes, rhythmic patterns, and the harmonic implications of the chord extensions is considered a fundamental essential skill of the professional jazz and commercial musician. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 107, 108, 17, 173 and 435, or by consent of instructor.

MUS 437 Popular Music Pedagogy credit: 2 or 4 Hours.

Explores various vernacular, popular, and folk musical traditions. Experiences will focus on oral/aural creation and performance as well as responding to and connecting with relevant sociocultural issues and contexts. Special emphasis will include the potential application and inclusion of these musical traditions within school music settings. 2 undergraduate hours. 2 or 4 graduate hours. Prerequisite: MUS 342 or 343, or graduate standing in music education.

MUS 438 Designing Musical Experiences credit: 2 Hours.

Students develop their musicianship through reflective engagement with a variety of approaches to non-performance oriented music learning. Equal emphasis is placed on various kinds of music (literature and repertoire) and the ways in which teachers can structure experiences for students. Students will plan and lead experiences, sing and perform on a variety of instruments, and review recent research and scholarship in the field. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 240 and MUS 342.

MUS 439 Differentiating Music Instruction credit: 3 Hours.

Strategies for adapting and modifying music instruction for students with disabilities in general, choral, and instrumental music classes. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 342.

MUS 440 Marching Band Procedures credit: 2 Hours.

Detailed consideration of principles and procedures for preparing a marching band to participate in parades, ceremonies, and shows for sports events. 2 undergraduate hours. 2 graduate hours. Prerequisite: Junior standing in instrumental music education.

MUS 441 Contemp Issues in Inst Mus Ed credit: 2 Hours.

Research-based investigation of concepts and principles of school band programs including repertoire and curriculum, score study and teaching strategies, and leadership and advocacy. 2 undergraduate hours. 2 graduate hours. Prerequisite: Completion of student teaching, graduate standing in music education, or consent of instructor.

MUS 442 Band Arranging credit: 2 Hours.

Development of basic scoring and arranging skills for various small instrumental ensembles and marching band. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 202 and MUS 208 or equivalent.

MUS 443 Orchestral Repertory credit: 1 Hour.

Laboratory class designed for brass, woodwind, and percussion performance majors who wish to become more familiar with orchestral literature and a variety of interpretational orchestral techniques. Emphasis on individual and sectional parts of orchestral masterworks. 1 undergraduate hour. 1 graduate hour. May be repeated to a maximum of 4 undergraduate hours and 4 graduate hours. A maximum of 6 hours of credit is cumulative within either the BM or MM degree, or a combination of the two. Prerequisite: Consent of instructor in consultation with the appropriate studio teacher.

MUS 444 Healthy Music Practices credit: 2 Hours.

This course is intended for the promotion of healthy musical and lifestyle habits and choices, as well as enhancement as a performer and teacher through knowledge of all aspects of their musical selves - physical, psychological, and spiritual. The course will focus on general self-care but will also cover the four target areas identified by the Health Promotion in Schools of Music Conference as crucial for musicians: musculoskeletal issues, hearing conservation, voice care, and psychological issues. 2 undergraduate hours. 2 graduate hours. Prerequisite: Music students, or instructor approval.

MUS 446 Songwriting credit: 2 Hours.

Develops and refines music composition techniques and self-expression in popular, vernacular, and folk music genres. Students will write, record, and perform original songs for class, provide constructive feedback for their peers, reflect personally on their experiences through journaling, and will engage with readings and recordings relevant to class activities. Students should be comfortable singing and creating/performing on an accompanying instrument (e.g. guitar, piano, self-composed digital backing tracks). 2 undergraduate hours. 2 graduate hours.

MUS 447 Advanced Music Ed Technology credit: 2 or 4 Hours.

A deepening of ideas and skills presented in MUS 243. Provides advanced exploration and construction of digital learning environments, as well as exploring the computer as a musical instrument. Students will work alone and in teams to create curricular materials grounded by historical, philosophical, and research in technology and education. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: MUS 243, graduate standing, or consent of instructor.

MUS 448 Computer Music credit: 3 Hours.

Introduction to the multiple ways computers are used in music, with an emphasis on digital sounds synthesis and composition. Elements of acoustics, psychoacoustics, and programming are introduced in order to allow students to use and modify the existing software DISSCO/Sound Maker developed at UIUC. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

MUS 449 Music in Early Childhood credit: 2 Hours.

Provides pre-service music educators with a framework for designing and implementing developmentally appropriate music learning experiences for young children. Includes a survey of recent developments in the fields of early childhood and music education research and pedagogy that emphasize: assessing musical growth, integrating music into the curriculum, and accommodating individual differences in diverse learning settings. Early field experiences at the UIUC Child Development Laboratory are included in the course work. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior or graduate standing in music, or consent of instructor.

MUS 450 Advanced Ensemble Music credit: 1 Hour.

Selected projects in the study and performance of ensemble literature, including the areas of operatic, instrumental, vocal-choral, and accompanying. 1 undergraduate hour. 1 graduate hour. May be repeated. Prerequisite: Consent of instructor.

MUS 451 Basso Continuo credit: 2 Hours.

Introduction to figured bass realization. Techniques of accompanying singers and instrumentalists from a figured bass. 2 undergraduate hours. 2 graduate hours. May be repeated. Prerequisite: Advanced standing in music as a piano, organ, harpsichord, or accompanying major, or consent of instructor.

MUS 452 Special Topics in Harpsichord credit: 2 Hours.

Practical and theoretical studies in historical tuning and temperament; early fingerings, harpsichord tutors (treatises), styles of figured bass improvisation, harpsichord literature, and other topics related to harpsichord performance. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MUS 453 Special Topics in Organ credit: 2 Hours.

Development of practical keyboard skills related primarily to the work of the church organist: transposition, score-reading, harmonization, modulation, hymn-playing, and solo and anthem accompaniment. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MUS 454 Advanced Keyboard Skills I credit: 2 Hours.

Comprehensive keyboard musicianship course for advanced pianists emphasizing the development of the following skills: sight reading, harmonization, transposition, improvisation, playing by ear, and vocal and instrumental score reading. Ensemble piano music is performed. This course addresses the keyboard competency policy for undergraduate piano performance majors. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 180 (12 hours completed) or MUS 175; and MUS 202 and MUS 208 or equivalent; and consent of instructor.

MUS 455 Advanced Keyboard Skills II credit: 2 Hours.

Continuation of the topics introduced in MUS 454. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 180 (12 hours completed) or MUS 175; MUS 202 and MUS 208 or equivalent; MUS 454 or equivalent; and consent of instructor.

MUS 456 Adv Jazz Piano Improvisation credit: 2 Hours.

Study of solo jazz piano improvisation on an advanced level. Includes practical experience in traditional, modern, and abstract solo performance, as well as theoretical, stylistic, and historical background. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: MUS 161 or equivalent.

MUS 457 Organ History and Design credit: 2 Hours.

Survey of the important national and historical styles of organ building and their relation to musical composition, performance practice, and modern organ design. Includes visits to regional organ installations chosen for their pertinent design features. 2 undergraduate hours. 2 graduate hours. Prerequisite: Consent of instructor.

MUS 459 Professional Internship credit: 0 to 12 Hours.

Professional work with an approved musical organization that is external to the School of Music, in an area related to the student's academic program; exposure to and participation in professional music-related activities. Full documentation and approval of internship activities required. The default credit will always be 0 credits unless a student, with the faculty advisor's support, petitions the appropriate academic committee (UG or Grad) with a detailed proposal outlining the academic nature, content, and scope of the internship. 0 to 12 undergraduate hours. 0 to 12 graduate hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours if topics vary.

MUS 462 Jazz Listening Seminar I credit: 2 Hours.

Examines the fundamental aural elements of improvisation in a jazz idiom. A chronological survey of jazz artists presented via recordings. Topics will vary with the introduction of each new artist or group. 2 undergraduate hours. 2 graduate hours. Prerequisite: Jazz majors or consent of instructor.

MUS 463 Jazz Listening Seminar II credit: 2 Hours.

A continuation in greater depth of material presented in MUS 462. Further examines the aural elements of improvisation in a jazz idiom. A chronological survey of jazz artists presented via recordings. Topics will vary with the introduction of each new artist or group. 2 undergraduate hours. 2 graduate hours. Prerequisite: Jazz majors or consent of instructor.

MUS 464 Jazz History I credit: 3 or 4 Hours.

Presents jazz music history chronologically while providing historical background information drawn from other disciplines to illuminate the many ways that jazz has influenced, and been influenced by, American and global societies. Explores the many ways that jazz has encountered other art forms. Unpacks the many issues deeply associated with jazz music's history – issues of race, class, mass media, gender, critical reception, etc. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior musical knowledge and training preferred but not required. Consent of instructor.

MUS 465 Jazz History II credit: 3 or 4 Hours.

A continuation of the materials presented in MUS 464. Allows the students to look both forward and backward to explore jazz music's unfolding in the twentieth century, beginning roughly in 1945 and continuing to the present. Looks at music and its creators using recorded music, film transcription, theory, and various other analytical and media techniques. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior musical knowledge and training preferred but not required. Consent of instructor.

MUS 466 Applied Jazz Instruction credit: 2 to 4 Hours.

Instruction at the advanced undergraduate or graduate level in voice in instruments normally associated with the jazz idiom. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 undergraduate hours or 20 graduate hours. Prerequisite: Successful performance audition for the jazz faculty.

MUS 467 Lyric Theatre Voice credit: 2 Hours.

This is an individualized voice class setting where the student and teacher work exclusively with the technical, musical, and communicative aspects of Lyric Theatre repertoire in a one-on-one setting. Students receive a great deal of feedback from the instructor during each weekly lesson. 2 undergraduate hours. 2 graduate hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. For Music majors only, or by consent of instructor.

MUS 468 Lyric Studio credit: 2 Hours.

Acquaints the student with a variety of opera, operetta, and musical theatre literature in contrasting styles and historical periods, culminating in a public performance of sung theatre (opera, operetta, musical theatre) productions and scenes each semester. Develops skills as both a solo and ensemble performer. Introduces skills related to the field of sung theatre performance, including, but not limited to, stage movement, mind-body awareness, diction, acting, and improvisational techniques. Forms and integrates a performing ensemble to serve as an outreach group that may perform in select venues off campus. Intended for voice majors (BM-Performance and BMA) and vocal accompanying/coaching majors; others by consent of instructor. Audition required. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 12 undergraduate hours or 8 graduate hours. Prerequisite: Consent of instructor.

MUS 469 Opera Production I credit: 2 or 3 Hours.

Studies the problems of the lyric stage. Investigation of and practice with casting methods, program selection, production procedures, stage direction, coaching methods, and opera dramatics. 3 undergraduate hours. 2 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: MUS 265 and MUS 481; consent of instructor.

MUS 470 Opera Production II credit: 2 or 3 Hours.

Continuation of topics introduced in MUS 469. 3 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: MUS 469.

MUS 471 Composer-Chor Workshop credit: 2 Hours.

Same as DANC 464. See DANC 464.

MUS 472 Senior Project Showcase credit: 1 Hour.

Senior Project Showcase will be a sequenced, two semester course, culminating in a final performance(s) in the spring semester. Students will use class time for individual and team writing during the fall semester, presenting their work for faculty approval at the end of the first semester. Students will meet weekly in large and small groups, as well as frequent individual sessions with their advisors, receiving and providing feedback, working on staging, choreography and arrangements, and, later, assisting in the production design as well. Improvisation will play a central role in the development of concept and specific songs from character driven work. 1 undergraduate hour. No graduate credit. May be repeated to a maximum of 2 hours in separate terms. Prerequisite: Musical Theatre Repertoire (MUS 422). For BMA in Lyric Theatre majors only.

MUS 474 Vocal Repertoire I credit: 1 Hour.

Study of the standard solo literature including solo excerpts from larger works, i.e., cantata, oratorio, and opera. Supplements the student's knowledge of the literature in his/her major field. 1 undergraduate hour. 1 graduate hour. Prerequisite: Junior standing in voice, or consent of instructor and concurrent registration in MUS 481.

MUS 475 Vocal Repertoire II credit: 1 Hour.

Continuation of the study of the standard solo literature including solo excerpts from larger works, i.e., cantata, oratorio, and opera. Supplements the student's knowledge of the literature in his/her major field. 1 undergraduate hour. 1 graduate hour. Prerequisite: Junior standing in voice, or consent of instructor and concurrent registration in MUS 481.

MUS 477 Principles of Accompanying credit: 2 or 4 Hours.

Principles of accompanying singers and instrumentalists. Practical experience in accompanying and facility in sight reading for keyboard performers. 2 or 4 undergraduate hours. 2 or 4 graduate hours. May be repeated. (Summer session, 2 undergraduate or graduate hours). Prerequisite: Advanced undergraduate or graduate standing in music or music education, and consent of instructor.

MUS 478 Guitar credit: 2 to 4 Hours.

Instruction in guitar at the advanced undergraduate and graduate levels, predominantly classical. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing or above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 479 Harpsichord credit: 2 to 4 Hours.

Instruction in harpsichord at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors, junior standing or above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 480 Piano credit: 2 to 4 Hours.

Instruction in piano at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: For students in the Bachelor of Music program. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 481 Voice credit: 2 to 4 Hours.

Instruction in voice at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Primarily for music majors, junior standing and above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 482 Organ credit: 2 to 4 Hours.

Instruction in organ at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 483 Violin credit: 2 to 4 Hours.

Instruction in violin at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Music majors must register concurrently in MUS 250. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 484 Viola credit: 2 to 4 Hours.

Instruction in viola at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Music majors must register concurrently in MUS 250. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 485 Cello credit: 2 to 4 Hours.

Instruction in cello at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Music majors must register concurrently in MUS 250. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 486 Double Bass credit: 2 to 4 Hours.

Instruction in double bass at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Music majors must register concurrently in MUS 250. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 487 Harp credit: 2 to 4 Hours.

Instruction in harp at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 488 Flute credit: 2 to 4 Hours.

Instruction in flute at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 489 Clarinet credit: 2 to 4 Hours.

Instruction in clarinet at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 490 Oboe credit: 2 to 4 Hours.

Instruction in oboe at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 491 Bassoon credit: 2 to 4 Hours.

Instruction in bassoon at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 492 Saxophone credit: 2 to 4 Hours.

Instruction in saxophone at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 493 Trumpet credit: 2 to 4 Hours.

Instruction in cornet and trumpet at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 494 Horn credit: 2 to 4 Hours.

Instruction in horn at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 495 Trombone credit: 2 to 4 Hours.

Instruction in trombone at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 496 Euphonium credit: 2 to 4 Hours.

Instruction in euphonium at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 497 Tuba credit: 2 to 4 Hours.

Instruction in tuba at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 498 Percussion credit: 2 to 4 Hours.

Instruction in percussion at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 499 Proseminar in Music credit: .5 to 4 Hours.

Special preparation in specialized fields of musicology, composition-theory, performance, and music education. 0.5 to 4 undergraduate hours. 0.5 to 4 graduate hours. May be repeated to a maximum of 8 hours; undergraduate students in open studies may repeat the course unlimited times with approval of the open studies advisor. Prerequisite: Senior or graduate standing in music or music education; consent of instructor.

Bachelor of Arts with a Major in Music

<http://music.illinois.edu/>

The Bachelor of Arts with a Major in Music is designed for students who wish to pursue a music degree with curricular flexibility to complete coursework in secondary and complementary areas of study. The BA in Music requires students to select a specific area of study, called an option. Current options include music technology, music theory, composition, and various branches of musicology; or students may work with an advisor to explore alternate options not listed here (music +). BA students work with their BA advisor to designate supplemental coursework to suit their interests and long-term goals. Students may indicate a specific area of study (option) during the admissions process; some students may prefer to select an option after completing the first year of the music core. All BA students must designate their option by no later than the start of the spring semester of sophomore year.

For admission requirements for the BA, please see the School of Music's Admissions website (<http://www.music.illinois.edu/prospective-students>) or contact the Music Admissions Office:

Music Admissions Office

School of Music: 1114 W. Nevada Street, Room 2014

Urbana, IL 61801

Phone: (217) 244-7899 | E-mail: musicadmissions@illinois.edu

Minimum required major and supporting course work normally equates to 48-50 hours excluding the keyboard skills (MUS 172 and MUS 173) requirement, and includes 37-41 hours in music courses, 29-31 hours in core courses. Students who wish to study voice or an instrument for credit, in addition to satisfying the Performance Studies requirement of MUS 172 and MUS 173, are required to satisfy the instrumental or vocal qualifying audition designed for students outside the School of Music; credits earned in applied music beyond the keyboard requirement stated above are generally considered elective.

Minimum hours required for graduation: 120 hours

Students must complete the following core music courses and select an area of study, called an "option." An option consists of 8-9 hours of advanced music courses and 11-12 hours of supporting (non-Music) coursework. The coursework is determined in consultation with the student's advisor.

Code	Title	Hours
Music Theory Core (BA)		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201	Music Theory and Practice III	2
MUS 202	Music Theory and Practice IV	2
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207	Musicianship III	2
MUS 208	Musicianship IV	1
Advanced music theory		3
Music History and Literature Core (BA)		
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced music history		3
Performance Studies (BA)		
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
Option		
Advanced Music Courses ²		8-9
Supporting Coursework ²		11-12
Total Hours		52-54

¹ Completion of both MUS 313 and MUS 314 meets the general education Humanities and the Arts requirement.

² Advanced music courses and supporting coursework outside the School of Music are selected in consultation with an advisor.

For All Options:

- Twelve hours of 400-level courses in music must be taken on the Urbana-Champaign campus.
- A Major Plan of Study Form must be completed and submitted to the School of Music Undergraduate Academic Advisor (Music Building 2058) before the end of the fifth semester (60-75 hours). Please see your BA Music advisor, or the Undergraduate Academic Advisor, for assistance in completing the form.

Instrumental Performance Major

<http://www.music.illinois.edu>

Students may major in piano, organ, harpsichord, violin, viola, violoncello, double bass, harp, flute, oboe, clarinet, saxophone, bassoon, trumpet, horn, euphonium, baritone, trombone, tuba, or percussion.

A student enrolled in this major normally takes two applied subjects, one a major (24-32 semester hours in the same applied area) and the other a minor (8 semester hours in the same applied area). Third- and fourth-year students must present satisfactory public junior and senior recitals as part of the requirements for the Instrumental Performance Major within the Bachelor of Music degree.

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2

MUS 201 & MUS 202	Music Theory and Practice III and Music Theory and Practice IV	4
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207 & MUS 208	Musicianship III and Musicianship IV	3
Advanced Music Theory		6
Music History and Literature Core		
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced Music History		6
Required Music Courses		
Ensembles ²		8
MUS 242	Elements of Conducting	2
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
Major applied music subject ^{1,2}		32
Minor applied music subject ³		8
MUS 317	Intro to Piano Literature ⁴	3
MUS 431 & MUS 432	Piano Pedagogy I and Piano Pedagogy II ⁴	4
Electives as needed to total 130 hours		

¹ Concurrent registration in MUS 250 is required for all students who register for any of MUS 183-MUS 186 and MUS 483-MUS 486.

² String majors will register for four semester hours of applied music in the first year; thereafter, string majors will register for three semester hours of applied music and one semester hour of MUS 267 in the second, third, and fourth years. Brass majors will register for three semesters hours of applied music and one semester hour of MUS 267 each semester for all four years.

³ Piano majors are required to complete only 6 hours of minor applied music.

⁴ For piano majors only. Other majors may choose four semester hours of electives.

Jazz Performance Major

<http://www.music.illinois.edu>

Students majoring in jazz performance may do so with piano, double bass, saxophone/clarinet, trumpet, trombone, percussion, or guitar as the major instrument. Third- and fourth-year students must present satisfactory public junior and senior recitals as part of the requirements for the Bachelor of Music degree in jazz performance. All students must successfully complete one semester of Conducting, MUS 242.

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201 & MUS 202	Music Theory and Practice III and Music Theory and Practice IV	4
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2

MUS 207 & MUS 208	Musicianship III and Musicianship IV	3
Advanced Music Theory		6
Music History and Literature Core		
MUS 110	Intro Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced Music History		6
Required Music Courses		
Ensembles		8
MUS 242	Elements of Conducting	2
Applied Music ¹		16
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
MUS 163	Jazz Keyboard Studies I	2
MUS 164	Jazz Keyboard Studies II	2
MUS 360	Jazz Improv:Theory and Prac I	2
MUS 361	Jazz Improv:Theory and Prac II	2
MUS 362 & MUS 363	Jazz Arranging I and Jazz Arranging II	6
MUS 364 & MUS 365	Jazz Composition I and Jazz Composition II	4
MUS 368 & MUS 369	Jazz Improvisation Styles I and Jazz Improvisation Styles II	4
MUS 435 & MUS 499	Jazz Aural Skills I and Proseminar in Music ³	4
Electives as needed to total 130 hours		

¹ Of the eight semesters of applied music, two semesters (4 hours) must be in classical applied study.

² For students with no keyboard skills, MUS 172 and MUS 173 taken in the first year, followed by Jazz Keyboard I and II in the second year will satisfy the secondary applied instrument requirement. For students whose principal instrument is piano, a secondary instrument or jazz voice may be chosen as a substitute for MUS 172, MUS 173 and Jazz Keyboard I and II, in consultation with the advisor.

³ MUS 499 MB, Jazz Pedagogy II.

Music Composition-Theory Major

<http://www.music.illinois.edu>

In this major, emphasis may be placed on music composition or on the theory of music. Necessary course adjustments require approval of the composition-theory division.

If the emphasis is on composition, the fourth-year student must present a satisfactory senior recital of original compositions. If the emphasis is on theory, an advanced project (MUS 299, Thesis, two semesters) approved by the composition-theory division is required in the fourth year.

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201 & MUS 202	Music Theory and Practice III and Music Theory and Practice IV	4

MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207 & MUS 208	Musicianship III and Musicianship IV	3
Advanced Music Theory		6
Music History and Literature Core		
MUS 110	Intro Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced Music History		6
Required Music Courses		
Ensembles ²		8
MUS 242	Elements of Conducting	2
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
Applied music		16
MUS 106	Beginning Composition	4
MUS 206	Intermediate Composition	4
MUS 406	Advanced Composition ³	12
MUS 402		3
An advanced (400-level) music history course		3
MUS 425		3
MUS 426	Orchestration	3
Music Theory ³		8
French, German, or Italian ⁴		8
Electives as needed to total 130 hours		

¹ Completion of both MUS 313 and MUS 314 meets the general education Humanities and the Arts requirement.

² All students are required to enroll in at least one approved performance ensemble each semester in residence, with a maximum of 16 semester hours of such ensemble applicable to the Bachelor of Music degree.

³ The music theory electives for the third and fourth years are to be chosen from , MUS 404 (may be repeated to a maximum of six semester hours), MUS 405, MUS 407, MUS 408 (may be repeated to a maximum of six semester hours in addition to MUS 408, sections D or E), MUS 409, and MUS 499 (may be repeated to a maximum of four semester hours; senior standing in music required). If the curricular emphasis is in music theory, the following will apply: juniors will substitute an additional three semester hours of MUS 408 for MUS 406; seniors will take MUS 299 (two semesters), MUS 405, and substitute an additional 400-level music history course for MUS 406.

⁴ Students who completed 2 years of French, German, or Italian in high school have met this requirement. Other languages may be chosen with permission of the composition-theory adviser. Completion of this requirement does not complete the General Education language requirement.

Music Education

Professor Jeffrey Magee

2040 Music Building, 1114 West Nevada, Urbana
PH: (217) 333-2620

<http://www.music.illinois.edu>

For the Degree of Bachelor of Music Education

A minimum of 130 hours of credit is required for graduation. This curriculum prepares its graduates for teaching music in grades kindergarten through twelve. For teacher education requirements applicable to all curricula, see the [Council on Teacher Education](#). Students complete a concentration in instrumental (band or strings), choral, technology, or general music education.

In order to be recommended for licensure, candidates are required to maintain a UIUC cumulative grade-point average of 2.5, content area (music courses) gpa of 2.75, and professional education course gpa of 3.0 (A=4.0). Candidates should consult the music education handbook, their advisor, or the Council on Teacher Education for a listing of courses used to compute these grade-point averages.

The Council on Teacher Education policy requires that all candidates for teacher education programs pass the Illinois Licensure Testing System Test of Academic Proficiency (TAP), or submit a composite ACT+Writing score of 22 (plus a combined English/Writing score of at least 19 for tests prior to September 2015; or ACT writing score of at least 16 for tests taken September 2015 or after), or a composite SAT (mathematics and critical reading) score of 1030 (SAT Writing score of at least 450) for tests taken prior to March 5, 2016; or a combined score (evidence-based reading and writing plus mathematics) of at least 1110 and a minimum score of 26 on writing and language tests for tests taken on or after March 5, 2016 before admission. All music education students must earn a grade of C or better in all music and professional education courses required for licensure.

General Education/FAA

Code	Title	Hours
FAA 101	Arts at Illinois	2
	Composition I	4
	Natural Sciences and Technology	6
	Cultural Studies: Western Comparative Culture(s)	3
	Social and Behavioral Sciences - fulfilled by PSYC 100 and EPSY 201 ¹	7
	Quantitative Reasoning I and II ²	6
	General Education Requirements met by courses required within the BME:	
	Advanced Composition - fulfilled by MUS 244	3
	Humanities and the Arts - fulfilled by MUS 313 and MUS 314	6
	Cultural Studies: Non-Western Culture(s) - fulfilled by MUS 133	3
	Foreign Language	0-12
	Total Hours ³	40-52

¹ PSYC 100 is prerequisite to EPSY 201, required in all teacher education programs.

² Quantitative Reasoning I is satisfied by students in the Technology concentration selecting CS 105 as a Technique course or elective.

³ 25-37 of the general education hours are not met by course requirements within the BME; 15 hours of general education requirements are met by courses required by the BME.

Code	Title	Hours
Additional hours as needed to total 130		

Music Core Coursework

Code	Title	Hours
Applied Major (Lessons) ¹		12
Ensembles ²		6
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201	Music Theory and Practice III	2
MUS 202	Music Theory and Practice IV	2
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207	Musicianship III	2
MUS 208	Musicianship IV	1
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 133	Introduction to World Music	3
MUS 313	The History of Music I	3
MUS 314	The History of Music II	3
MUS 172	Grp Instr Pno for Mus Major I ³	2
MUS 173	Grp Instr Pno for Mus Maj II ³	2
Total Hours		48

¹ Enrollment in the applied major is normally expected during the first six semesters, 2 semester hours each.

² All music education majors are required to participate in an approved ensemble every semester in residence.

³ All students must demonstrate keyboard competency by examination when they matriculate or by enrolling in MUS 172 and/or MUS 173.

Professional Education Core Coursework

Code	Title	Hours
MUS 090	Seminar in Music Education	0
MUS 240	Orientation Mus Tchgr Lrng K-HS	1
MUS 242	Elements of Conducting	2
MUS 244	Social Foundations of Music Ed	3 or 4
	or EPS 202	Foundations of Education-ACP
MUS 434	Assessment/Eval in Music Ed	3
MUS 439	Differentiating Music Instruction	3
CI 473	Disciplinary Literacy	2
EPSY 201	Educational Psychology	3
EDPR 438	Educational Practice in Special Fields ¹	4
EDPR 442	Educational Practice in Secondary Education ¹	4

¹ Student teaching coursework may be taken for 4-8 credits. Eight hours of student teaching apply toward graduation. Enrolling for at least 12 credits is needed to retain full-time status. You must register for both EDPR 438 and EDPR 442 during the semester of your student teaching. If public school licensure is not desired, the student selects alternative courses totaling 13 semester hours in consultation with the music education advisor, seven semester hours of which must be from the student's applied major, music theory, or music history.

Music Education Core Coursework

Code	Title	Hours
Technique Courses (listed in each concentration area)		
		7-8
MUS 243	Introductory Music Ed Tech	2
MUS 342	Music in Childhood	3
MUS 343	Music in Adolescence	3
MUS 350	Music Teaching in Ens Settings	5

Concentration in Choral Music Education

Code	Title	Hours
Technique Courses Requirements: 7 credit minimum to be selected with advisor from the lists below:		
MUS 140	String Instrument Class	2
MUS 144	Supp WW Inst: Clarinet	.5
MUS 146	Supp WW Inst: Flute	.5
MUS 147	Supp WW Inst: Oboe	.5
MUS 148	Supp WW Inst: Saxophone	.5
MUS 149	Supp WW Inst: Bassoon	.5
MUS 151	Supp Brass Inst: Trumpet	.5
MUS 153	Supp Brass Inst: Horn	.5
MUS 154	Supp Brass Inst: Trombone	.5
MUS 155	Supp Brass Inst: Euph/Tuba	.5
MUS 158	Supp Percussion Instruments	2

Minimum 4 credits (of the 7 total required credits for Technique courses) from the list below:

MUS 174	Grp Instr Pno for Mus Maj III ¹	2
MUS 175	Grp Instr Pno for Mus Maj IV ¹	2
MUS 180	Piano (Secondary Piano Lessons) ¹	2
MUS 181	Voice (Secondary Voice Lesson) ²	2
MUS 252	Ethnomusicology Perf Ensembles	1

Specialized Choral Music Education Coursework Requirements:

MUS 121	Italian Diction	1
or MUS 122	German Diction	
or MUS 123	French Diction	
MUS 330	Advanced Choral Conducting I	2
MUS 346	Choral Methods for Secondary Ensembles	2
MUS 348	Choral Literature ³	1 + 1

¹ Choral students take at least one diction course and secondary piano through MUS 174, or with advisor permission, applied lessons.

² Piano students must have at least 4 credits of secondary voice.

³ MUS 348 (Chorale Literature) is taken twice.

Concentration in General Music Education

Code	Title	Hours
Technique Courses Requirements: 8 credit minimum to be selected with advisor from the lists below.		
MUS 140	String Instrument Class	2
MUS 144	Supp WW Inst: Clarinet	.5
MUS 146	Supp WW Inst: Flute	.5
MUS 147	Supp WW Inst: Oboe	.5
MUS 148	Supp WW Inst: Saxophone	.5

MUS 149	Supp WW Inst: Bassoon	.5
MUS 151	Supp Brass Inst: Trumpet	.5
MUS 153	Supp Brass Inst: Horn	.5
MUS 154	Supp Brass Inst: Trombone	.5
MUS 155	Supp Brass Inst: Euph/Tuba	.5
MUS 158	Supp Percussion Instruments	2

Minimum 5 credits (of the 8 total required credits for Technique courses) from the list below:

MUS 121	Italian Diction	1
or MUS 122	German Diction	
or MUS 123	French Diction	
MUS 174	Grp Instr Pno for Mus Maj III	2
MUS 175	Grp Instr Pno for Mus Maj IV	2
MUS 180	Piano (Secondary Piano Lessons)	2
MUS 181	Voice (Secondary Voice Lessons)	2
MUS 252	Ethnomusicology Perf Ensembles	1

Specialized General Music Education Coursework Requirements:

MUS 433	Music Interdisciplinary Curriculum	2
MUS 437	Popular Music Pedagogy	2
MUS 449	Music in Early Childhood	2

Concentration in Instrumental Music Education

Code	Title	Hours
Technique Courses Requirements: 8 credit minimum to be selected with advisor from the list below:		
MUS 140	String Instrument Class	2
MUS 144	Supp WW Inst: Clarinet	.5
MUS 146	Supp WW Inst: Flute	0.5
MUS 147	Supp WW Inst: Oboe	0.5
MUS 148	Supp WW Inst: Saxophone	0.5
MUS 149	Supp WW Inst: Bassoon	0.5
MUS 151	Supp Brass Inst: Trumpet	0.5
MUS 153	Supp Brass Inst: Horn	0.5
MUS 154	Supp Brass Inst: Trombone	0.5
MUS 155	Supp Brass Inst: Euph/Tuba	0.5
MUS 158	Supp Percussion Instruments	2

Specialized Instrumental Music Education Coursework Requirements:

MUS 332	Advanced Wind Band Conducting and Rehearsal Strategies	3
or MUS 333	Cond/Teach Strings-Grp Setting	
MUS 344	Wind Band Methods for Secondary Ensembles	2

Concentration in Music Education Technology

Code	Title	Hours
Technique Course Requirements: 8 credit minimum to be selected with advisor from the lists below:		
2-5 credits (of the 8 total required credits for Techniques courses) from the list below:		
MUS 402		3
MUS 404	Contemp Compos Techniques	2
MUS 407	Elect Music Techniques I	3

MUS 409	Elec Music Techniques II ¹	2
MUS 448	Computer Music	3
MUS 499	Proseminar in Music (Section ART)	2
THEA 399	Undergraduate Group Seminar (Section RS)	3
THEA 453	Theatre Sound Technology	3
THEA 454	Sound Design I ²	3

3-6 credits (of the 8 total required credits for Techniques courses) from the list below:

CI 210	Introduction to Digital Learning Environments	3
CI 424	Child Development & Technology	3
CI 437	Educational Game Design	3
CI 438	Comp Prgmmg and the Classroom	3
CI 482	Social Learning and Multimedia	3

0-3 credits (of the 8 total required credits for Techniques courses) from the list below:

ARTS 343	Time Arts I	3
ARTS 344	Interaction I	3
CS 105	Intro Computing: Non-Tech	3
ECE 110	Introduction to Electronics	3
MUS 140	String Instrument Class	2
MUS 144	Supp WW Inst: Clarinet	.5
MUS 146	Supp WW Inst: Flute	.5
MUS 147	Supp WW Inst: Oboe	.5
MUS 148	Supp WW Inst: Saxophone	.5
MUS 149	Supp WW Inst: Bassoon	.5
MUS 151	Supp Brass Inst: Trumpet	.5
MUS 153	Supp Brass Inst: Horn	.5
MUS 154	Supp Brass Inst: Trombone	.5
MUS 155	Supp Brass Inst: Euph/Tuba	.5
MUS 158	Supp Percussion Instruments	2
MUS 121	Italian Diction	1
or MUS 122	German Diction	
or MUS 123	French Diction	
MUS 174	Grp Instr Pno for Mus Maj III	2
MUS 175	Grp Instr Pno for Mus Maj IV	2
MUS 180	Piano	2
MUS 181	Voice	2
MUS 252	Ethnomusicology Perf Ensembles	1
MUS 446	Songwriting	2

Specialized Music Education Technology Coursework

Requirements:

MUS 199	Undergraduate Open Seminar (Section MET)	1
MUS 437	Popular Music Pedagogy	2
MUS 447	Advanced Music Ed Technology	2

¹ MUS 407 must be taken prior to MUS 409.

² THEA 453 must be taken prior to THEA 454.

Music Education Electives

Code	Title	Hours
Select credits to reach 130 from the following courses, if not taken to satisfy a requirement in one of the above sections:		
MUS 106	Beginning Composition	2
MUS 174	Grp Instr Pno for Mus Maj III	2
MUS 175	Grp Instr Pno for Mus Maj IV	2
MUS 252	Ethnomusicology Perf Ensembles	1
MUS 330	Advanced Choral Conducting I	2
MUS 331	Advanced Choral Conducting II	2
MUS 332	Advanced Wind Band Conducting and Rehearsal Strategies	3
MUS 333	Cond/Teach Strings-Grp Setting	3
MUS 336	Service Learning in Music Education	3
MUS 344	Wind Band Methods for Secondary Ensembles	2
MUS 346	Choral Methods for Secondary Ensembles	2
MUS 348	Choral Literature	1
MUS 402		3
MUS 404	Contemp Compos Techniques	2
MUS 407	Elect Music Techniques I	3
MUS 409	Elec Music Techniques II	2
MUS 433	Music Interdisciplinary Curriculum	2
MUS 435	Jazz Aural Skills I	2
MUS 437	Popular Music Pedagogy	2
MUS 440	Marching Band Procedures	2
MUS 444	Healthy Music Practices	2
MUS 446	Songwriting	2
MUS 447	Advanced Music Ed Technology	2
MUS 448	Computer Music	3
MUS 449	Music in Early Childhood	2
MUS 499	Proseminar in Music (Section ART)	2
THEA 399	Undergraduate Group Seminar (Section RS)	3
THEA 453	Theatre Sound Technology	3
THEA 454	Sound Design I	3

Musicology Major

<http://www.music.illinois.edu>

This major offers a broad cultural education that unites academic and musical training. It also provides preparation for the graduate study required for research and teaching in musicology or ethnomusicology.

Students must complete a fourth-level college foreign language course or its equivalent for graduation. French, German, or Italian are strongly encouraged.

The fourth-year student, working with an adviser, must complete a satisfactory thesis (MUS 299) as part of the requirements for the Music History Major Bachelor of Music Degree.

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201 & MUS 202	Music Theory and Practice III and Music Theory and Practice IV	4
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207 & MUS 208	Musicianship III and Musicianship IV	3
Advanced Music Theory		6
Music History and Literature Core		
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced Music History		6
Required Music Courses		
Ensembles ²		8
MUS 242	Elements of Conducting	2
Applied music ³		16
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
Foreign language ⁴		8
Supporting Coursework:		12
Additional course in advanced music theory chosen in consultation with an advisor		3
Advanced music history (chosen in consultation with an advisor)		6
Four courses in relevant disciplines outside of music chosen in consultation with a Musicology advisor ⁵		
MUS 419	Sr Seminar in Musicology	3
MUS 299	Thesis/Adv UG Honors in Music	1
Electives as needed to total 130 hours		

¹ Completion of both MUS 313 and MUS 314 meets the general education Humanities and the Arts requirement.

² All students are required to enroll in at least one approved performance ensemble each semester in residence, with a maximum of 16 semester hours of such ensemble applicable to the Bachelor of Music degree.

³ Students enroll in applied music in the same instrument or in voice each semester. It is strongly recommended that students in this major acquire a thorough practical knowledge of the piano beyond basic keyboard competency as part of the applied music study.

⁴ Students must complete the equivalent of a fourth-level college foreign language course or demonstrate fourth-level proficiency for graduation. French, German, or Italian are strongly encouraged.

⁵ May not be used to satisfy general education requirements.

Open Studies

Open Studies allows students to focus on diverse fields such as music of other cultures, piano pedagogy, or other areas not included in the majors above. Open Studies requires completion of the common requirements for all BMUS degrees and a minimum of 130 semester hours of credit for graduation.

Admission to Open Studies is initiated by petition to a committee of three faculty members, the open studies adviser, and the associate dean of the College of Fine and Applied Arts. Additional information may be obtained from the:

Music Admissions Office
School of Music: 1114 W. Nevada Street, Room 2014
Urbana, IL 61801
(217) 244-7899

Email: musicadmissions@illinois.edu (musicadmissions@illinois.edu)

Vocal Performance Major

<http://www.music.illinois.edu>

The primary applied subject in this major includes both private lessons in voice and classes in vocal diction.

At least eight semester hours each in the Italian, French, and German languages are required for the voice major. A student who has not completed at least two years of Italian in high school should take Italian during the first year. Completion of this requirement does not complete the campus general education language requirement, which is twelve semester hours.

Third- and fourth-year students must present satisfactory public junior and senior recitals as part of the requirements for the Vocal Performance Major within the Bachelor of Music degree.

Code	Title	Hours
Music Theory Core		
MUS 101	Music Theory and Practice I	2
MUS 102	Music Theory and Practice II	2
MUS 201 & MUS 202	Music Theory and Practice III and Music Theory and Practice IV	4
MUS 107	Musicianship I	2
MUS 108	Musicianship II	2
MUS 207 & MUS 208	Musicianship III and Musicianship IV	3
Advanced Music Theory		6
Music History and Literature Core		
MUS 110	Introd Art Mus: Intl Perspect	2
MUS 313 & MUS 314	The History of Music I and The History of Music II ¹	6
Advanced Music History		6
Required Music Courses		
Ensembles ²		8
MUS 242	Elements of Conducting	2
MUS 172 & MUS 173	Grp Instr Pno for Mus Major I and Grp Instr Pno for Mus Maj II	4
Major applied music subject		24
MUS 120	English Diction	1
MUS 121	Italian Diction	1
MUS 122	German Diction	1
MUS 123	French Diction	1
MUS 430	Applied Music Pedagogy	4
French		8
German		8

Italian	8
Piano	8
Electives as needed to total 130 hours	

- ¹ Completion of both MUS 313 and MUS 314 meets the general education Humanities and the Arts requirement.
- ² All students are required to enroll in at least one approved performance ensemble each semester in residence, with a maximum of 16 semester hours of such ensemble applicable to the Bachelor of Music degree.

Theatre, Department of

Kirsten Pullen
 4-122 Krannert Center for the Performing Arts, 500 South Goodwin,
 Urbana
 PH: (217) 333-2371
 FX: Fax (217) 244-1861
<http://theatre.illinois.edu>

The curricular concentrations in the Department of Theatre provide intensive and extensive preparation for the rigorous demands of a professional career in the theatre. A strong commitment to work in the theatre and a realistic understanding of its intellectual, aesthetic, and physical demands are therefore necessary in students who enter the department.

Before acceptance into theatre, applicants must participate in auditions or interviews, which take place at the Krannert Center for the Performing Arts five or more weekends each year, and at selected regional locations (normally Chicago and New York). In these auditions, applicants who plan to pursue the concentration in acting should present a three-minute audition, comprising two contrasting works from dramatic literature. Applicants wishing to pursue one of the concentrations in design, technology, and management should present a portfolio of previous theatre work. Applicants who intend to pursue the theatre studies concentration should also bring evidence of their previous theatre work and a 500-word essay addressing the aspects of the theatre studies program that interest them most and why they want to pursue those aspects. Information on these auditions and interviews will be sent to applicants once they have applied to the University and their eligibility has been determined by the Office of Admissions and Records.

Concentrations in theatre are in Acting, Costume Design and Technology, Lighting Design, Scenic Design, Scenic Technology, Sound Design and Technology, Stage Management, and Theatre Studies. Students are initially accepted as theatre majors and then formally admitted to one of these concentrations after an evaluation by the faculty during the student's first or second year. The concentrations in acting and design, technology, and management are intended for students who, in the judgement of the faculty, are ready to concentrate in these specialties in an intensive undergraduate professional training curriculum. The theatre studies concentration is intended for students who plan to pursue advanced training in directing, dramaturgy, playwriting, arts management, social issues theatre, and theatre history and criticism.

As one of the resident producing organizations at the Krannert Center for the Performing Arts, the Department of Theatre produces six or seven fully mounted productions each academic year and three each summer. The theatres and workshops of the Krannert Center serve as laboratories for theatre students, who have the opportunity to learn and to work alongside an outstanding staff of resident theatre professionals and visiting artists, preparing performances in theatre, opera, and dance. In

addition, the department sponsors a small experimental theatre space for student-written and student-directed productions.

All theatre majors must successfully complete production crew assignments at the Krannert Center under THEA 100-Practicum I. Acting and theatre studies students cast in Krannert Center productions or assigned to assist in Krannert Center productions must also take THEA 400-Practicum, II. Design, technology, and management students are required to work on Krannert Center productions as assigned for THEA 400-Practicum, II, credit. Students seeking credit for practical theatre work outside the Krannert Center must secure the approval and supervision of theatre faculty in the form of an Individual Project (THEA 391 or THEA 392) or as a Professional Internship (THEA 490) or Creative Project (THEA 595).

Curricula in Theatre

For the Degree of Bachelor of Fine Arts in Theatre

A minimum of 128 hours of credit is required for the degree.

General Education Requirements for all University Students

Code	Title	Hours
	Composition I	4
	Advanced Composition (fulfilled by THEA 261)	
	Quantitative Reasoning, I and II	6
	Foreign Language	0-12
	General Education	18
	Humanities and the Arts (fulfilled by THEA 102 and THEA 261)	
	Natural Sciences and Technology (6 hours)	
	Social and Behavioral Sciences (6 hours)	
	Cultural Studies (Western and non-Western Cultures) (6 hours)	
	General non-Theatre Electives	9
	Open Electives	11-14
	Total Hours	48-51

Core Requirements for all Theatre Majors

Code	Title	Hours
THEA 102	Text to Stage ¹	4
THEA 103	Survey of Theatre Production	4
THEA 170	Fundamentals of Acting I ¹	3
THEA 125 or THEA 175	Graphic Skills ¹ Fundamentals of Acting II	3
THEA 208	Dramatic Analysis	3
THEA 262	Literature of Modern Theatre	3
THEA 360	History of Theatre I	4
THEA 361	History of Theatre II	4
	Total Hours	28

¹ First year theatre foundations courses.

Acting Program

The acting program provides intensive training in a wide variety of performing media. In the first and second years, students take introductory courses in movement, voice, and acting. In their second year

of study in the department, students must audition for acceptance into the studio in acting. In addition to successful completion of all classes in their first and second years, acceptance will be based on an evaluation of each student's potential for professional-caliber performance, commitment to theatre, and the necessary discipline for intensive study. Third- and fourth-year students meet in daily four-hour sessions, each of which includes sections in dynamics, voice and speech, movement, and acting. Semester-long acting sections include advanced scene study, musical theatre, Shakespeare, and acting for the camera. Students in the professional studio in acting must audition for department productions and perform as cast.

Acting Concentration

Code	Title	Hours
THEA 100	Practicum I	4
THEA 400	Practicum II	4
THEA 270	Relationships in Acting I	3
THEA 271	Voice and Movement I	2
THEA 275	Relationships in Acting II	3
THEA 276	Voice and Movement II	2
THEA 371	Acting Studio I: Dynamics	1
THEA 372	Acting Studio I: Voice	2
THEA 373	Acting Studio I: Movement	2
THEA 374	Acting Studio I: Acting	3
THEA 375	Acting Studio II: Dynamics	1
THEA 376	Acting Studio II: Voice	2
THEA 377	Acting Studio II: Movement	2
THEA 378	Acting Studio II: Acting	3
THEA 471	Acting Studio III: Dynamics	1
THEA 472	Acting Studio III: Voice	2
THEA 473	Acting Studio III: Movement	2
THEA 474	Acting Studio III: Acting	3
THEA 475	Acting Studio IV: Dynamics	1
THEA 476	Acting Studio IV: Voice	2
THEA 477	Acting Studio IV: Movement	2
THEA 478	Acting Studio IV: Acting	3
Total Hours		50

Division of Design, Technology, and Management

Students planning careers in costume design and construction, lighting design, scenic design, scenic technology, sound design and technology, and stage management are selected for the options in this division by a process of faculty evaluation at the end of their first year of study in the department. Criteria for acceptance and continuance in these options include satisfactory completion of all course work in the first and second years, potential for professional-caliber work, commitment to theatre, and the necessary discipline for intensive study and practice. Students in these options are assigned to teams that design, mount, and manage more than fifteen productions annually in the Krannert Center for the Performing Arts.

Costume Design and Technology Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	8
THEA 208	Dramatic Analysis	3
THEA 222	Introduction to Scenic Design	3

THEA 231	Intro to Lighting Design	3
THEA 391	Individual Topics	2
THEA 392	Individual Topics	2
THEA 426	History of Decor	3
THEA 442	Costume Patterning	3
THEA 444	Costume Draping	4
THEA 445	Costume History and Design I	4
THEA 446	Costume History and Design II	4
THEA 447	Costume Rendering	4
THEA 449	Costume Fabrication	4
Total Hours		49

Lighting Design Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	8
THEA 199	Undergraduate Open Seminar	5
THEA 222	Introduction to Scenic Design	3
THEA 223	Intro to Technical Direction	4
THEA 391	Individual Topics	2
THEA 423	Advanced Lighting Design	3
THEA 425	Stage Drafting	3
THEA 431	The Lighting Laboratory	3
THEA 432	Lighting for Non-Theatrical Spaces and Styles	3
THEA 435	Professional Lighting Systems	2
THEA 437	Software for Lighting Design	2
THEA 446	Costume History and Design II	2
THEA 451	Principles of Stage Management	4
THEA 453	Theatre Sound Technology	3
Total Hours		52

Scenic Design Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	8
THEA 222	Introduction to Scenic Design	3
THEA 223	Intro to Technical Direction	4
THEA 231	Intro to Lighting Design	3
THEA 391	Individual Topics	2
THEA 415	Scenic Design I	4
THEA 425	Stage Drafting	3
THEA 426	History of Decor	3
THEA 427	Scene Painting	2
THEA 445	Costume History and Design I	4
THEA 446	Costume History and Design II	4
THEA 456	Properties Design	2
Total Hours		47

Scenic Technology Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	8
THEA 126	Stagecraft	3

THEA 199	Undergraduate Open Seminar	2
THEA 222	Introduction to Scenic Design	3
THEA 223	Intro to Technical Direction	4
THEA 231	Intro to Lighting Design	3
THEA 391	Individual Topics	2
THEA 419	CAD Drafting for the Stage	3
THEA 425	Stage Drafting	3
THEA 427	Scene Painting	2
THEA 430	Technical Direction	3
THEA 440	Stage Mechanics III	3
THEA 446	Costume History and Design II	2
THEA 453	Theatre Sound Technology	3
Total Hours		49

Sound Design and Technology Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	8
THEA 126	Stagecraft	3
THEA 199	Undergraduate Open Seminar	2
THEA 222	Introduction to Scenic Design	3
THEA 223	Intro to Technical Direction	4
THEA 231	Intro to Lighting Design	3
THEA 391	Individual Topics	2
THEA 425	Stage Drafting	3
THEA 446	Costume History and Design II	2
THEA 451	Principles of Stage Management	4
THEA 453	Theatre Sound Technology	3
THEA 454	Sound Design I	3
THEA 455	Audio Production	2
THEA 459	Sound Systems	2
THEA 456	Properties Design	2
Total Hours		51

Stage Management Concentration

Code	Title	Hours
THEA 100	Practicum I	5
THEA 400	Practicum II	10
THEA 212	Introduction to Directing	3
THEA 220	Survey of Theatrical Design	3
THEA 223	Intro to Technical Direction	4
THEA 408	AEA Union Stage Management	3
THEA 409	Stage Management Workshop	6
THEA 450	Management Seminar	6
THEA 451	Principles of Stage Management	3
THEA 452	Principles of Arts Management	3
THEA 453	Theatre Sound Technology	3
THEA 456	Properties Design	2
Total Hours		51

Theatre Studies Program

The theatre studies program focuses on the practical application of theatre scholarship and explores theatrical production as a collaborative

art form that is grounded in theory, criticism, history, research, and writing.

The theatre studies concentration is intended to lay the foundation for students planning to pursue professional careers in areas of theatre for which advanced training or specialization at the graduate level is normally required. These areas include, but are not limited to: directing, dramaturgy, playwriting, arts management, social issues theatre, and theatre history and criticism.

Emphasis is given to a comprehensive study of theatre practices of the past, material participation in theatre practices of the present, and the discovery and application of theatre practices for the future.

Code	Title	Hours
THEA 100	Practicum I	4
THEA 208	Dramatic Analysis	3
THEA 211	Introduction to Playwriting	3
THEA 212	Introduction to Directing	3
THEA 218	Intro to Social Issues Theatre	3
or THEA 270	Relationships in Acting I	
THEA 262	Literature of Modern Theatre	3
THEA 220	Survey of Theatrical Design	3
THEA 391	Individual Topics	2
THEA 392	Individual Topics	2
THEA 400	Practicum II	2
THEA 490	Professional Internship	6
Advanced Theatre courses: any 300 or 400 level Theatre course		12
Supporting Professional Electives: any theatre, dance or music course		12
Total Hours		58

Minor in Theatre

The Minor in Theatre offers students a comprehensive overview of the study of theatre, including both academic (history and criticism) and production (acting, design and technology) courses. The purpose is to expose undergraduate students to the field by reinforcing the integrated nature of theatre as a scholarly and aesthetic pursuit. Students are required to take a core of required courses, totaling ten hours. They then take a minimum of ten hours of electives in two general areas (History/Criticism and Production/Performance) with at least one course from each area.

Code	Title	Hours
THEA 100	Practicum I	1
THEA 101	Introduction to Theatre Arts	3
THEA 208	Dramatic Analysis	3
THEA 262	Literature of Modern Theatre	3
Select at least one of the following:		4
THEA 360	History of Theatre I	
THEA 361	History of Theatre II	

Select at least two courses from the list of electives with a minimum of one course from History/Criticism and one from Production/Performance. At least one course must be 300 level or higher. A listing of electives is available in the Department of Theatre office.	6
Total Hours	20

Contact the Department of Theatre for admission information.

THEA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/THEA>)

Courses

THEA 100 Practicum I credit: 1 to 3 Hours.

Practical work in the design, construction, and handling of scenery, lighting, sound, properties, costumes, and makeup for public performance. A minimum of forty hours of production activity to be arranged for each credit hour. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor required for non-theatre majors.

THEA 101 Introduction to Theatre Arts credit: 3 Hours.

Introduction to the arts of theater for non-majors, including acting, design, directing, dramaturgy, and playwriting, together with a survey of theatrical history, minority theater, and plays by women. Attendance at Department of Theater productions (ticket fee required). Credit not given for both THEA 101 and THEA 102.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

THEA 102 Text to Stage credit: 4 Hours.

Practical exploration of theatre production for Theatre majors with emphasis on the collaborative contributions of playwrights, actors, directors, designers, and dramaturges, culminating in final group projects in planning productions of one-act plays. Attendance at Department of Theatre productions required. Credit not given for both THEA 101 and THEA 102. This course is required for all Theatre Majors.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

THEA 103 Survey of Theatre Production credit: 4 Hours.

Provides a broad overview of the essential functions and practices of the following foundational technical theatre areas: Scenic Technology, Costume Technology, Lighting Technology, Sound technology, Properties Construction Scene Painting, and Stage/Production Management. Through lectures and labs the course provides students with practical application and basic skills essential in the areas of Design, Technology, and Stage Management.

THEA 110 Broadway Musicals credit: 3 Hours.

A cultural context of the uniquely "American" Broadway musical through an introduction to the art form, an analysis of the pertinent time period, and historical and critical placement of the work as a reflection (and development) of the identity of the United States. This course will introduce the collaborative artistry of the musical, survey specific iconic works, and explore the socio-economic impacts of the Broadway musical. Attendance at selected performances is required.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

THEA 125 Graphic Skills credit: 3 Hours.

Introduction to drawing, technical drafting, and model building for the theatre. Drawing and drafting supplies are required. Approved for letter and S/U grading. Prerequisite: Enrollment limited to Theatre majors only.

THEA 126 Stagecraft credit: 3 Hours.

Studies and training in materials, techniques, and processes used in executing scenery for the theater. Includes both classroom lectures and practical laboratory work in the Scenic Studio of Krannert Center. Prerequisite: Enrollment limited to Theater majors in Scenic Technology or consent of instructor.

THEA 170 Fundamentals of Acting I credit: 3 Hours.

Study of the methods of acting, with emphasis on basic acting techniques; role of character in relation to the play as a whole, the play's internal and emotional values, and their interpretation through voice and action.

THEA 175 Fundamentals of Acting II credit: 3 Hours.

Exploration and communication of experience through speech and action on the stage. Prerequisite: THEA 170.

THEA 180 Violence as a Narrative Tool credit: 3 Hours.

This course will examine the use of violence as a key element in the creation of narrative for theatre and film. Students will learn to identify and critique specific choices that directors, performers, and filmmakers use in developing scenes of violence to evoke specific responses from their audiences. In addition, this course will interrogate the relationship between theatrical violence and society. Using examples from works of theatre and cinema, students will examine, analyze, and critique the genres of "violence design," while gaining insight to the creative process of fight direction.

THEA 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 12 hours.

THEA 203 Theatre of Black Experience credit: 3 Hours.

Surveys the history and literature, and studies dramatic works focused on the black experience through the rehearsal and performance of representative works of black dramatists. May be repeated to a maximum of 9 hours.

THEA 208 Dramatic Analysis credit: 3 Hours.

Introduction to the study of plays for theatre practitioners employing analytical methods and plays from modern theatre. Requires paper or project assignments for each play. Prerequisite: Consent of instructor required for non-theatre majors.

THEA 210 The Tragic Spirit credit: 3 Hours.

Same as CLCV 222 and CWL 264. See CLCV 222. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

THEA 211 Introduction to Playwriting credit: 3 Hours.

Practical course in writing for the stage, including a study of basic dramatic construction and the analysis of weekly writing assignments, focusing on structure, style, and imagination, and culminating in a final term project of a one-act play. Prerequisite: THEA 208 or consent of instructor.

THEA 212 Introduction to Directing credit: 3 Hours.

Practical course in directing for the stage, focusing on script analysis, script preparation, casting, staging techniques, and design strategies, culminating in a directorial concept presentation of a contemporary play. Prerequisite: THEA 208.

THEA 218 Intro to Social Issues Theatre credit: 3 Hours.

An introductory exploration/survey of the rich histories, theories, and practices of community-based and social issues theatre. Through discussion, participation, lecture, and performance, representative works, movement, and artists will be explored. Lively connections will be made to an array of social issues in today's world. Same as GWS 218.

THEA 220 Survey of Theatrical Design credit: 3 Hours.

Survey of design elements in theatrical production including the function of scenery, costuming, lighting, and sound in conveying directorial concepts, style, and dramatic meaning. Intended for students not concentrating on theatrical design, this course requires both theoretical and practical projects. Prerequisite: THEA 102, THEA 208, or consent of instructor.

THEA 222 Introduction to Scenic Design credit: 3 Hours.

Projects and lectures addressing basic technical and aesthetic skills of scene design. Enrollment limited to Theatre majors. Prerequisite: THEA 125.

THEA 223 Intro to Technical Direction credit: 4 Hours.

Studies in the basic principles of technical direction and practical laboratory training in the materials, techniques, and processes for scenic construction and associated technologies. Prerequisite: Enrollment limited to Theater majors only.

THEA 231 Intro to Lighting Design credit: 3 Hours.

Develop an understanding of the basic aspects of lighting design and stage electrics for live performance.

THEA 260 Intro Asian American Theatre credit: 3 Hours.

Introduction to Asian American theatre, with emphasis on theatre companies, actors, playwrights, and audiences, through the reading of major dramatic works, examining production histories, and viewing Asian American performances and film. Same as AAS 260.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

THEA 262 Literature of Modern Theatre credit: 3 Hours.

Introduction to the principal modes of dramatic expression from around 1870 to the present day. Prerequisite: Completion of campus Composition I general education requirement and THEA 208; or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts

THEA 263 Intro African American Theat credit: 3 Hours.

Focuses on theatre artists, theatre companies, and the role of Historically Black Colleges and Universities (HBCU's). Students will read plays, view productions, screen documentaries, and examine various primary sources. Same as AFRO 212.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

THEA 270 Relationships in Acting I credit: 3 Hours.

Behavior in stage performance explored on the basis of the actor's relationship with self, with objects, and with other players; emphasizes analysis of playscript to discover action, environment, and relationships. Prerequisite: THEA 175 or consent of instructor.

THEA 271 Voice and Movement I credit: 2 Hours.

Fundamental development of vocal production as connected to body awareness and movement for the actor. Various exercised, conditioning, and training methods are used. Prerequisite: THEA 175 or consent of instructor.

THEA 275 Relationships in Acting II credit: 3 Hours.

Beginning scene work with special emphasis on analysis of plays, roles, characterization, and application of skills learned through improvisation and relationships in acting. Prerequisite: THEA 270 or consent of instructor.

THEA 276 Voice and Movement II credit: 2 Hours.

Further development of the interconnected vocal production and movement processes for the actor. Various exercised, conditioning, and training methods are used. Prerequisite: Enrollment limited to Theatre majors only.

THEA 323 The Comic Imagination credit: 3 Hours.

Same as CLCV 323 and CWL 322. See CLCV 323.
This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

THEA 360 History of Theatre I credit: 4 Hours.

History of the drama and theatre of ancient Greece and Rome, the Middle Ages, and the Italian and English Renaissance. Prerequisite: Junior standing or consent of instructor.

THEA 361 History of Theatre II credit: 4 Hours.

History of the drama and theatre of the Spanish Renaissance, seventeenth-century France, the English Restoration, the eighteenth and nineteenth centuries in Europe and America, and Asia. Prerequisite: THEA 360 or consent of instructor.

THEA 362 Chekhov credit: 3 Hours.

Same as RUSS 325 and CWL 325. See RUSS 325.

THEA 371 Acting Studio I: Dynamics credit: 1 Hour.

Development of movement and voice skills for actors. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 372, THEA 373, and THEA 374.

THEA 372 Acting Studio I: Voice credit: 2 Hours.

Concentrated training in standard speech for the stage and the International Phonetic Alphabet. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 373, and THEA 374.

THEA 373 Acting Studio I: Movement credit: 2 Hours.

Concentrated training in movement skills and mask characterization. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 372, and THEA 374.

THEA 374 Acting Studio I: Acting credit: 3 Hours.

Acting in realistic and naturalistic plays. A performance is given at the end of the term. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 372, and THEA 373.

THEA 375 Acting Studio II: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373 and THEA 374, and concurrent registration in THEA 376, THEA 377 and THEA 378.

THEA 376 Acting Studio II: Voice credit: 2 Hours.

Continued training in standard speech for the stage and the International Phonetic Alphabet. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374, and concurrent registration in THEA 375, THEA 377 and THEA 378.

THEA 377 Acting Studio II: Movement credit: 2 Hours.

Concentrated training in movement for the stage, body alignment and awareness. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374; and concurrent registration in THEA 375, THEA 376 and THEA 378.

THEA 378 Acting Studio II: Acting credit: 3 Hours.

Development of acting skills for musical theatre including dance, singing, and the analysis of British and American musical theatre materials. A performance is given at the end of the term. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374, and concurrent registration in THEA 375, THEA 376 and THEA 377.

THEA 391 Individual Topics credit: 2 Hours.

Individual projects and problems. Prerequisite: Consent of instructor.

THEA 392 Individual Topics credit: 2 Hours.

Individual projects and problems. Prerequisite: Consent of instructor.

THEA 399 Undergraduate Group Seminar credit: 1 to 4 Hours.

Group exploration of specialized topics. May be repeated in the same term to a maximum of 8 hours. May be repeated in subsequent terms to a maximum of 12 hours.

THEA 400 Practicum II credit: 1 to 3 Hours.

Advanced practical work in acting; theatre management; dramaturgy and directing; and the design, construction, and handling of scenery, lighting, sound, properties, costumes, and makeup for public performance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Enrollment limited to Theatre majors.

THEA 406 Opera/Dance Stage Management credit: 3 or 4 Hours.

Explores the professional practice of opera and dance stage management including understanding producing models, rehearsal and performance practices, and management techniques. Emphasis on building skills to prepare opera and dance prompt-books and production paperwork. 3 undergraduate hours. 4 graduate hours. In the BFA Stage Management Curriculum, this course would replace 3 credits of THEA 409 Stage Management Workshop. Prerequisite: Stage Management Majors only unless approved by instructor.

THEA 408 AEA Union Stage Management credit: 3 or 4 Hours.

Exploration of the Actors' Equity Association LORT contract: practices and concerns. Emphasis on practical use an application of union contracts with particular focus on workplace rules and regulations. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 451.

THEA 409 Stage Management Workshop credit: 3 or 4 Hours.

Explores advanced topics in stage management focusing on practical applications of principles learned in earlier courses. Possible topics include: Touring Stage Management, Stage Managing Opera and Dance, and Production Management. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or separate terms to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: THEA 445 and THEA 446.

THEA 410 Dramaturgs Workshop credit: 3 or 4 Hours.

Seminar course focusing on the role of the dramaturg in the collaborative process. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 12 graduate hours, if topics vary.

THEA 411 Playwrights Workshop credit: 3 Hours.

Seminar course focusing on the role of the playwright in the collaborative process. Course may be repeated as topics will vary. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 9 graduate hours. Prerequisite: THEA 211.

THEA 412 Directors Workshop credit: 3 Hours.

Seminar course exploring the role of the director in the collaborative process. Course may be repeated as topics will vary. 3 undergraduate hours. 3 graduate hours. May be repeated to maximum of 6 undergraduate hours or 9 graduate hours. Prerequisite: THEA 212.

THEA 415 Scenic Design I credit: 4 Hours.

Advanced problems in scene design for period and style plays and development of professional portfolio. 4 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours if topics vary. Cannot repeat a section already taken. Prerequisite: THEA 222 or consent of instructor.

THEA 417 Leading Post-Perform Dialog credit: 4 Hours.

Study of the history, processes, and methods of leading discussions with social issues theatre audiences. Emphasis on the skills and techniques of facilitators/peer educators; artistic considerations; function and application of the dramaturg; and practical experience through facilitation of social issues theatre dialog. Same as GWS 417. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above or consent of instructor.

THEA 418 Devising Social Issues Theatre credit: 3 or 4 Hours.

Focuses on the role of the artist as 'cultural worker' through devising theatre in a community-based context that is explicitly concerned with social and/or health-related issues. While there is substantial research, reading and critique involved, the overall experience will be that of rigorously composing theatrical work vital to the community. Same as GWS 418. 3 undergraduate hours. 4 graduate hours.

THEA 419 CAD Drafting for the Stage credit: 3 Hours.

Study and application of computer-aided design techniques for scenery construction and design, focusing on the use of AutoCAD to create technical drawings for theatre. 3 undergraduate hours. 3 graduate hours. May not be repeated for credit. Prerequisite: THEA 425; enrollment limited to Theatre majors or by consent of instructor.

THEA 423 Advanced Lighting Design credit: 3 or 4 Hours.

A study of lighting design as it relates to color, intensity, distribution, and movement. Material covered includes: script analysis, scenic breakdowns, photometrics and lighting for live performance. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231.

THEA 425 Stage Drafting credit: 3 Hours.

Traditional and digital drafting techniques for scenic and lighting design and for technical production. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 125. Theatre Majors only.

THEA 426 History of Decor credit: 3 Hours.

Historical and comparative survey of designs, motifs, and forms of decor in the West. Emphasis on the relation between research and design for the stage. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a max of 6 hours if topics vary.

THEA 427 Scene Painting credit: 2 Hours.

Techniques and practice of scene painting; lab time required. 2 undergraduate hours. 2 graduate hours. Prerequisite: Consent of instructor.

THEA 428 Scenic Painting II credit: 3 Hours.

In this course, students will study and apply advanced materials, techniques, and skills of scenic painting. Over the semester, students will work to improve their own skills and techniques, with an emphasis on techniques, mediums, surfaces, and process. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 3 hours if topics vary. Prerequisite: THEA 427.

THEA 430 Technical Direction credit: 3 Hours.

Advanced studies in technical direction and theatre production organization. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 223 or consent of instructor.

THEA 431 The Lighting Laboratory credit: 3 or 4 Hours.

The investigation of lighting design theories through paper projects and practical experimentation in the lighting lab. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, or graduate standing.

THEA 432 Lighting for Non-Theatrical Spaces and Styles credit: 3 or 4 Hours.

A strong focus on lighting for architecture, landscape architecture, special events, theme parks, museums, concerts and site-specific venues. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, THEA 431.

THEA 433 Business of Lighting Design credit: 3 or 4 Hours.

Practical approaches to working as a professional lighting designer. Material covered includes: unions, contracts, negotiations, agents, assistants vs. associates, city survival, promotional websites, touring, residencies, etc. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, THEA 431, THEA 432.

THEA 434 Advanced Lighting Seminar credit: 1 Hour.

An open discussion of current shows and trends in the lighting industry including Skype interviews with business professionals. 1 undergraduate hour. 1 graduate hour. Prerequisite: Theatre Majors Only.

THEA 435 Professional Lighting Systems credit: 2 Hours.

Practical study of state-of-the-art lighting technology for the theatre, using the facilities of the Krannert Center for the Performing Arts. In-depth study of lighting control systems and programming, instrument maintenance, special effects, and the role of the master electrician in production. 2 undergraduate hours. 2 graduate hours. May not be repeated for credit.

THEA 437 Software for Lighting Design credit: 2 Hours.

Practical study of lighting design software currently used in the professional theatre and the entertainment industry. As technology evolves and new software developed, software programs will be added. Accommodating upgrades may necessitate offering the course every other year. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: THEA 231 and THEA 425.

THEA 439 Stage Mechanics II credit: 3 Hours.

Examines newly accepted and developing techniques and materials used in constructing and rigging stage scenery with emphasis on metalworking. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours.

THEA 440 Stage Mechanics III credit: 3 Hours.

Study in advanced scenery methods and materials, including advanced woodworking, plastic-craft, and rigging. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 126.

THEA 442 Costume Patterning credit: 3 or 4 Hours.

Methods of draping and drafting patterns for period theatrical costumes. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

THEA 444 Costume Draping credit: 4 Hours.

Development of patterns for theatrical costumes through advanced draping techniques. Extensive lab work culminating in draping and constructing. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 442.

THEA 445 Costume History and Design I credit: 2 or 4 Hours.

Surveys theatrical costume and fashion of major periods; emphasizes relationships to styles of art and dramaturgy, social milieu, and production design. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Consent of instructor.

THEA 446 Costume History and Design II credit: 2 or 4 Hours.

Continuation of THEA 445. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: THEA 445 or equivalent.

THEA 447 Costume Rendering credit: 3 or 4 Hours.

Studio course in costume rendering techniques: analysis of costume figure, rendering of fabrics, exploration of various rendering media. Enrollment limited to Theatre majors. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

THEA 448 Advanced Costume Crafts credit: 3 or 4 Hours.

The research, rendering, and execution of armor, millinery, jewelry, and masks; dyeing with natural substances and with chemical dyes and the art of distressing clothing to achieve an aged, worn, tired or tattered look. Student is responsible for providing all materials used to complete the various projects. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 445 and THEA 446.

THEA 449 Costume Fabrication credit: 4 Hours.

Explores, through design projects, the appropriateness of various fabrics for specific costumes determined by historical accuracy, style, and constructability. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 445 and THEA 446. Costume Majors or consent of instructor.

THEA 450 Management Seminar credit: 1 Hour.

Addresses production and management issues surrounding Theater Department and KCPA productions. Guest speakers provide professional points of view on various management topics. 1 undergraduate hour. 1 graduate hour. May be repeated in separate terms to a maximum of 6 undergraduate or 6 graduate hours.

THEA 451 Principles of Stage Management credit: 3 or 4 Hours.

Studies in the principles and the craft of stage management. Enrollment limited to Theatre majors. 3 undergraduate hours. 4 graduate hours. Prerequisite: Minimum of sophomore standing in a Theatre curriculum.

THEA 452 Principles of Arts Management credit: 3 or 4 Hours.

Introduction to the basic practices of theatre and arts management with emphasis on facilities management, arts marketing, and financial planning in the performing arts. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior or graduate standing.

THEA 453 Theatre Sound Technology credit: 3 Hours.

Exploration of audio production techniques and equipment, as related to theatre sound. Related topics include acoustics, electronics, and music. 3 undergraduate hours. 3 graduate hours. Prerequisite: Enrollment limited to junior, senior or graduate theatre majors.

THEA 454 Sound Design I credit: 3 Hours.

Introduction to sound reproduction, recording, and basic systems design as applied to the modern theatre. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 453, THEA 455 and THEA 459.

THEA 455 Audio Production credit: 2 Hours.

Project-based study of professional techniques in audio recording, mixing, and editing for music, theatre, and film production, utilizing current digital technology. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: THEA 453.

THEA 456 Properties Design credit: 3 Hours.

Principles of stage property design, planning and management. 3 undergraduate hours. 3 graduate hours.

THEA 457 Model Making for the Stage credit: 2 Hours.

Familiarizes students with diverse techniques, materials, and tools available to model makers, especially in theatre design. Focuses work on traditional craftsmanship of 1/4" scale and 1/2" scale models including sculpting, casting, and soldering. Also address issues of scale, texture, color, and specialty finishes. Open to all designers, artists, and technicians, including students in Museum Studies. Prior knowledge of studio art helpful but not required. 2 undergraduate hours. 2 graduate hours. Prerequisite: Contact instructor for approval.

THEA 458 Rendering for Live Performance credit: 2 Hours.

Develops students' ability to realize visually their design ideas through drawings and renderings. Students will deal with perspective problems and study shadow and light. Focuses on painting techniques with various media on different surfaces and explorations of different materials used by known designers in the field. Students will be given opportunities to render specific design projects for their personal portfolios. Course consists of lectures, demonstrations, and in-class exercised. Open to all designers, artists, and technicians. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor required.

THEA 459 Sound Systems credit: 2 Hours.

Project-based study of professional techniques in sound system applications and design for sound reinforcement in music, theatre, and architectural applications. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: THEA 453.

THEA 460 Multi-Ethnic Theatre credit: 4 Hours.

Focuses on the history and aesthetics of African, Asian, African American, Asian American, Latino/Latina, and Native American plays and productions. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 102.

THEA 462 Advanced Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on the advanced tools and skills of creating programmed images for live performance of dance, theatre and music theatre. Students will acquire advanced technical skills as well as continue to explore to the relationship of projected images to text, performer, space and time. Lectures and projects develop advanced skills with digital technology, images and projections in live performance. 3 undergraduate hours. 4 graduate hours.

THEA 463 American Theatre History I credit: 3 or 4 Hours.

Survey of the development of American theatre as a cultural, social, political, and economic institution from the colonial era to 1900. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing.

THEA 464 American Theatre History II credit: 3 or 4 Hours.

Survey of the development of American theatre as a cultural, social, political, and economic institution from the late nineteenth century to the present. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior or graduate standing.

THEA 465 Musical Theatre History credit: 4 Hours.

History of the American musical in the twentieth century, studied through the contributions of major composers, lyricists, directors, and choreographers. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above, or consent of instructor.

THEA 467 Contemporary Theatrical Forms credit: 3 or 4 Hours.

Study of post-World War I theatre, including the New Stagecraft, expressionism, Brecht and epic theatre, theatre of the absurd, and later developments. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 208, and junior, senior or graduate standing.

THEA 471 Acting Studio III: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. 1 undergraduate hour. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 472, THEA 473 and THEA 474.

THEA 472 Acting Studio III: Voice credit: 2 Hours.

Advanced training in voice and speech for the stage with emphasis on classic texts. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 471, THEA 473 and THEA 474.

THEA 473 Acting Studio III: Movement credit: 2 Hours.

Training in stage combat, sword, and rapier. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 471, THEA 472 and THEA 474.

THEA 474 Acting Studio III: Acting credit: 3 Hours.

Acting in Shakespearean and other Elizabethan, Jacobean, and Caroline drama. A performance is given at the end of the term. Enrollment limited to Theatre majors. 3 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent enrollment in THEA 471, THEA 472 and THEA 473.

THEA 475 Acting Studio IV: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. 1 undergraduate hour. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 476, THEA 477 and THEA 478.

THEA 476 Acting Studio IV: Voice credit: 2 Hours.

Advanced training in voice and speech for the stage with emphasis on dialects. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 477 and THEA 478.

THEA 477 Acting Studio IV: Movement credit: 2 Hours.

Advanced training in unarmed stage combat and quarterstaff. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 476 and THEA 478.

THEA 478 Acting Studio IV: Acting credit: 3 Hours.

Studies in the techniques of acting for the camera and cold readings; analysis of distinguished film acting. Scenes are recorded in the television studio. Enrollment limited to Theatre majors. 3 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 476 and THEA 477.

THEA 479 Preparation for Auditions credit: 2 Hours.

Each actor, through extensive research, prepares a portfolio of audition pieces for the opportunities imminent before and after graduation for resident companies, commercial productions, and film, or professional graduate schools. Enrollment limited to Theatre majors. 2 undergraduate hours. 2 graduate hours. Prerequisite: THEA 375, THEA 376, THEA 377, THEA 378.

THEA 481 Content Creation 1: Camera and Editing for Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on creating original video content. There is special emphasis on producing media assets to be used as a part of live performance of dance, theatre and music theatre. Lecture and classwork projects develop skills in developing image ideas from text to storyboards to camera images to completed motion video. 3 undergraduate hours. 4 graduate hours.

THEA 482 Content Creation 2: Motion Graphics & VFX for Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on creating motion graphics & video special effects content. There is special emphasis on producing media assets to be used as a part of live performance of dance, theatre and music theatre. Lecture and classwork projects are intended to explore and develop skills in preparing still images and animating them into motion video. 3 undergraduate hours. 4 graduate hours.

THEA 483 Modern Scandinavian Drama credit: 3 or 4 Hours.

Same as CWL 463 and SCAN 463. See SCAN 463.

THEA 485 Prop Furniture Construction credit: 3 or 4 Hours.

This course explores the skills and tools commonly used for furniture construction. Students will learn a variety of fine woodworking techniques while constructing samples that will ultimately lead to a realized piece of furniture. In this advanced course of study, students will focus on joinery, the properties of finer lumber choices, programming the CNC for automated cutting assistance, the use of a wood lathe, and natural fiber upholstery techniques such as rushing and caning. 3 undergraduate hours. 4 graduate hours. Prerequisite: Students taking this class should have prior carpentry and woodworking experience and a familiarity with bench tools, hand tools, various glues, and common construction materials.

THEA 488 Premodern Chinese Drama credit: 3 or 4 Hours.

Same as CWL 416 and EALC 413. See EALC 413.

THEA 490 Professional Internship credit: 0 to 14 Hours.

Professional work with an approved host theatre or institution in an area related to the student's academic program; exposure to and participation in professional theatre. Full documentation and approval of internship activities required. 0 to 14 undergraduate hours. 0 to 12 graduate hours. Approved for S/U grading only. May be repeated in the same or subsequent terms, if topics vary. Prerequisite: Junior, senior, or graduate standing in Theatre; consent of Internship Coordinator.

THEA 491 Advanced CAD Drafting for Lighting Designers credit: 3 or 4 Hours.

Advanced practical study of CAD drafting for lighting designers and technicians utilizing current industry software. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 437.

THEA 492 Digital Rendering for Lighting credit: 3 or 4 Hours.

An exploration of 3-D rendering techniques for live performance using software specific to the lighting industry. Teach skills necessary to create an artistic representation of a design and to imagine a production. 3 undergraduate hours. 4 graduate hours.

THEA 493 Lighting Opera & Musicals credit: 3 or 4 Hours.

An advanced study of techniques used for lighting musicals and operas through paper projects and various lectures. 3 undergraduate hours. 4 graduate hours.

THEA 494 Advanced Problem Solving for Lighting Designers credit: 3 or 4 Hours.

Practical projects to help lighting designers and technicians prepare for unforeseen problems that arise in professional situations when dealing with various lighting projects and gear. Topics addressed include storytelling, plot, practical lighting, and repertory. 3 undergraduate hours. 4 graduate hours.

Urban and Regional Planning, Department of

Daniel Schneider, Interim Department Head

111 Temple Hoyne Buell Hall
611 East Lorado Taft Drive
Champaign, IL 61820
PH: (217) 333-3890
<http://www.urban.illinois.edu>

BAUSP Director: Alice Novak, Assistant Head

The Department of Urban and Regional Planning offers a program leading to the degree of Bachelor of Arts in Urban Studies and Planning. The aim of urban planning is to sustain and enhance the quality of life in cities and regions. Therefore, in addition to technical skills, students also acquire a broad liberal education that leads to an understanding of the natural and social environments, their problems, and their potential for enriching human life. The urban planning degree emphasizes skills in analysis, problem solving, and communication within complex urban and social contexts. As a result, undergraduate planning education leads to diverse professional careers or graduate study in urban planning or related professions, such as law, business, public policy or public administration. Continuation in the program requires the student to maintain a 2.00 grade point average. The degree is professionally accredited by the Planning Accreditation Board.

A transfer student must have completed 30 or more semester hours of acceptable undergraduate college work (including introductory courses in microeconomics, statistics, and sociology; a sequence in English composition is desirable) with an earned grade point average of at least 2.75 (A = 4.0). Transfer applicants not meeting these requirements will be considered in special cases.

The Department also offers a minor in Urban Studies and Planning. The minor provides students with the opportunity to apply disciplinary knowledge from a variety of fields (such as economics, politics, environmental science, informatics, sociology, architecture, landscape

architecture) toward understanding urban phenomena and planning for orderly, efficient, functional, environmentally friendly, and aesthetically pleasing urban development. The minor introduces students to a) cities as arenas with challenges such as housing affordability, population segregation, neighborhood disinvestment and decline, environmental pollution, and traffic congestion; and b) professional planning practice, which devises actions to address such issues and improve the quality of life in urban areas. Urban issues are explored on a range of scales from the neighborhood to the mega city.

The Department's administrative and faculty offices, classrooms, and computer laboratory space are located in Temple Hoyne Buell Hall. Students may go to Room 111 for information.

The Department of Urban and Regional Planning also offers a program of graduate studies leading to the Master of Urban Planning degree, joint degree programs with the Master of Architecture, Master of Landscape Architecture and the Juris Doctor degrees, and the Doctor of Philosophy in Regional Planning.

For the Degree of Bachelor of Arts in Urban Studies & Planning (BAUSP)

A minimum of 120 hours is required for this degree.

Current University of Illinois General Education requirements include courses in humanities, composition, social sciences, natural sciences and technology, cultural studies, quantitative reasoning, and foreign language. See the General Education Web site (<http://www.courses.illinois.edu/gened>) for information on courses that meet these requirements.

Summary of Requirements

Code	Title	Hours
1st Year		
UP 101	Introduction to City Planning	
4 Foundation Courses		
2nd Year		
UP 201	Planning in Action	
UP 203	Cities: Planning & Urban Life	
or UP 204	Chicago: Planning & Urban Life	
Concentration Gateway Course		
3rd Year		
UP 312	Communication for Planners	
UP 316	Urban Informatics II	
Concentration Electives		
UP 301	Capstone Preparation	
4th Year		
Concentration Workshop (UP 447, UP 455, UP 456, UP 457, or UP 478)		
Capstone Experience (UP 390 or UP 397)		
UP 401	Undergraduate Capstone Seminar	
Plus 15 hours of UP electives, GE not met by UP foundation & Core, and open electives.		

Foundation Courses

Code	Title	Hours
RHET 105	Writing and Research (or equivalent)	4
3-4 hours selected from:		
AAS 100	Intro Asian American Studies	
AFRO 100	Intro to African American St	
AIS 102	Contemp Issues in Ind Country	
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
LLS 100	Intro Latina/Latino Studies	
SOC 100	Introduction to Sociology	
ECON 102	Microeconomic Principles	3
or ACE 100	Agr Cons and Resource Econ	
UP 116	Urban Informatics I (or equivalent)	3
or STAT 100	Statistics	
Total Hours		10

Urban Studies and Planning Core

Code	Title	Hours
UP 101	Introduction to City Planning	3
UP 201	Planning in Action	3
UP 203	Cities: Planning & Urban Life	3
UP 312	Communication for Planners	4
UP 316	Urban Informatics II	3

Sustainability Concentration

Code	Title	Hours
UP 205	Ecology & Environmental Sustainability (Gateway)	3
Select 2 courses from:		6-8
UP 136	Urban Sustainability	
UP 405	Watershed Ecology and Planning	
UP 420	Plng for Historic Preservation	
UP 446	Sustainable Planning Seminar	
UP 460	Transportation/Land Use Policy	
UP 466	Energy, Plng & Blt Environment	
UP 480	Sustainable Design Principles	
UP 456	Sustainable Planning Workshop (Workshop)	4

Policy and Planning Concentration

Code	Title	Hours
UP 211	Local Planning, Gov't and Law (Used to be UP 311. This is the Gateway course for Policy and Planning.)	3
Select 2 courses from:		6-8
UP 330	The Modern American City	
UP 340	Planning for Healthy Cities	
UP 345	Economic Development Planning	
UP 407	State and Local Public Finance	
UP 420	Plng for Historic Preservation	
UP 430	Urban Transportation Planning	
UP 460	Transportation/Land Use Policy	

UP 473	Housing & Urban Policy
UP 474	Neighborhood Revitalization
Select 1 Workshop Course from:	
UP 447	Land Use Planning Workshop
UP 455	Economic Development Workshop
UP 457	Small Town/Rural Planning Workshop

Social Justice Concentration

Code	Title	Hours
UP 260	Social Inequality and Planning (Gateway)	3
Select 2 courses from:		6-8
UP 335	Cities and Immigrants	
UP 340	Planning for Healthy Cities	
UP 423	Community Development in the Global South	
UP 473	Housing & Urban Policy	
UP 478	Community Development Workshop (Workshop)	4

Global Cities Concentration

Code	Title	Hours
UP 185	Cities in a Global Perspective (Gateway)	3
Select 2 courses from:		6-8
UP 335	Cities and Immigrants	
UP 423	Community Development in the Global South	
Workshop: Study Abroad		4

Capstone

Required Courses:	Required Hours
Capstone Preparation: During the 3rd year, students enroll in UP 301, Capstone Preparation. Students meet individually with their capstone advisor to develop a plan to meet the capstone requirement. To pass this course students must turn in a proposal at the end of the semester.	1

Capstone Experience: Students engage in a semester or summer-long applied activity outside of the classroom. The Capstone Experience is intended to engage the students in the real world and prepare them for the job market. Students typically complete this requirement during their junior year, but have the option to complete it during the summer between their 3rd and 4th year. Examples include a paid or unpaid internship, volunteer work, consulting project with a client, summer research and more. Students enroll in UP 390, Planning Internship, and/or UP 397, Undergraduate Capstone, to receive credit.

Capstone Seminar: During the 4th year, students enroll in UP 401 for 2 semesters. Students will participate in monthly activities to discuss and reflect on the Capstone Experience. In addition, students will present a poster summarizing their capstone experience in a public setting; for example at a public engagement conference, public meeting or community meeting, McNair Scholars conference, James Scholars event, Illinois American Planning Association meeting, undergraduate research symposium, or other venue. The seminar sessions also include career development such as resume writing, interviewing and networking with professionals through the Wetmore Lecture Series.

Minor in Urban Studies and Planning

Code	Title	Hours
UP 101	Introduction to City Planning	3
UP 203	Cities: Planning & Urban Life (prerequisite: UP 101)	3
or UP 204	Chicago: Planning & Urban Life	
Elective courses offered by DURP. At least six (6) hours of coursework must be advanced courses (300- or 400-level) and distinct from credit earned for the student's major or another minor.		14
Total Hours		20

Admission criteria: 2.75 GPA, as space is available. For admission criteria and process, see www.urban.illinois.edu (<http://www.urban.illinois.edu>) or contact the BAUSP Director, Alice Novak, at novak2@illinois.edu.

UP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/UP>)

Courses

UP 101 Introduction to City Planning credit: 3 Hours.

Provides an introduction to urban and regional planning by examining the history of American urbanization, the evolution of American planning thought and practice, and contemporary issues and planning approaches.

UP 116 Urban Informatics I credit: 3 Hours.

Introduces students to basic analytical techniques used to better understand how cities work. Topics include the foundational statistical concepts of data, variation, and inference. Students formulate a research question about an urban studies or planning issue, collect data, use statistical software to analyze data, and communicate the findings.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

UP 136 Urban Sustainability credit: 3 Hours.

Provides students with a basic understanding of how to make cities more sustainable by connecting how and where we live to environmental issues. Emphasis on green infrastructure and urban systems, vulnerability and resilience, green design and construction methods, energy production and consumption, and water conservation.

UP 185 Cities in a Global Perspective credit: 3 Hours.

Introduction to the process of urbanization from a global perspective by exploring the social, political, cultural and economic forces that shape urban life. Students will learn to analyze urban development in a range of cities including those in the Middle East and South Asia, Latin America and Africa.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

UP 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

UP 201 Planning in Action credit: 3 Hours.

Introduces students to different career paths open to urban studies and planning majors. Students interact with professionals and take part in hands-on activities related to different concentration areas: sustainability, policy & planning, social justice and global cities.

UP 203 Cities: Planning & Urban Life credit: 3 Hours.

Provides a broad introduction to social science theories and analysis methods to examine how people, communities, and governments plan a city. Draws upon theories and methods of several social science disciplines including economics, geography, political science, anthropology and sociology. Includes hands-on application of fundamental analysis techniques. Credit is not given for both UP 203 and UP 204. Prerequisite: UP 101.

UP 204 Chicago: Planning & Urban Life credit: 3 Hours.

Provides a broad introduction to social science theories and analysis methods, and uses the City of Chicago as a semester-long case study to examine how people, communities, and governments plan a city. Draws upon theories and methods of several social science disciplines including economics, geography, political science, anthropology, and sociology. Balances themes and concepts from the assigned readings with discussion of Chicago-specific case studies and hands-on application of fundamental analysis techniques. Credit is not given for both UP 204 and UP 203. Prerequisite: UP 101.

UP 205 Ecology & Environmental Sustainability credit: 3 Hours.

Basic ecological principles underlying environmental sustainability. Examination of problems that arise from inadequate consideration of structure and function of ecological systems, and approaches to ecological restoration and environmentally sound planning. Applications of principles to case studies drawn from urban planning, natural resource management and sustainable development.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

UP 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ECON 210, ENV 210, and NRES 210. See ACE 210. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

UP 211 Local Planning, Gov't and Law credit: 3 Hours.

Provides students with a basic understanding of the governmental structure, legal aspects, and practice of local municipal planning, with special emphasis on case law, constitutional principles, zoning, subdivision regulations and comprehensive planning. Gives an introduction for students interested in pursuing more advanced studies in land use law and local government planning.

UP 260 Social Inequality and Planning credit: 3 Hours.

How are inequalities produced and contested in an urban environment? This course examines this question by analyzing how the urban landscape shapes and is shaped by race, class, and gender inequalities. Uses comparative cases to explore successful intervention, both from formal and informal, across multiple scales from the local to the global. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

UP 301 Capstone Preparation credit: 1 Hour.

Students work with capstone advisor to develop a plan to meet the capstone experience requirement. Students submit a proposal at the end of the semester. Approved for S/U grading only. Prerequisite: Junior standing.

UP 312 Communication for Planners credit: 4 Hours.

Integrates written, verbal, and graphic communication techniques into planning and analysis. Activities simulate professional situations where students develop skills and pieces of broader arguments and synthesize them into final products. Prerequisite: Completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for:
Advanced Composition

UP 316 Urban Informatics II credit: 3 Hours.

Provides an introduction to formal methods for collecting and analyzing data required in various planning processes. Methods include survey research, regional demographic and economic analysis, forecasting techniques, benefit-cost analysis, and decision analysis. Prerequisite: UP 116 or an introductory statistics course. This course satisfies the General Education Criteria for:
Quantitative Reasoning II

UP 330 The Modern American City credit: 3 Hours.

Explore the transformation of the American city in its journey from abandonment to renewed growth. Cities today are sites of rapid change and experimentation with new ideas for how people can and should live. This course examines the resurgence of American cities, the challenges they face, and their transformation in the 21st century. Each week, class will focus on a different aspect of the modern American city--work, housing, globalization, high finance--and explore its promises, challenges, and implications for the future.

UP 335 Cities and Immigrants credit: 3 Hours.

Focuses on the experiences of United States cities and towns undergoing rapid demographic economic, social, and cultural changes and the local responses to those changes, including local policy making, land-use regulations, community controversy, and grassroots activism. Same as SOCW 335.

UP 340 Planning for Healthy Cities credit: 3 Hours.

Explores the evolving role of health in urban planning. Historical and current theories on the relationship between public health and the built environment are highlighted, as are prescriptions for healthy urban design. Community health planning, health disparities, and the needs of special populations in the city are also examined, along with some of the major policy issues affecting urban health care today.

UP 345 Economic Development Planning credit: 3 Hours.

Public-private-partnerships in urban economic development, including study of potentials, problems, and projects; financing urban economic development through federal grant programs, tax increment financing, and other means.

UP 347 Junior Planning Workshop credit: 6 Hours.

Introduction to planning practice, with an emphasis on physical planning skills. Includes field observation, spatial data analysis, professional communication, and design. Prerequisite: UP 205, UP 312, UP 260 and UP 316.

UP 357 The Land Development Process credit: 3 Hours.

The planning practice requires an understanding of the land development process. In this course students will learn about the decision process used for land development and the technical skills required for reading site plans. The course provides the essential skills necessary in the field of public-sector planning. Developers are required to make key determinations in the decision process for developing land. Planners are required to understand these decisions and they must possess the ability to interpret proposed site plans for development. This includes an understanding of existing conditions of land proposed for development and the impact of new development on the site and surrounding areas. This course contains three primary components in teaching an understanding of the land development process. They are: Understanding Market Decision for Developing Land; Reading Site Plans; and Assembling a Development Plan. Credit is not given for UP 357 if credit for UP 347 has already been given. Prerequisite: UP 312-Communication for Planners is highly recommended or basic familiarity with InDesign, Illustrator, and SketchUp.

UP 390 Planning Internship credit: 0 to 4 Hours.

Professionally supervised field experience in public and private planning or development agencies. Designed to introduce students to professional employment and actual planning practice. Students work in an agency of their own choice, subject to departmental approval, either during the summer session or part-time during a regular term. At least two weeks of full-time employment or its equivalent is required for each term hour of credit to a maximum of 4 hours. Summary reports are submitted by both employer and student. Approved for S/U grading only. May be repeated. Counts toward the Capstone Experience Requirement. Prerequisite: Upper division undergraduate standing in urban planning.

UP 397 Undergraduate Project credit: 1 to 3 Hours.

Special projects and applied research related to real world urban problems and professional practice. One credit hour requires approximately 80 hours of work. May be repeated up to 3 hours. Counts toward the Capstone Experience Requirement. Prerequisite: Upper division standing in Urban Planning and consent of Capstone advisor.

UP 401 Undergraduate Capstone Seminar credit: 1 Hour.

Seminar for peer discussion about the capstone experience and required capstone experience presentation. Students will attend lectures and workshops about career opportunities, resume writing, interviewing, and networking. Meets on a monthly basis. 1 undergraduate hour. No graduate credit. Approved for S/U grading only. May be repeated in separate terms up to 2 hours. Prerequisite: Senior standing.

UP 405 Watershed Ecology and Planning credit: 4 Hours.

Uses the watershed as the basic organizing concept in environmental planning and management; methods for assessing watershed boundaries, soils, land use, and groundwater system processes and developing plans for watershed protection. Emphasizes ecological implications of patterns of land use on functional and qualitative aspects of watershed systems. All-day field trip required. 4 undergraduate hours. 4 graduate hours. Prerequisite: Should have a previous course in environmental science.

UP 406 Urban Ecology credit: 4 Hours.

Examines cities as natural systems, combining ecological analyses with historical, anthropological, and sociological studies of urban nature. Addresses ecological sustainability, growth management, biodiversity, restoration, and environmental justice. Required field trip. Same as ENVS 406. 4 undergraduate hours. 4 graduate hours.

UP 407 State and Local Public Finance credit: 4 Hours.

Provides students with an understanding of the fundamental concepts of fiscal planning at the state and local levels of government. Addresses both the theory and methods of state and local finance, focused on state and local fiscal policy. Addresses emerging policy issues involving land use and taxation, spending and budgeting, intergovernmental cooperation, debt financing, financing for economic development, and privatization. 4 undergraduate hours. 4 graduate hours.

UP 418 GIS for Planners credit: 4 Hours.

Detailed introduction to the design and use of computerized geographic information systems, focusing on their significance for planning. Emphasizes GIS within an institutional setting, covering not only fundamental technical concepts, but also organizational, management, and legal issues. Students will be introduced to GIS applications and products through readings, videos, demonstrations, and exercises. Computer laboratory work is included. 4 undergraduate hours. 4 graduate hours. Prerequisite: Upper division undergraduate or graduate standing.

UP 420 Png for Historic Preservation credit: 4 Hours.

Historic preservation in the context of urban planning, including legal issues and ordinances, economic incentives, comprehensive plans and preservation plans, public participation, media relations, and more. Students will conduct a building survey including research and architectural descriptions for an on-going project in Urbana. Tours of local preservation projects. 4 undergraduate hours. 4 graduate hours. Prerequisite: At least junior standing.

UP 423 Community Development in the Global South credit: 4 Hours.

Introduces students to the main theoretical frameworks and conceptual building blocks of urban and community development in the Global South. It helps students to develop critical grassroots focused understanding of the approaches to development planning, the notion of community participation and empowerment, and the role of various actors including the non-government organizations and the community-based groups. 4 undergraduate hours. 4 graduate hours.

UP 426 Urban Design and Planning credit: 4 Hours.

Concepts and techniques of urban analysis, plan making, and implementation essential for effective interdisciplinary work in urban design. 4 undergraduate hours. 4 graduate hours. Prerequisite: Senior standing.

UP 428 International Planning Studio credit: 3 to 6 Hours.

Involves multidisciplinary student teams developing design or policy proposals for urban development of sites in international contexts. The studio combines seminar and studio/workshop formats to apply critical analysis, define planning problems, and propose solutions that integrate the social, economic, physical, and cultural aspects of site development. 3 to 6 undergraduate hours. 3 to 6 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

UP 430 Urban Transportation Planning credit: 4 Hours.

Role of transportation in urban development and planning; characteristics of urban-person transportation systems and methods of analysis and forecasting of urban-person transportation demand; transportation systems management and capital improvement programming; and emphasis on the needs and activities of metropolitan planning organizations. Same as CEE 417. 4 undergraduate hours. 4 graduate hours.

UP 436 Urban Design Workshop credit: 4 Hours.

Examines urban design theory and principles, and evaluates the built environment in a lab-based setting. Working in teams, students become immersed in real work examples and propose design interventions for specific places, including socially diverse neighborhoods in small cities and major metropolitan urban centers. Normally includes active engagement with community residents. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 426, senior or graduate standing, or consent of instructor.

UP 438 Disasters and Urban Planning credit: 4 Hours.

Introduction to the role of urban planners in preparing for and rebuilding after disasters. Emphasizes U.S. planning practice, with particular attention to the role of local government. Includes basic U.S. emergency management laws and framework, local mitigation planning, and post-disaster recovery planning. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate standing, senior in Urban Planning, or consent of instructor.

UP 441 Land Resource Evaluation credit: 4 Hours.

Same as LA 441. See LA 441.

UP 443 Scenarios, Plans & Future Cities credit: 3 Hours.

This course teaches theories and tools of scenario analysis, a set of techniques useful for making plans and creating more sustainable future cities. Scenario analysis can be used to think about multiple facets of a problem simultaneously and for addressing the uncertain future in light of the limited cognitive and computational capacity of individuals and organizations. Urban planners and policymakers are adopting and extending scenario approaches to envision the future, analyze decisions, and identify robust strategies in situations as varied as comparing projected outcomes of alternative routes for highway investment, to making decisions in situations when formal regulatory mechanisms may be lacking. The need for knowledge and skills in this area is reflected in (1) the growing use of scenario analysis as a required method in many government-funded planning initiative in the United States and around the world, (2) new courses and workshops offered by urban planning programs and professional trainers, such as the American Planning Association and Planetizen, and (3) the sprouting of scenario planning support tools, such as Envision Tomorrow and Index PlanBuilder. 3 undergraduate hours. 3 graduate hours. Prerequisite: A completion of an urban planning class would be useful. Junior standing is required.

UP 446 Sustainable Planning Seminar credit: 4 Hours.

Same as LA 446, GEOG 446, and NRES 446. See LA 446.

UP 447 Land Use Planning Workshop credit: 4 Hours.

Small group field work applying principles and techniques to specific land use problems in selected jurisdictions. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 211, senior or graduate standing, or consent of instructor.

UP 455 Economic Development Workshop credit: 4 Hours.

Small group field work applying principles and techniques of economic development planning and policy analysis to specific problems in selected cities, regions, or states. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 345 or consent of instructor.

UP 456 Sustainable Planning Workshop credit: 4 Hours.

Focuses on applying sustainable planning principles in a real world setting. Readings and research into indices of sustainable development, sustainable urbanism, and related literature help establish parameters for resolving a local planning project. Course is a hybrid workshop with portions of the semester spent on reading, research, and application working with a local planning agency. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 136 and UP 205, senior or graduate standing, or consent of instructor.

UP 457 Small Town/Rural Planning Workshop credit: 4 Hours.

What is rural and why does it matter? This workshop focuses on small towns and rural communities using Central Illinois communities in local case studies. Students will apply concepts and skills from prior courses and work extensively in teams to compile, synthesize, and communicate information that furthers planning and placemaking efforts. Archival research techniques; analysis of demographic, social, and economic trends; qualitative interviewing; and documentary film production are examples of the kinds of skills students will develop and refine. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 211, senior or graduate standing, or consent of instructor.

UP 460 Transportation/Land Use Policy credit: 4 Hours.

Provides an integrated perspective and analytical framework for understanding urban transportation and land use policies. Emphasizes the interplay between the built environment and transportation by focusing on: fundamental travel demand theories; performance measures of urban transportation systems; impacts of transportation on land use and urban form; impacts of land use and urban form on travel patterns; congestion pricing; public transportation and active transportation; and transit oriented development (TOD). 4 undergraduate hours. 4 graduate hours.

UP 466 Energy, Plng & Blt Environment credit: 4 Hours.

Focuses on the study of buildings, including their past and present uses, their place in the environment, and most importantly, how they can become more sustainable. Teaches students to think about and plan physical space from an energy- and climate-centric perspective. Uses climate mitigation and building energy systems-modeling techniques to analyze potential energy systems reductions and approaches to affect a building's carbon footprint. Same as LA 466. 4 undergraduate hours. 4 graduate hours.

UP 470 Shrinking Cities credit: 4 Hours.

This seminar examines urban shrinkage—a phenomenon typically associated with population loss, but also characterized by obsolescence, disinvestment, and abandonment. While some cities thrive and struggle to house the global urban majority, other cities face the stark reality of shrinkage and decline. What should we do to envision and enact a viable future for our shrinking cities? This course will be taught as a seminar, using readings, student facilitated discussions, and lectures as a means for creating a shared understanding around urban shrinkage. Literature from Planning, Economics, Sociology, and other areas will contribute to discussions of the meaning of urban decline as a set of social, economic, and spatial phenomena. Some seminar sessions will be "lab" sessions, focused on developing your analytical skillset via qualitative and quantitative methods. 4 undergraduate hours. 4 graduate hours. Credit is not given for UP 470 if credit for UP 494-AG has been given. Prerequisite: Students must have at least a junior standing.

UP 473 Housing & Urban Policy credit: 4 Hours.

The role of housing in American social policy planning: the history of public and private intervention in housing, regulation of supply and demand within housing markets and market imperfections; analysis of public policies for housing as they affect special populations (for example, the poor, the elderly, the disabled, homeless, and minorities). 4 undergraduate hours. 4 graduate hours.

UP 474 Neighborhood Revitalization credit: 4 Hours.

Examines rationale and techniques for planning at the neighborhood level; the major social, political, and economic issues that confound public and private sector efforts to revitalize distressed neighborhoods. 4 undergraduate hours. 4 graduate hours.

UP 475 Real Estate Development Fundamentals credit: 4 Hours.

This course will provide an introduction to the fundamental concepts and techniques applied in the real estate development process. In addition, this course will examine both the broader economic and social context in which real estate development is situated as well as how various professions interact within this context. Course assessments will include several case study assignments and a group project using an actual development site that will provide students with the chance to apply the concepts and techniques learned in the course, culminating in a final report and presentation. The overall objective of the course is to provide students with a useful framework for understanding the real estate development process, allowing them to identify viable development opportunities and analyze real estate development projects, while weighing the economic, social, and environmental costs and benefits for a community. 4 undergraduate hours. 4 graduate hours. Credit is not given for UP 475 if credit was already given for UP 494-RE. Prerequisite: This course has no prerequisites, however, having had at least an introductory urban planning class would be helpful. Upper-level or graduate standing is recommended.

UP 478 Community Development Workshop credit: 4 Hours.

Application of community development principles and techniques to the solution of environmental, economic and social problems facing low income urban communities. Involves small group projects and off-campus field work in collaboration with community leaders. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 260, senior or graduate standing, or consent of instructor.

UP 480 Sustainable Design Principles credit: 2 Hours.

Same as LA 480. See LA 480.

UP 481 Urban Communities & Public Pol credit: 3 or 4 Hours.

Same as AFRO 481 and SOC 472. See AFRO 481.

UP 493 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, NRES 494, SOC 493. See GEOG 493.

UP 494 Special Topics in Planning credit: 1 to 6 Hours.

Seminar on topics of current interest, as announced in the Schedule. 1 to 6 undergraduate hours. 1 to 6 graduate hours. May be repeated to a maximum of 16 hours.

Minor in Art History

The minor in art history is designed for students who seek to study art history in depth as a compliment to their major area of study. The minor provides students with an education in art history that is balanced and diverse culturally, temporally, and geographically. It allows students to choose from a variety of introductory courses that cover a variety of regions, cultures, and periods.

Contact: Mark Avery

Coordinator of Undergraduate Academic Affairs

140 Art and Design Building, Champaign, 333-6632, mavery@illinois.edu

Course Requirements

Students must meet the following course requirements for a total of 20 hours¹

Code	Title	Hours
Select two of the following (one of which must be ARTH 113 or ARTH 114):		
ARTH 111	Ancient to Medieval Art	8
ARTH 112	Renaissance to Modern Art	

ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
ARTH 395	Junior Seminar in Art History	3
ARTH courses at the 200, 300, or 400 level ²		3
ARTH courses at the 300 or 400 level		6

¹ A maximum of one course from either the History of Architecture or the History of Landscape Architecture will count toward the requirements of the Art History Minor.

² At least one course must be primarily concerned with a subject outside of Europe and the Modern Americas. A maximum of one course from other universities will satisfy the requirements for upper-level Art History courses.

General Studies, Division of

Daniel J. Turner, Ph.D., Director

Kristi Kuntz, Associate Provost

Campus Center for Advising and Academic Services (CCAAS)

Illini Union Bookstore Building,

Fifth Floor

807 S. Wright Street

Champaign, IL 61820

(217) 333-4710

PH: 2173334710

<http://dgs.illinois.edu>

genstudies@illinois.edu

The Division of General Studies (DGS) assists undeclared students with the process of exploring and declaring majors at the University of Illinois by providing holistic, developmental academic advising. DGS offers students the ability to connect with academic advisors who are committed to their success.

The Division of General Studies helps students:

- Clarify their academic, personal, and career goals;
- Identify their strengths, skills, interests, and values;
- Understand the process of exploring majors at Illinois;
- Identify the programs of study available at Illinois;
- Understand specific programmatic and degree requirements;
- Understand the Intercollegiate Transfer (ICT) process at Illinois;
- Recognize the significance of and their responsibility in the academic advising relationship;
- Learn about and connect with appropriate campus resources and services;
- Learn about the educational opportunities available at the University of Illinois including undergraduate research, study abroad, tutoring, leadership development, involvement in student organizations, volunteer experiences, and connections with faculty.

DGS provides students with opportunities to participate in academic achievement programs, the James Scholar Honors program, and short-term study abroad experiences. In addition, all DGS students enroll in an introduction to the university course, General Studies 101 (GS 101), to assist with their transition to college life and provide insight into the major exploration process at Illinois. Students may be enrolled in the

Division of General Studies for up to four semesters before being required to declare a major in one of the undergraduate colleges at the University of Illinois.

Liberal Arts and Sciences, College of

2002 Lincoln Hall

702 South Wright Street

Urbana, IL 61801

(217) 333-1705

<http://las.illinois.edu>

The College of Liberal Arts and Sciences (LAS) has four missions: scholarly inquiry and the generation of knowledge, preparation of individuals for an array of careers and professions, service to the public, and the provision of the intellectual core of the University. The college shares the first three missions with professional schools and other colleges on this campus, but the last mission is uniquely the responsibility of the College of Liberal Arts and Sciences. By fulfilling this responsibility, the college helps develop broadly educated individuals who are committed to or characterized by open inquiry, critical thinking, effective communication, and responsiveness to the needs of individuals and society.

Students in the college are expected to understand the content of and to develop skills in areas that reflect the overall purpose of the college: fluency and facility in English; literacy in at least one additional language; broad exposure to a number of different disciplines; and intensive study in one discipline (or an interdisciplinary program). The student has a wide choice of courses to satisfy these requirements; however, ultimately he or she must plan a diverse and intensive program of study, prepare for an occupational, professional and intellectual future, and develop that clarity and range of mind that is the goal of educated people.

Information for current students may be found here: <http://www.las.illinois.edu/students/>

Information for newly admitted students may be found here: <http://www.las.illinois.edu/students/admission/>

Information for prospective students may be found here: <http://www.las.illinois.edu/prospective/>

Majors

- Actuarial Science (p. 502)
- African American Studies (p. 323)
- Anthropology (p. 332)
 - Archaeology Concentration
 - General Anthropology Concentration
 - Human Evolutionary Biology Concentration
 - Sociocultural and Linguistic Anthropology Concentration
- Art History (p. 581)
- Asian American Studies (p. 345)
- Astronomy (p. 348)
- Atmospheric Sciences (p. 351)
- Biology (p. 584)
- Biology Teaching (p. 585)
- Biochemistry (p. 517)
- Chemical Engineering (p. 355)

- Biomolecular Engineering Concentration
- Chemical Engineering Concentration
- Chemistry (p. 361)
 - Chemistry Concentration
 - Chemistry Teaching Concentration
- Chemistry (p. 361)-Specialized Curriculum (p. 367)
 - Environmental Chemistry Concentration
- Classics (p. 369)
 - Classical Archaeology Concentration
 - Classical Civilization Concentration
 - Classics Concentration
 - Greek Concentration
 - Latin Concentration
- Communication (p. 375)
- Comparative and World Literature (p. 380)
 - Comparative Literature Concentration
 - World Literature Concentration
- Computer Science and Anthropology (p. 586)
- Computer Science and Astronomy (p. 587)
- Computer Science and Chemistry (p. 588)
- Computer Science and Linguistics (p. 588)
- Creative Writing (p. 406)
- Earth, Society, and Environmental Sustainability (p. 549)
 - Society and the Environment Concentration
 - Science of the Earth System Concentration
- East Asian Languages and Cultures (p. 387)
 - East Asian Languages and Cultures
 - Teaching of East Asian Languages
 - Teaching Specialization: Mandarin Chinese
 - Teaching Specialization: Japanese
- Economics (p. 394)
- English (p. 397)
 - English Concentration
 - English Teaching Concentration
- Foreign Language Teaching (p. 410)
- French (p. 411)
 - French Studies Concentration
 - French Commercial Studies Concentration
 - Teaching of French
- Gender and Women's Studies (p. 418)
- Geography and Geographic Information Science (p. 423)
 - General Geography Concentration
 - Geographic Information Science Concentration
 - Human Geography Concentration
 - Physical Geography Concentration
- Geology (p. 432)
 - Geology Concentration
 - Earth and Environmental Science Concentration
 - Earth Science Teaching Concentration
- Geology and Geophysics (p. 432)
 - Geology Concentration
 - Geophysics Concentration
 - Environmental Geology Concentration
- Germanic Studies (p. 440)
 - German Culture and Literature Concentration
 - German Business and Commercial Studies Concentration
 - German Linguistics Concentration
 - Scandinavian Studies Concentration
 - Teaching of German
- Global Studies (p. 448)
- History (p. 452)
 - History Concentration
 - Social Science: History Teaching Concentration
- Individual Plans of Study (p. 589)
- Integrative Biology (p. 466)
 - Integrative Biology Concentration
 - Integrative Biology Honors Concentration
- Interdisciplinary Studies (p. 474)
 - Jewish Studies Concentration
 - Medieval Studies Concentration
- Italian (p. 411)
- Latin, Teaching of (p. 373)
- Latin American Studies (p. 479)
- Latina/Latino Studies (p. 481)
- Linguistics (p. 485)
- Mathematics (p. 496)
 - Mathematics Concentration
 - Graduate Preparatory Concentration
 - Applied Mathematics Concentration
 - Operations Research Concentration
 - Mathematics Teaching Concentration
- Mathematics and Computer Science (p. 505)
- Molecular and Cellular Biology (p. 510)
 - Molecular and Cellular Biology Concentration
 - Molecular and Cellular Biology Honors Concentration
- Philosophy (p. 518)
- Physics (p. 590)
 - Physics Concentration
 - Physics Teaching Concentration
- Physics- Specialized Curriculum (p. 593)
- Political Science (p. 522)
 - General Concentration in Political Science
 - Civic Leadership Concentration
- Portuguese (p. 570)
- Psychology (p. 532)
 - Intradisciplinary Psychology Concentration
 - Behavioral Neuroscience Concentration
 - Clinical/Community Psychology Concentration
 - Cognitive Neuroscience Concentration
 - Cognitive Psychology Concentration
 - Developmental Psychology Concentration
 - Diversity Science Concentration
 - Organizational Psychology Concentration
 - Personality Psychology Concentration
 - Social Psychology Concentration
- Religion (p. 546)
- Russian and East European Studies (p. 547)
- Slavic Studies (p. 555)

- Czech Studies Concentration
- Polish Studies Concentration
- Russian Language and Literature Concentration
- South Slavic Studies Concentration
- Ukrainian Studies Concentration
- Sociology (p. 563)
- Spanish (p. 570)
 - Spanish
 - Teaching of Spanish
- Statistics (p. 577)
- Statistics and Computer Science (p. 580)

Minors

- African Studies (p. 328)
- African-American Studies (p. 324)
- American Indian Studies (p. 330)
- Anthropology (p. 332)
- Arabic Studies (p. 494)
- Asian American Studies (p. 346)
- Astronomy (p. 349)
- Atmospheric Sciences (p. 351)
- Biomolecular Engineering (p. 358)
- Chemistry (p. 361)
- Classical Archaeology (p. 374)
- Classical Civilization (p. 374)
- Communication (p. 375)
- Creative Writing (p. 409)
- Criminology, Law, and Society (p. 568)
- Earth, Society, and Environment (p. 550)
- East Asian Languages and Cultures (p. 387)
- Ecology and Conservation Biology (p. 473)
- English (p. 410)
- English as a Second Language (p. 495)
- English as a Second Language, Teacher Education Minor in (p. 496)
- French (p. 417)
- Gender and Women's Studies (p. 422)
- Geography and GIS (p. 424)
- Geology (p. 432)
- German (p. 445)
- Global Markets and Society (p. 451)
- Global Studies (p. 452)
- Greek (p. 374)
- Hindi Studies (p. 495)
- History (p. 452)
- Integrative Biology (p. 473)
- Islamic World, Study of the (p. 570)
- Italian (p. 417)
- Jewish Culture and Society (p. 478)
- Latin (p. 374)
- Latin American Studies (p. 480)
- Latina/Latino Studies (p. 481)
- LGBT/Queer Studies (p. 423)

- Linguistics (p. 495)
- Mathematics (p. 505)
- Mathematics: Grades 9-12, Teacher Education Minor in (p. 507)
- Medieval Studies (p. 508)
- Molecular and Cellular Biology (p. 510)
- Philosophy (p. 519)
- Political Science (p. 523)
- Political and Civic Leadership (p. 531)
- Portuguese (p. 576)
- Psychology (p. 533)
- Religious Studies (p. 547)
- Russian, East European and Eurasian Studies (p. 548)
- Russian Language and Literature (p. 559)
- Scandinavian Studies (p. 445)
- Science and Technology in Society (p. 474)
- Slavic Language, Literature and Culture (p. 559)
- Sociology (p. 568)
- South Asian Studies (p. 569)
- Spanish (p. 576)
- Statistics (p. 577)
- Sub-Saharan African Languages (p. 495)
- World Literature (p. 380)

Academic Units

The following is a list of undergraduate degree-granting academic units in the College of Liberal Arts and Sciences. A full listing of all LAS Academic Units is available here (<http://www.las.illinois.edu/units>).

- African American Studies (p. 323)
- African Studies, Center for (p. 328)
- American Indian Studies, Program in (p. 330)
- Anthropology (p. 332)
- Asian American Studies (p. 345)
- Astronomy (p. 348)
- Atmospheric Sciences (p. 351)
- Biochemistry (p. 517)
- Chemical and Biomolecular Engineering (p. 354)
- Chemistry (p. 361)
- Classics (p. 368)
- Communication (p. 375)
- Comparative and World Literature, Program in (p. 380)
- Earth, Society, and Environment, School of (p. 549)
- East Asian Languages and Cultures (p. 386)
- Economics (p. 394)
- English (p. 396)
- French and Italian (p. 410)
- Gender and Women's Studies (p. 418)
- Geography and Geographic Information Science (p. 423)
- Geology (p. 432)
- Germanic Languages and Literatures (p. 440)
- Global Studies, LAS (p. 448)
- History (p. 452)

- Integrative Biology, School of (p. 466)
- Jewish Culture and Society, Program in (p. 478)
- Latin American and Caribbean Studies, Center for (p. 479)
- Latina/Latino Studies (p. 481)
- Linguistics (p. 485)
- Mathematics (p. 496)
- Medieval Studies, Program in (p. 508)
- Molecular and Cellular Biology, School of (p. 510)
- Philosophy (p. 518)
- Political Science (p. 522)
- Psychology (p. 531)
- Religion (p. 546)
- Russian, East European, and Eurasian Center (p. 547)
- Slavic Languages and Literatures (p. 554)
- Sociology (p. 562)
- South Asian and Middle Eastern Studies, Center for (p. 568)
- Spanish and Portuguese (p. 570)
- Statistics (p. 577)

African American Studies

Ronald Bailey, Department Head
1201 West Nevada, Urbana
PH: (217) 333-7781
<http://www.afro.illinois.edu>

The Department of African American Studies undergraduate offerings include an undergraduate major and minor.

African American Studies is a field that systematically explores the life and culture of African American peoples and their African Diaspora relationships, patterns, and ties. Those who major in African American Studies will learn about the historical, political, ideological, legal, social, artistic, and economic issues affecting African Americans. They will learn about the dignity-affirming struggles of African American people to have their humanity acknowledged, valued, and understood.

The major in African American Studies (AAS) is to provide students with a transdisciplinary perspective on the origin, role and policy implications of race in the United States and world political economy, society and culture, over time. AAS students will learn diverse concepts, theories and methodologies for analyzing the experiences and perspectives and the cultural and intellectual production of African Americans and African descended people, largely though not exclusively in the United States. An African American studies major will be encouraged to achieve excellence in developing vital creative and critical competencies, including oral and written communication, computer and statistical skills. Students majoring in AAS will also be encouraged to join a new generation of leadership grounded in African American studies knowledge and committed to public engagement to meet the continuing challenges of a diverse democratic society; and to foster national discourse to produce public policy aimed at achieving social justice.

This program is designed to serve undergraduate students primarily interested in the social sciences and humanities, though all students are welcome and encouraged to enroll in the program. This program prepares students for graduate study and research in traditional disciplines and interdisciplinary fields and for careers in the private or public sectors such as teaching, social work, human resources, criminal justice,

management and administration, city planning, marketing, policy-making, medicine and law.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences Major in Sciences and Letters Curriculum

E-mail: loturner@illinois.edu (loturner@uiuc.edu)

Minimum required major and supporting course work equates to 48 hours.

General Education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level African American Studies courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction:

To graduate with distinction, students must complete the following:

1. 3.3 overall G.P.A
2. 3.6 program G.P.A
3. Complete AFRO 495 Senior Thesis Seminar with a grade of 3.3 or better

Code	Title	Hours
I. Core course requirements		
AFRO 100	Intro to African American St	3
AFRO 220	Intro to Research Methods AfAm	3
AFRO 490	Theory in African American St	3
AFRO 495	Senior Thesis Seminar	3
II. Theory and Methods Requirement		
At least one theory and one methods course beyond the core.		6
The courses must be selected from a list maintained in the Department's advising office.		
III. Thematic Areas		
Students must take at least one course each from the following five areas. At least 6 of the remaining hours must be taken from only one of any of the five areas. A list of courses is maintained in the Department's advising office.		21
A. Comparative Race, Racialized Communities and Identities		
B. Cultural Production and Cultural Movements		
C. Political Economy, Public Policy and Contemporary Issues		
D. Global Interconnections: Black Transnationalism and the African Diaspora		
E. Black Women, Gender and Sexuality Studies		
IV. Cognate or Supporting Coursework		

Students must complete 9 hours of supporting coursework. Supporting coursework consists of a set of courses which are logically grouped, and which reflect or support a student's interests outside of the African American Studies major. Supporting coursework courses must be approved by the Department's undergraduate advisor.

Total Hours 48

Interdisciplinary Minor in African-American Studies

The Department of African American Studies offers a campus-wide interdisciplinary minor in African American Studies. The minor is premised on the following principles: Interdisciplinarity, the centrality of Black women and gender, the use of the Global Africa/African Diaspora as a contextualizing framework and an emphasis on black agency or self-determining activity of African peoples. A minimum grade point average of 2.33 is required for completion of courses taken in the program. The Department of African American Studies must approve a student's minor course plan.

Code	Title	Hours
I. Core course requirements		
AFRO 100	Intro to African American St	3
AFRO 490	Theory in African American St	3
or AFRO 220	Intro to Research Methods AfAm	
AFRO 495	Senior Thesis Seminar	3
II. Areas of Concentration		
A. Comparative Race, Racialized Communities & Identities.		3-4
Students must take at least one course in this area. Students may choose courses from a list in the Department office.		
B. Cultural Production & Cultural Movements. Students must take at least one course in this area. Students may choose courses from a list in the Department office.		3-4
C. Political Economy, Public Policy & Contemporary Issues.		3-4
Students must take at least one course in this area. Students may choose courses from a list in the Department office.		
Elective in any of the above areas		3
Students must take at least one course focusing on Black Women, Gender, and Sexuality Studies chosen from a list in the Department office. Students may count this course toward any of the required areas above.		
Total Hours		21

Students must not take more than 6 hours of 100-level courses. A minimum of 6 hours of 300- and 400-level courses is required.

AFRO Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AFRO>)

Courses

AFRO 100 Intro to African American St credit: 3 Hours.

Interdisciplinary introduction to the basic concepts and literature in the disciplines covered by African American studies; surveys the major approaches to the study of African Americans across several academic disciplines including economics, education, psychology, literature, political science, sociology and others.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AFRO 101 Black America, 1619-Present credit: 3 Hours.

Sociohistorical survey of African American experiences from the West African background to North America, from the 17th century to the present. Same as HIST 174.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 102 Researching the African Am Exp credit: 3 Hours.

Introduction to research and documentation of the African American experience. Approved for both letter and S/U grading.

AFRO 103 Black Women in the Diaspora credit: 3 Hours.

Explores the historical, social, economic, cultural and political realities of black women in the African diaspora with an emphasis on the U.S., Canada, Britain, Africa and the English speaking Caribbean. How macro structures such as slavery, imperialism, colonialism, capitalism, and globalization shaped and continue to circumscribe the lives of black women across various geographic regions. Discussion of the multiple strategies/efforts that black women employ both in the past and present to ensure the survival of the self and the community. Same as AFST 103 and GWS 103.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 105 Black Literature in America credit: 3 Hours.

Survey of the literary work of Black Americans from 1746 to the present. Exploration of the social, cultural, and political contexts that have shaped the Black American literary tradition by analyzing not only poetry, drama, autobiographical narratives, short stories, and novels, but also folktales, spirituals, and contemporary music. Same as ENGL 150.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AFRO 106 Hist Arch Americas credit: 3 Hours.

Same as ANTH 106. See ANTH 106.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 132 African American Music credit: 3 Hours.

Survey of African American music, from its origins to the present with a focus on understanding details of musical performance and the ways in which music interacts with its social and political context. Examines genres such as spirituals, the blues, jazz, R&B, soul, and hip-hop. No previous musical background is necessary.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AFRO 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

AFRO 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AAS 201, LLS 201, and PS 201. See PS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AFRO 211 Intro to African-American Film credit: 3 Hours.

Same as MACS 211. See MACS 211.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 212 Intro African American Theat credit: 3 Hours.

Same as THEA 263. See THEA 263.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AIS 295, GWS 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 220 Intro to Research Methods AfAm credit: 3 Hours.

Introduction to various methodologies to be employed in the interdisciplinary field of African American/Africana studies. Prerequisite: AFRO 100.

AFRO 221 History of the Prison credit: 3 Hours.

Same as HIST 219 and LA 221. See LA 221.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

AFRO 224 Humanist Persp of Afro-Am Exp credit: 3 Hours.

Presents the Afro-centric world view as it was manifested in traditional African society and in the Afro-American slave community. Shows that this world view merged with European notions of art and humanity, as revealed in modern Afro-American literature, art, and music. Same as CWL 226. Approved for both letter and S/U grading. Prerequisite: AFRO 100 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AFRO 226 Black Women Contemp US Society credit: 3 Hours.

Sociological perspective of the experience of African American women in the contemporary United States. Specifically, an examination of relationships between the economy, state policy, culture, work and motherhood for this demographic group. Same as GWS 226 and SOC 223.

AFRO 227 Studies in Black Television credit: 3 Hours.

Explores topics in black television in order to a) analyze the economic and political factors that lead to successful series; b) historicize black television of the Diaspora, including the U.S., Caribbean, UK, Canada, and Nigeria; c) identify conventions and define a "black aesthetic;" d) determine how black series in one genre (such as sitcoms or dramas) aid in mapping other genres; and e) discuss how these series navigate stereotypes and cultural shifts. Same as MACS 227.

AFRO 228 Hip Hop Music: History and Culture credit: 3 Hours.

A study of hip-hop from its beginnings in the post-industrial South Bronx of the 1970s to the global present. By focusing on the work of specific artists and movements, we will compare and contrast the production and consumption of hip-hop with other forms of popular music (including jazz, rock, disco, and pop). This course shows how musicians and listeners use hip-hop to express ideas about topics such as economics, nationalism, black power, feminism, and violence.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AFRO 231 Lang Diff Dis: American Persp credit: 3 Hours.

Discusses the interaction of culture, ethnicity/race and language among American minorities. Emphasizes language difference theory as related to social and regional dialects and bilingualism/multilingualism. Distinguishes language differences from language disorders through examination of assessment and treatment approaches for different aged populations. Same as SHS 231.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 243 Pan Africanism credit: 3 Hours.

Same as AFST 243, PS 243, and SOC 267. See PS 243.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

AFRO 250 Introduction to Health and Wellness in the Black Community credit: 3 Hours.

An introduction for understanding health-related issues and disparities affecting the African American community. We will explore health status across the lifespan, social and environmental challenges, chronic diseases, lifestyle behaviors, and intervention, research and policy implications. Students will learn how to integrate and situate these complexities in a broader systemic framework and understand how this population exhibits resiliency in the face of these adversities.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AFRO 259 Afro-American Literature I credit: 3 Hours.

Same as CWL 259 and ENGL 259. See ENGL 259.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 260 Afro-American Literature II credit: 3 Hours.

Same as CWL 260 and ENGL 260. See ENGL 260.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 261 Intro to the African Diaspora credit: 3 Hours.

Introduction to the origin, development, and maturation of the African diaspora in the Americas and the Caribbean, beginning with the transatlantic slave trade and up to the end of the 20th century. Same as ANTH 261.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 272 Minority Images in Amer Film credit: 3 Hours.

Same as ENGL 272. See ENGL 272.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AFRO 275 Afro-American History to 1877 credit: 3 Hours.

Same as HIST 275. See HIST 275.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 276 Afro-American Hist Since 1877 credit: 3 Hours.

Same as HIST 276. See HIST 276.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 281 Constructing Race in America credit: 3 Hours.

Same as AAS 281, HIST 281, and LLS 281. See HIST 281.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 287 African-American Women credit: 3 Hours.

Same as GWS 287 and HIST 287. See HIST 287.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 290 Af Am Urban Hist Since 1917 credit: 3 Hours.

Examination of the changing interaction among black urban communities, the broader urban citizenry, municipal government, the local and national urban-industrial economy, and federal policy over time, giving particular attention to discourses about the black "ghetto" as both a physical space and set of social conditions. Same as HIST 284. Prerequisite: AFRO 101, HIST 276, HIST 172, SOC, 225, or PS 201.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 298 Spec Topics African-Am Studies credit: 3 Hours.

Seminar on selected topics with particular emphasis on current research trends. May be repeated to a maximum of 6 hours. Prerequisite: AFRO 100 or AFRO 101, or consent of instructor.

AFRO 310 Race and Cultural Diversity credit: 4 Hours.

Same as AAS 310, EPS 310, and LLS 310. See EPS 310.

This course satisfies the General Education Criteria for:

Advanced Composition

Cultural Studies - US Minority

AFRO 312 Psychology of Race & Ethnicity credit: 3 Hours.

Same as PSYC 312. See PSYC 312.

AFRO 315 African American Politics credit: 3 Hours.

Same as PS 315. See PS 315.

AFRO 340 Dancing Black Popular Culture credit: 3 Hours.

Same as DANC 340. See DANC 340.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 341 Gov & Pol in Africa credit: 3 Hours.

Same as PS 341. See PS 341.

AFRO 342 Black Men and Masculinities credit: 3 Hours.

The sociological study of African American men in the contemporary U.S. Specifically, black manhood and masculinities and the experiences of this demographic group as it relates to the economy, state, policy, and institutions such as family, criminal justice system, and education. Same as SOC 325. Prerequisite: Introductory social science course.

AFRO 372 Class Politics & Blk Community credit: 3 Hours.

Exploration of the complex history of class relations among African Americans during the twentieth century, examining both the internal and external shapers of black class stratification. Considers the historical development of contemporary black "underclass", and the parallel expansion of the black middle class today. Same as HIST 384. Prerequisite: AFRO 101, HIST 276, or SOC 225 or consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

AFRO 373 AfAm Cultr Politic Mid20C credit: 3 Hours.

Focusing on African American culture and history from World War II until the early 1960's, topics include citizenship, migration, urban life, the African Diaspora, Civil Rights Movement, and art forms. Approved for both letter and S/U grading. Prerequisite: AFRO 100 and AFRO 101, AFRO 261, ENGL 260 or HIST 276.

AFRO 378 Race and Revolutions credit: 3 Hours.

Focus on the relationship between race and slavery during the revolutions in American and Haiti, respectively. We will seek to understand how the themes of slavery, revolution and race affected blacks, whites and indigenous Americans. We will learn about life during the Revolutionary era by reading the biographies, political pamphlets and personal letters of former slaves, Revolutionaries and everyday men and women as well as historical scholarship. Same as HIST 389. Prerequisite: One African American Studies or History course at either the 100- or 200-level or the consent of instructor.

AFRO 380 Black Women Hist & Cultures credit: 3 Hours.

Same as GWS 380. See GWS 380.

AFRO 381 Black Women and Film credit: 3 Hours.

An examination of the contribution of Black women film directors to cinema. The study of documentary, experimental, animated, fictional shorts, and feature films will reveal their unique approach to constructions of the intersection of race and gender. Starting from the 1920's up to the present, the course considers themes, aesthetics, historical contexts, and ideological discourses presented in the films. Same as MACS 381. Prerequisite: College level film course or consent of instructor.

AFRO 382 African Amer Families in Film credit: 3 Hours.

Uses film as case studies to examine the diverse structures, social classes, and internal dynamics among African American families. Critical family processes such as family formation patterns, dating mate selection, parenting, male-female/gender relations, child adolescent, and adult development, family routines and practices, family communication, and family stress and coping will be examined. Also considers how families interact within larger contexts, such as the local neighborhood and key institutions (school, workplace, social service agencies). Films will be supplemented with readings drawn for diverse disciplines (African American Studies, Anthropology, Family Studies, History, Psychology, and Sociology) that allow us to examine key substantive, theoretical, methodological, and policy issues in the study of African American families. Same as HDFS 324.

AFRO 383 Hist of Blk Women's Activism credit: 3 Hours.

Examination of the history of twentieth century black women's activism, specifically concerned with how African American female activists have been critical to building, sustaining and leading black freedom movements. Same as GWS 383 and HIST 383. Prerequisite: AFRO 100 or AFRO 101 or AFRO 103 or consent of instructor.

AFRO 398 Spec Topics Afro-Am Studies credit: 3 Hours.

Advanced seminar on selected topics with particular emphasis on current research trends. May be repeated to a maximum of 6 hours. Prerequisite: Junior status and one of the following: AFRO 224, or HIST 275 or HIST 276, or ENGL 259 or ENGL 260.

AFRO 400 African Diasporic Lit Americas credit: 3 or 4 Hours.

Critical examination of the contributions of writers of African descent from the Caribbean (English, French, Spanish) and the United States. Major works of fiction, poetry, drama and essays from Cuba, Guadeloupe, Guyana, Haiti, St. Lucia, the United States and other countries are analyzed within a post-colonial theoretical framework. Same as CWL 400. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 224 or AFRO 259 or AFRO 260 or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AFRO 407 Slavery & Race in Latin Am credit: 2 to 4 Hours.

Same as HIST 407. See HIST 407.

AFRO 410 Hate Crimes credit: 3 Hours.

Hate crimes represent the manifestation of intergroup bias and aggression. Examples of these crimes will be examined while analyzing longstanding theories in social psychology. Same as PSYC 410. 3 undergraduate hours. 3 graduate hours. Prerequisite: PSYC 201 or consent of instructor.

AFRO 411 African American Psychology credit: 3 or 4 Hours.

Introduction to the research, theories, and paradigms developed to understand the attitudes, behaviors, and psychological and educational realities of African Americans. Same as PSYC 416. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or one psychology course.

AFRO 415 Africana Feminisms credit: 3 or 4 Hours.

Explores readings and research from the perspective of feminists throughout the African diaspora, with a focus on Black feminist thought emanating from the United States. Same as AFST 420 and GWS 415. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 103 and an additional 300 or 400-level African American Studies course or consent of the instructor.

AFRO 421 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as EPS 421, HDFS 424, and SOC 421. See EPS 421.

AFRO 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, GWS 435, LLS 435 and MACS 432. See LLS 435.

AFRO 453 Plantation Soc in Americas credit: 3 or 4 Hours.

Comparative and interdisciplinary approach to study of the development of New World societies with focus on plantation agriculture from the 15th to 19th centuries. Course considers Portuguese, Spanish, British, French, and Dutch colonization. Students will study the relative importance of culture versus economy and demography in determining social structure. Same as HIST 470. 3 undergraduate hours. 4 graduate hours. Prerequisite: A survey course in early United States history and/or western civilization; junior status, or consent of the instructor.

AFRO 460 Slavery in the United States credit: 3 or 4 Hours.

Examination of slavery in the U.S. using primary sources (slave narratives, songs and tales, plantation records, laws and newspapers) from the 18th century through emancipation. Same as HIST 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or AFRO 101 and one 300-level AFRO course.

This course satisfies the General Education Criteria for:
Advanced Composition

AFRO 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AAS 465, GWS 465, and LLS 465. See LLS 465.

AFRO 466 Race, Science, and Medicine credit: 3 or 4 Hours.

Examines the development of race in in medical and scientific thought; how public health and medical institutions deploy the concept; and the process by which race emerged as a valid though controversial topic of scientific and biomedical inquiry. Also addressed is the relationship between slavery and nineteenth-century medicine, the birth of the eugenics movement, legacies of medical exploitation and mistrust, trends in genetic medicine, and contemporary disparities in health outcomes and health care delivery. Same as HIST 483. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or AFRO 101 and one 300-level AFRO course.

AFRO 474 Black Freed Move, 1955-Present credit: 3 or 4 Hours.

Presents the struggle of African Americans for self-definition, self-development, and self-determination from the inception of the civil rights movement to the contemporary period. Same as HIST 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 101, HIST 276, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

AFRO 481 Urban Communities & Public Pol credit: 3 or 4 Hours.

Examination of how public policy has shaped urban communities and the life chances (i.e., the social, economic, mental and physical well-being) of families of color. Emphasizes the theoretical, political, and economic context of public policy making and specifically address urban issues of housing, communities and families, employment, welfare, and poverty. This course will draw on scholarship by sociologists, historians, policy analysts, race theorists, and economists. Same as SOC 472 and UP 481. 3 undergraduate hours. 4 graduate hours.

AFRO 482 Immersion Journalism credit: 3 or 4 Hours.

Same as JOUR 482. See JOUR 482.

AFRO 490 Theory in African American St credit: 3 or 4 Hours.

Introduction to various theories and methodologies rising out of the study of the Black world based on African American intellectual traditions. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 and one additional 400-level AFRO course, or consent of instructor.

AFRO 491 Methodology in African Amer St credit: 3 or 4 Hours.

Introduction to various methodologies to be employed in the interdisciplinary field of African American/Africana studies. Access to personal computer SPSS software is required. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 and AFRO 220 and an additional 300 or 400-level African American Studies course or consent of instructor.

AFRO 495 Senior Thesis Seminar credit: 3 Hours.

3 undergraduate hours. No graduate credit. Prerequisite: AFRO 100 and AFRO 220 or AFRO 490.

AFRO 498 Spec Topics African Am Studies credit: 3 or 4 Hours.

Seminar on selected topics with particular emphasis on current research trends. 3 undergraduate hours. 4 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Upper level AFRO course (300 or above) or consent of instructor.

African Studies, Center for

Teresa Barnes, Director

Room 210, International Studies Building, 910 South Fifth Street,
Champaign

PH: (217) 333-6335

<http://www.afrst.illinois.edu>

Interdisciplinary Minor in African Studies

The Center for African Studies offers an interdisciplinary minor as a complement to any major. The 20 hours selected by students for the African studies minor should form a coherent program of study. This program must be approved by the Center for African Studies. The Dean of the College of Liberal Arts and Sciences will verify that the student has completed the program on the recommendation of the Director of the Center for African Studies and on completion of the requirements below.

E-mail: african@illinois.edu

Requirements

Code	Title	Hours
	Study of an indigenous African Language. Acceptable languages include but are not limited to Arabic, Bamana, Lingala, Swahili, Wolof, and Zulu.	5
African Studies core courses. These courses contain a minimum of 50 percent African content and are defined according to a list maintained and regularly updated by the Center for African Studies. Courses completed to satisfy the core must come from at least 3 separate departments and must include the following three components:		
	Course-work surveying the continent. Choose one of the following:	3
AFST 210	Intro to Mod African Lit	
AFST 222	Introduction to Modern Africa	
AFST 254	Economic Systems in Africa	
HIST 110	History of Africa	
SOC 122	Africa in World Perspective	
	300- or 400-level core courses. Language courses cannot be used to meet this requirement.	6
	Additional core courses at any level. African language courses may be used to satisfy this requirement if they are at the advanced level (fifth semester or higher). Only 3 hours of AFST 199 may be used to satisfy the requirements of the minor.	6
Total Hours		20

AFST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AFST>)

Courses

AFST 103 Black Women in the Diaspora credit: 3 Hours.

Same as AFRO 103 and GWS 103. See AFRO 103.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AFST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

AFST 201 Elementary Bamana I credit: 5 Hours.

Same as BMNA 201. See BMNA 201.

AFST 202 Elementary Bamana II credit: 5 Hours.

Same as BMNA 202. See BMNA 202.

AFST 209 Constr Afr and Carib Identity credit: 3 Hours.

Same as CWL 225, FR 240, and LAST 240. See FR 240.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 210 Intro to Mod African Lit credit: 3 Hours.

Significant contemporary African writings depicting the history and cultural traditions of African peoples. Same as CWL 210 and ENGL 211.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

Cultural Studies - Non-West

AFST 211 Elementary Lingala I credit: 5 Hours.

Same as LGLA 201. See LGLA 201.

AFST 212 Elementary Lingala II credit: 5 Hours.

Same as LGLA 202. See LGLA 202.

AFST 213 African Muslim Cultures credit: 3 Hours.

Same as HIST 213 and REL 215. See HIST 213.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

Cultural Studies - Non-West

AFST 222 Introduction to Modern Africa credit: 3 Hours.

Interdisciplinary introduction to Africa dealing with basic themes and problems in the politics, economics, sociology, anthropology, and history of Africa. Same as ANTH 222, PS 242, and SOC 222.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 231 Elementary Swahili I credit: 5 Hours.

Same as SWAH 201. See SWAH 201.

AFST 232 Elementary Swahili II credit: 5 Hours.

Same as SWAH 202. See SWAH 202.

AFST 241 Elementary Wolof I credit: 5 Hours.

Same as WLOF 201. See WLOF 201.

AFST 242 Elementary Wolof II credit: 5 Hours.

Same as WLOF 202. See WLOF 202.

AFST 243 Pan Africanism credit: 3 Hours.

Same as AFRO 243, PS 243, and SOC 267. See PS 243.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

Social Beh Sci - Soc Sci

AFST 251 Elementary Zulu I credit: 5 Hours.

Same as ZULU 201. See ZULU 201.

AFST 252 Elementary Zulu II credit: 5 Hours.

Same as ZULU 202. See ZULU 202.

AFST 254 Economic Systems in Africa credit: 3 Hours.

Same as ACE 254. See ACE 254.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

Social Beh Sci - Soc Sci

AFST 266 African Film and Society credit: 3 Hours.

Same as ANTH 266. See ANTH 266.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 267 Memoirs of Africa credit: 3 Hours.

Same as ANTH 267. See ANTH 267.

This course satisfies the General Education Criteria for:

Advanced Composition
Cultural Studies - Non-West

AFST 312 Central African Art credit: 3 Hours.

Same as ARTH 312. See ARTH 312.

AFST 313 Modern and Contemp African Art credit: 3 Hours.

Same as ARTH 313. See ARTH 313.

AFST 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, ASST 325, EURO 325, INFO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

AFST 403 Intermediate Bamana I credit: 4 Hours.

Same as BMNA 403. See BMNA 403.

AFST 404 Intermediate Bamana II credit: 4 Hours.

Same as BMNA 404. See BMNA 404.

AFST 405 Topics Swahili Lang & Lit I credit: 3 Hours.

Same as SWAH 407. See SWAH 407.

AFST 406 Topics Swahili Lang & Lit II credit: 3 Hours.

Same as SWAH 408. See SWAH 408.

AFST 407 Adv Topics Swahili Lang&Lit I credit: 3 or 4 Hours.

Same as SWAH 409. See SWAH 409.

AFST 408 Adv Topics Swahili Lang&Lit II credit: 3 or 4 Hours.

Same as SWAH 410. See SWAH 410.

AFST 410 Modern African Fiction credit: 3 or 4 Hours.

Examines selected major African novels along thematic and formal lines; literary responses to colonialism and political independence and the crises that accompanied both in Africa; and study of critical approaches to the African novel and African characteristics of and contribution to the novel as a genre. Readings in English. Same as CWL 410, ENGL 470, and FR 410. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFST 210 or AFST 222, or junior standing.

AFST 412 Lang in African Culture & Soc credit: 3 or 4 Hours.

Same as LING 412. See LING 412.

AFST 413 Intermediate Lingala I credit: 4 Hours.

Same as LGLA 403. See LGLA 403.

AFST 414 Intermediate Lingala II credit: 4 Hours.

Same as LGLA 404. See LGLA 404.

AFST 415 Advanced Lingala I credit: 3 Hours.

Same as LGLA 405. See LGLA 405.

AFST 416 Advanced Lingala II credit: 3 Hours.

Same as LGLA 406. See LGLA 406.

AFST 417 Topics Lingala Lang & Lit I credit: 3 Hours.

Same as LGLA 407. See LGLA 407.

AFST 418 Topics Lingala Lang & Lit II credit: 3 Hours.

Same as LGLA 408. See LGLA 408.

AFST 420 Africana Feminisms credit: 3 or 4 Hours.

Same as AFRO 415 and GWS 415. See AFRO 415.

AFST 421 Sacred African Diaspora Arts credit: 3 or 4 Hours.

Same as ARTH 413. See ARTH 413.

AFST 425 Southern Africa Race & Power credit: 3 or 4 Hours.

Same as HIST 412. See HIST 412.

AFST 431 Advanced Bamana I credit: 3 Hours.

Same as BMNA 405. See BMNA 405.

AFST 432 Advanced Bamana II credit: 3 Hours.

Same as BMNA 406. See BMNA 406.

AFST 433 Intermediate Swahili I credit: 4 Hours.

Same as SWAH 403. See SWAH 403.

AFST 434 Intermediate Swahili II credit: 4 Hours.

Same as SWAH 404. See SWAH 404.

AFST 435 Advanced Swahili I credit: 3 Hours.

Same as SWAH 405. See SWAH 405.

AFST 436 Advanced Swahili II credit: 3 Hours.

Same as SWAH 406. See SWAH 406.

AFST 437 Egypt Since World War I credit: 2 to 4 Hours.

Same as HIST 438. See HIST 438.

AFST 443 Intermediate Wolof I credit: 4 Hours.

Same as WLOF 403. See WLOF 403.

AFST 444 Intermediate Wolof II credit: 4 Hours.

Same as WLOF 404. See WLOF 404.

AFST 445 Advanced Wolof I credit: 3 Hours.

Same as WLOF 405. See WLOF 405.

AFST 446 Advanced Wolof II credit: 3 Hours.

Same as WLOF 406. See WLOF 406.

AFST 447 Topics Wolof Lang & Lit I credit: 3 Hours.

Same as WLOF 407. See WLOF 407.

AFST 448 Topics Wolof Lang & Lit II credit: 3 Hours.

Same as WLOF 408. See WLOF 408.

AFST 451 Intermediate Zulu I credit: 4 Hours.

Same as ZULU 403. See ZULU 403.

AFST 452 Intermediate Zulu II credit: 4 Hours.

Same as ZULU 404. See ZULU 404.

AFST 453 Advanced Zulu I credit: 3 Hours.

Same as ZULU 405. See ZULU 405.

AFST 454 Advanced Zulu II credit: 3 Hours.

Same as ZULU 406. See ZULU 406.

AFST 467 Kinship-Culture-Power-Africa credit: 2 or 4 Hours.

Same as ANTH 469. See ANTH 469.

AFST 468 Religions of Africa credit: 3 or 4 Hours.

Same as ANTH 468 and REL 468. See ANTH 468.

AFST 469 Structure of Semitic Languages credit: 3 or 4 Hours.

Same as LING 469. See LING 469.

AFST 478 African Immigrants in Europe credit: 3 or 4 Hours.

Same as ANTH 478 and EURO 478. See ANTH 478.

AFST 484 African Urbanization credit: 3 or 4 Hours.

Same as SOC 484. See SOC 484.

AFST 490 Independent Study credit: 1 to 4 Hours.

Supervised readings and research in selected fields in consultation with the instructor. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms up to 9 undergraduate hours or 12 graduate hours, if topics vary. Prerequisite: Consent of the Center for African Studies.

American Indian Studies, Program in

Adrian Burgos Jr., Interim Director
1204 W. Nevada, Urbana
PH: (217) 265-9870
<http://ais.illinois.edu>

American Indian Studies (AIS) prepares students in a range of methodologies, theories, technologies, and teaching approaches that compliments a thorough undergraduate education.

Specifically, an undergraduate minor is designed to assist students in preparing for graduate school or for careers in a variety of pursuits including public and business administration, education, public relations, marketing, politics, and government, especially as they relate to American Indian and Native American constituencies. Career opportunities also exist in agencies such as Indian Health Services, the Bureau of Indian Affairs, and the Bureau of Land Management.

For many, AIS is an ideal minor that presents a critical and intellectual foundation for success in an increasingly challenging world.

Minor in American Indian Studies

American Indian Studies (AIS) is an interdisciplinary program with four subject areas:

1. Culture, Identity, Ethics, and Community
2. Sovereignty, Governance, and Politics
3. Literature, Language, and Performance
4. Colonialism, Decolonization, and Indigeneity

The courses chosen must form a coherent program of study and be approved by an AIS advisor.

Code	Title	Hours
Foundation Courses		
AIS 101	Intro to Amer Indian Studies	3
AIS 102	Contemp Issues in Ind Country	3
Subject Area Courses		
Students must complete 12 hours selected from 3 of the 4 subject areas.		12
Culture, Identity, Ethics, and Community		
AIS 140	Native Religious Traditions	
AIS 165	Lang & Culture Native North Am	
AIS 288	American Indians of Illinois	
Sovereignty, Governance, and Politics		
AAS 215	US Citizenship Comparatively	
HIST 277	Encounters in Native America	
HIST 278	Native American History	
AIS 280	Intro to Federal Indian Policy	
AIS 430	Indigenous Governance	
Literature, Language, and Performance		
AIS 265	Intro to American Indian Lit	
AIS 275	Am Indian and Indigenous Film	
AIS 451	Politics in Children's Lit	
AIS 459	Topics in American Indian Lit	
AIS 461	Politics of Popular Culture	

Colonialism, Decolonization, and Indigeneity	
AIS 285	Indigenous Thinkers
AIS 481	History of Amer Indian Educ
Total Hours	18

Only three courses (9 hours total) at the 100-level may be counted toward the minor. Students also are required to complete two courses (6 hours) at the 300- or 400-level. These advanced course credits must be distinct from credit earned for the student's major or another minor

AIS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AIS>)

Courses

AIS 101 Intro to Amer Indian Studies credit: 3 Hours.

Interdisciplinary introduction surveys the stories, histories, and lands of tribal peoples who became known as "American Indians".

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 102 Contemp Issues in Ind Country credit: 3 Hours.

Surveys a variety of topics in contemporary American Indian life.

Focusing on the modern experience, topics may include law and politics; lands and environment; education; visual arts; languages and literatures; health; social justice; business; treaties; the sacred; gender; sports; decolonization; comparative tribal, Indian and global indigenous concerns.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AIS 140 Native Religious Traditions credit: 3 Hours.

An interdisciplinary survey of native religious traditions, exploring the breadth and depth of spiritual expression among native people in North America. Assigned readings and class discussions cover a variety of important themes including sacred landscapes, mythic narratives, oral histories, communal identities, tribal values, elder teachings, visionary experiences, ceremonial practices, prayer traditions, and trickster wisdom. Students also consider historic encounters with missionary colonialism and contemporary strategies for religious self-determination. Class discussions are supplemented by audiovisual materials and guest speakers.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 165 Lang & Culture Native North Am credit: 3 Hours.

Same as ANTH 165. See ANTH 165.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

AIS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 6 hours.

AIS 265 Intro to American Indian Lit credit: 3 Hours.

Introduces students to the study of American Indian literature by focusing on texts by contemporary American Indian novelists, poets, and playwrights. Over the course of the semester, students will consider how indigenous aesthetics shape narrative in addition to examining how American Indian authors engage the legacies of colonization and the histories of their tribal communities through their stories. Same as ENGL 265.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AIS 275 Am Indian and Indigenous Film credit: 3 Hours.

Introduction to representations of American Indians and Indigenous peoples in film. Reconstructions of American Indians within the Western genre and more recent reconstructions by Native filmmakers will be considered. Other topics may include the development of an indigenous aesthetic; the role of documentaries and nonfiction films in the history of Native and Indigenous film; the role of commerce in the production of Native films. Same as ENGL 275 and MACS 275.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AIS 277 Encounters in Native America credit: 3 Hours.

Same as HIST 277. See HIST 277.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 278 Native American History credit: 3 Hours.

Same as HIST 278. See HIST 278.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 280 Intro to Federal Indian Policy credit: 3 Hours.

Traces the evolution of U.S. federal law as it pertains to American Indian nations. From the doctrine of discovery, through which European nations asserted control over the lands they claimed, to the processes of reorganization and recognition that have shaped contemporary rights and struggles native nations currently face, this class will interrogate how American Indian nations were transformed into "domestic dependent nations".

AIS 285 Indigenous Thinkers credit: 3 Hours.

An introduction to the English-language traditions of indigenous intellectuals. Specific topics vary. May be repeated in the same term to a maximum of 6 hours. May be repeated in subsequent terms to a maximum of 9 hours.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

AIS 288 American Indians of Illinois credit: 3 Hours.

Same as ANTH 288 and HIST 288. See ANTH 288.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 291 Independent Study credit: 1 to 6 Hours.

Supervised reading and research in American Indian Studies chosen by the student with instructor approval. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: One course in American Indian Studies and consent of instructor.

AIS 295 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AFRO 215, GWS 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 430 Indigenous Governance credit: 3 or 4 Hours.

Indigenous peoples have long and rich traditions of governance and political philosophies that have shaped institutions and informed diplomacies amongst each other and with European nations. This course examines the indigenous governance historically and within contemporary contexts with emphasis on the importance of sovereignty within institutions, education, language revitalization, and cultural resurgence. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any 100 or 200-level American Indian Studies course or consent of instructor.

AIS 451 Politics in Children's Lit credit: 3 or 4 Hours.

Students will revisit classic and popular children's books, applying critical theoretical perspectives to texts with the purpose of examining ideologies behind their creation, publication, review, distribution, and consumption. An emphasis will be placed on texts by and about American Indians. 3 undergraduate hours. 4 graduate hours. Prerequisite: Fulfillment of the Advanced Composition requirement; junior standing or above; or consent of instructor.

AIS 459 Topics in American Indian Lit credit: 3 or 4 Hours.

Interdisciplinary seminar on special and advanced topics in American Indian and Indigenous Literatures. Same as ENGL 459. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: One year of college literature or consent of instructor.

AIS 461 Politics of Popular Culture credit: 3 or 4 Hours.

Concerned with interdisciplinary frameworks that allow us to 'read' popular culture as well as with its actual forms and specific artifacts, this course seeks, first, to grasp how popular culture has legitimized the colonization of American Indian peoples and second, to reflect on the ways in which Indians engage popular culture to assert an anti-oppression politics. Same as MACS 461. 3 undergraduate hours. 4 graduate hours. Credit is not given for both AIS 461 and MACS 320 or MDIA 570. Prerequisite: Any 100 or 200-level American Indian Studies course or consent of the instructor.

AIS 481 History of Amer Indian Educ credit: 3 or 4 Hours.

Students will study various efforts to "civilize" American Indians through US government initiatives and religious churches, as well as educational models developed by tribal entities following passage of the Indian Self-Determination and Education Assistance Act of 1975. Same as EPS 481. 3 undergraduate hours. 4 graduate hours.

AIS 490 Adv Topics in Am Ind Studies credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Any course in American Indian Studies; junior standing; or consent of instructor.

AIS 491 Readings in Am Ind Studies credit: 1 to 8 Hours.

Individual guidance in intensive readings in the theories and practices of the field of American Indian Studies. 1 to 8 undergraduate hours. 1 to 8 graduate hours. May be repeated in the same or subsequent terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Graduate standing or one course in AIS and consent of instructor.

Anthropology

Virginia Dominguez

109 Davenport Hall, 607 South Mathews, Urbana

PH: (217) 333-3616

<http://www.anthro.illinois.edu/>

The Department of Anthropology offers four major concentrations and a minor. In addition, students may pursue Anthropology as part of the LAS Major in Computer Science and Anthropology (p. 586).

Anthropology combines scientific and humanistic interests in human biology and diverse cultures (both past and present) to provide in-depth knowledge and broad perspectives on the human condition. The anthropology major develops research, writing and analytical skills that enable graduates to confront problems, issues and situations that require understanding of cultural differences and human biological variation.

College graduates with a background in anthropology thrive in a broad range of jobs and professions including global/international relations, social work, education, law, medicine and health professions, bioscience and technology, government, NGOs and business, as well as further graduate study in anthropology.

Professional anthropologists work as research scientists and teachers in museums, universities, and archaeological surveys; as staff members in government agencies, social service programs, and business firms in which international understanding of human and social concerns is important; or as independent consultants to such agencies, programs, and firms.

The **Archaeology Concentration** offers students a program to explore the human past through its material remains to understand cultural and societal change through time, and the role of heritage in the present. We offer many opportunities for students to conduct research with faculty in our archaeology labs, field schools, and in our extensive research collections.

The **General Anthropology Concentration** includes all four fields of anthropology:

- biological anthropology (biological diversity and evolutionary history of human and nonhuman primates),
- archaeology (human prehistory and the organization and growth of technology and society),
- sociocultural anthropology (daily life at home and abroad; identity and power in social contexts),
- linguistic anthropology (language and communication in cultural contexts).

Although the student should strive for a topical and geographical balance, an undergraduate may specialize in one of these four branches and may also study a world cultural area intensively through an area studies program.

The **Human Evolutionary Biology Concentration** offers students a program to examine the interconnections between genetics, environment and culture to address issues from human origins and morphology to forensics and modern health.

The **Sociocultural and Linguistic Anthropology Concentration** offers students a program of more focused coursework in these closely related fields. Sociocultural anthropologists study the daily lives of people around the world, both at home and abroad. They conduct field research

to get a hands-on feel for people's lives and passions and examine everything from beauty pageants to political protest marches, from Disney films to the lab practices of nuclear scientists. Sociocultural anthropology distinguishes itself from other disciplines by its conviction that these local and personal details offer a crucial window on the largest processes and problems of our time, from globalization to race relations and violence.

Linguistic anthropology complements sociocultural anthropology with detailed attention to spoken and signed languages—their structure and use in the daily lives of people around the world, both at home and abroad. Linguistic anthropologists examine such things as the “English Only” movement in the United States, the persuasive language of advertising and politics, racism and hate speech, oral/gestural storytelling traditions around the world, communication in the classroom, on social media, or at the United Nations, as well as how the way we talk creates our sense of self and reality.

Because the field of anthropology presents a wide range of disciplinary perspectives on the human condition, students electing this major concentration are encouraged to select from among relevant course offerings in archaeology or biological anthropology to fulfill General Education requirements.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students must select one of the following concentrations in consultation with an advisor:

- Archaeology Concentration (p. 341)
- General Anthropology Concentration (p. 342)
- Human Evolutionary Biology Concentration (p. 343)
- Sociocultural and Linguistics Anthropology Concentration (p. 344)

Minor in Anthropology

The minor in anthropology may be tailored to each student's individual needs, thus accommodating students with interests as diverse as premedicine, prelaw, geography, and art history.

E-mail: anthro@illinois.edu

Web address for department: <http://www.anthro.illinois.edu>

Code	Title	Hours
Select at least two of the following:		
ANTH 220	Introduction to Archaeology	6
ANTH 230	Sociocultural Anthropology	
ANTH 240	Biological Anthropology	
ANTH 270	Language in Culture	
Minimum of six hours of 300- or 400-level courses. Only 3 hours of ANTH 499 may be used to fulfill this requirement.		6
Anthropology courses at any level		6
Total Hours		18

ANTH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ANTH>)

Anthropology Courses

ANTH 101 Introduction to Anthropology credit: 3 Hours.

Anthropology was first envisioned as a holistic discipline, combining insights from the study of human anatomy and evolution, research on material remains of human settlements, and the analysis of social interaction in language and other cultural practices. Following this tradition, this course explores the questions about where humans came from, how societies live and communicate, and why human cultural groups vary.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 102 Human Origins and Culture credit: 4 Hours.

Introduction to human evolutionary biology focusing on the biological processes responsible for our evolution. Draws on a diverse range of disciplines- evolutionary biology, population genetics, comparative anatomy, primatology, archaeology, geology and paleoecology to provide context for interpreting the fossil and archaeological evidence for humans' biological origin and evolution and early cultural change.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 103 Anthro in a Changing World credit: 3 Hours.

Presents the fundamental areas of anthropological analysis through a series of comparative cases that emphasize social and cultural relations in global contexts. Directs attention to the anthropological history of global empires and colonial states, their cultural exchanges, and contemporary studies of culture, society, and globalization.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ANTH 104 Talking Culture credit: 3 Hours.

Introduction to linguistic anthropology, focusing on the role of language in the creation and maintenance of society and culture and on a person's concept of self within that culture. Demonstrates how language use within a community can serve as the foundation for the analysis of cultural practices. Same as LING 104.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 105 World Archaeology credit: 3 Hours.

Using archaeological data, traces our prehistoric heritage and the processes which led to the evolution of agriculture, settled villages, and civilization in many areas of the world. Lectures range from the earliest Homo sapiens to Sumeria, Egypt, Mexico, Peru, and the United States.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 106 Hist Arch Americas credit: 3 Hours.

Explores recent theoretical, methodological, and thematic developments in historical archaeology in North America and the Caribbean.

The temporal coverage is 1500-1900 AD. Examines how historical archaeologists use artifactual, documentary and oral history evidence in interpreting the past, and how historical archaeology can contribute to our understanding of the ways by which material culture can be used to study race, class, gender, and ethnic identities. Same as AFRO 106.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

ANTH 108 Religion & Society in West I credit: 3 Hours.

Same as JS 108, PHIL 108, REL 108, and SOC 108. See REL 108.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

ANTH 109 Religion & Society in West II credit: 3 Hours.

Same as PHIL 109, REL 109, and SOC 109. See REL 109.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

ANTH 130 History of South Asia credit: 3 Hours.

Same as HIST 130. See HIST 130.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

ANTH 143 Biology of Human Behavior credit: 3 Hours.

Critical consideration of data and information bearing on current controversies and ideas concerning selected aspects of human behavior. Topics to be discussed include communication; social organization; and parental, sexual, and aggressive behavior. Same as HDFS 143.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

ANTH 157 The Archaeology of Illinois credit: 3 Hours.

Traces the prehistory of Illinois from the first entry of people into the region more than 113,000 years ago until the 17th century and the beginning of historical records; examines subsequent cultural changes up to the 19th century and statehood from an archaeological and ethnohistorical perspective.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 160 Contemporary Social Issues credit: 3 Hours.

Course considers how anthropological theory and methods enhance our understanding of contemporary social and political issues, including immigration, education, affirmative action, and welfare. It examines the relationship between social policy and social science as well as the strengths and limits of anthropological methods for social and political issues.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

ANTH 165 Lang & Culture Native North Am credit: 3 Hours.

Develops understanding of the rich diversity of languages and cultures found among Native North American peoples from the perspectives of sociocultural and linguistic anthropology. Same as AIS 165.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 175 Archaeology and Pop Culture credit: 3 Hours.

Examines the ways in which the ancient past has been interpreted, appropriated, represented, used, and misused for a variety of reasons by political parties, national governments, and religious and ethnic groups living in the present.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 180 The Archaeology of Death credit: 3 Hours.

Cross-cultural introduction to the celebration of death across time and space. Examines the anthropological and archaeological literature on death, particularly in terms of death ritual and burial practices. Students study popular films on death in different cultures, and carry out a field project at a local cemetery.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 182 Latin American Cultures credit: 4 Hours.

Latin America considered as a theater of conflict and cultural experimentation among Native American, African, and Iberian peoples; their survival and transformation as reported in selected ethnographies and eyewitness sources; and some modern theories and controversies about their experience.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ANTH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ANTH 209 Food, Culture, and Society credit: 3 Hours.

Introduces basic anthropological and sociological methods, concepts and approaches to the study of the food. Explores issues including gender roles, religious influences, family relationships, community sharing, nationalist rituals, and global processes in the production, distribution and consumption of food. Film, ethnographies, and other social science studies will be examined. Same as SOC 269.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 210 Families in Global Perspective credit: 3 Hours.

Same as HDFS 220. See HDFS 220.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ANTH 220 Introduction to Archaeology credit: 3 Hours.

Introduction to the problems of studying past cultures; special attention given to the ranges of techniques available and the adequacy of various methodologies as bases for sound inference about the structure of extinct cultures. Prerequisite: ANTH 102 or consent of instructor.

ANTH 222 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, PS 242, and SOC 222. See AFST 222.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 223 Exploring African Cities credit: 3 Hours.

Same as LA 220. See LA 220.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

ANTH 224 Tourist Cities and Sites credit: 3 Hours.

Examination of tourism's social, political, economic, cultural, and physical dimensions from an anthropological perspective.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 225 Women in Prehistory credit: 3 Hours.

Course identifies the presence of women in the archaeological record and seeks to reconstruct women's lives and roles in a range of ancient societies. It also considers the intellectual history of gender studies in archaeology and anthropology. Same as GWS 225.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 230 Sociocultural Anthropology credit: 3 Hours.

Introduction to the anthropological study of contemporary human societies; emphasis on the comparative study of social organization, interpersonal relations, cultural ecology, and processes of sociocultural change, but also includes some consideration of the method and theory of ethnographic field research.

ANTH 240 Biological Anthropology credit: 3 Hours.

Past and present evolution of the human species and population and individual biological variation; topics include genetic principles relevant to human evolution, primate phylogeny and behavior, fossil evidence for human evolution, and the origin and significance of biological diversity in modern humans. Prerequisite: ANTH 102 or ANTH 143; or an introductory life sciences course; or consent of instructor.

ANTH 241 Human Biological Variation credit: 3 Hours.

Examines the biological concept of race as applied and misapplied to *Homo sapiens* by anthropologists and others from the 18th century to the present and of the origin, nature, and significance of so-called racial variation.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

ANTH 242 History of Human Evolution credit: 3 Hours.

Reviews the history of evolution and its controversies from the pre-Darwinians to contemporary debates. Examines disciplinary and wider societal debates and how they affect each other.

ANTH 243 Sociality of the Great Apes credit: 3 Hours.

Examines the social organization, mating patterns, and group structure of free-ranging chimpanzees, gorillas, and orangutans. Presents historical perspective focusing on misconceptions that have colored our understanding of ape social behavior; addresses questions concerned with learning potential, food sharing, social cooperation, aggressive behavior, self-awareness, and the appropriateness of the apes as models for understanding human behavior. Prerequisite: ANTH 102, ANTH 143, or an equivalent course in animal behavior; or consent of instructor.

ANTH 246 Forensic Science credit: 4 Hours.

History and theory underlying methods used in forensic science. Topics include the courtroom, the units of a crime laboratory, methods of securing and investigating a crime scene, and the analysis of evidence collected from a crime scene such as blood, fibers, hair and fingerprints.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

ANTH 247 Forensic Science DNA Lab credit: 3 Hours.

Forensic science is the application of science to the law and encompasses a wide variety of scientific disciplines. This course introduces students to general laboratory practice, molecular biology and DNA analysis skill that are commonly used by forensic DNA scientists. Students will learn using a ?hands-on? and interactive approach with many of the same tools used by professional forensic DNA scientists.

Prerequisite: ANTH 246.

ANTH 249 Evolution and Human Disease credit: 3 Hours.

Principles of modern evolutionary theory are applied to medical problems. Topics include: transmission, pathogen strategies, symptoms and spectrum of disease, evolution of virulence, concept of cause, antimicrobial resistance, emerging diseases, stress and adaptation, nutrition, diachronic overview of changing patterns of human disease, and ecological factors.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANTH 250 The World Through Museums credit: 3 Hours.

Same as MUSE 250. See MUSE 250.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 258 Sex in Nature and Culture credit: 3 Hours.

A simultaneous exploration of human sexuality from a biological and cultural perspective. Same as GWS 258.

ANTH 259 Latina/o Cultures credit: 3 Hours.

Introduction to the Spanish-speaking population of the United States, including demography, history, economics, and culture; emphasis on Mexican-Americans and Puerto Ricans, although other Spanish-speaking groups are also considered. Same as LLS 259. Prerequisite: ANTH 103 or consent of instructor.

ANTH 261 Intro to the African Diaspora credit: 3 Hours.

Same as AFRO 261. See AFRO 261.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

ANTH 262 Women's Lives credit: 3 Hours.

Perceptions of women, their perceptions of themselves, and their varying roles and statuses in several contemporary societies in diverse countries; supervised ethnographic observation of women's behavior. Same as GWS 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ANTH 266 African Film and Society credit: 3 Hours.

Introduction to African cinema as a contemporary art form and as a window on the social and cultural realities of Africa. The course includes discussion of modern African culture, the African film industry, and African cinema as an art form and as popular entertainment. Same as AFST 266.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ANTH 267 Memoirs of Africa credit: 3 Hours.

Course introduces Africa to students who have read little or nothing about the continent, the course provides a "user-friendly" approach by offering engagingly written narratives of actual lives lived. The texts may be a combination of memoirs written by Africans (about their childhood experiences growing up in various regions of Africa) and by non-African scholars and other authors (including but not limited to anthropologists) who have spent significant amounts of time on the continent. Same as AFST 267. Prerequisite: Completion of Campus Composition I general requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - Non-West

ANTH 268 Images of the Other credit: 3 Hours.

Do all peoples view neighboring or distant populations as radically different "Others," or can humans create mutual images based on a notion of shared humanity? Course compares and analyzes the range of images of ethnic, "racial," gender, class, and bodily differences that have been enacted historically and cross-culturally in both Western and non-Western populations. Prerequisite: A previous course in history and/or one of the social sciences suggested.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

ANTH 270 Language in Culture credit: 3 Hours.

Examines the intersections of culture and language. Topics include the definition of language; the cultural shaping of narrative; how different linguistic systems guide speakers to think differently about the world; and how ideologies about language relate to beliefs about the nation, modernity, race, and gender. Credit is not given for both ANTH 270 and ANTH 271.

ANTH 271 Language in Culture-ACP credit: 3 Hours.

Course is identical to ANTH 270 except for the additional writing component. Credit is not given for both ANTH 271 and ANTH 270. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

ANTH 277 Ancient Cities, Sacred Land credit: 3 Hours.

Examines urban development from its origins to the present day. Among the concepts covered are urbanism, urbanization, ceremonial centers and ceremonial cities, the city as a system, the spatial and economic organization of cities, and the built environment (sacred landscapes, vernacular architecture, places of power). Small field project is conducted in Champaign-Urbana.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 278 Climate Change & Civilization credit: 3 Hours.

Examination of how climate change impacts society. With the increasing need to understand how climate changes and society intersect at present, it is becoming important that we address critical questions about how lessons from the past inform present needs. Case studies from around the world are discussed.

ANTH 285 Intro to Korea Through Film credit: 3 Hours.

Same as EALC 285. See EALC 285.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ANTH 286 Southeast Asian Civilizations credit: 3 Hours.

Overviews the cultural and institutional history of the Indianized states and Vietnam, with attention to dominant commercial, political, religious, artistic, and social traditions of Southeast Asia. Same as ASST 286 and HIST 225.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

ANTH 287 Contemporary East Asia credit: 3 Hours.

Same as EALC 288. See EALC 288.

ANTH 288 American Indians of Illinois credit: 3 Hours.

An interdisciplinary survey of the Native American experience in the Illinois region from pre-Columbian times to the present. Introduces theories, concepts and methods in archaeology, history, and sociocultural anthropology. Includes archaeological field site and museum visits, plus guest lectures by American Indian scholars and community members. Same as AIS 288 and HIST 288.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

ANTH 290 Jewish Cultures of the World credit: 3 Hours.

Survey of the world's Jewish cultures with a particular focus on the non-Western world. Addresses the relations between Judaism and other religious systems and the nature of Jewish life in such locales as North Africa, Sub-Saharan Africa, India, China, and South America.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ANTH 340 Archaeology of Religion credit: 3 Hours.

We familiarize ourselves with how anthropologists approach the study of religion and then look at how we can best understand religion in the past. We examine the differences between religion, worldview, cosmology and culture, and investigate what archaeology can tell us about the origins of religion and the materiality and mundane practices of religion, revitalization and missionization. Lectures will cover theoretical, perspectives, and archaeological cases. Same as REL 342. Prerequisite: Consent of the instructor.

ANTH 341 Native People and Christianity credit: 3 Hours.

Same as REL 341. See REL 341.

ANTH 342 Animal Behavior credit: 3 Hours.

Same as ANSC 366 and IB 329. See IB 329.

ANTH 343 Behavior and Biology of Women credit: 3 Hours.

Exploration of female biology and behavior in a broad evolutionary context. Explores development from pre-puberty through menopause, reproductive processes such as pregnancy, birth and lactation, cognitive and behavioral sex differences, and male and female reproductive strategies in a variety of cultural settings. Examples are drawn primarily from traditional and modern human societies as well as field and experimental data from other species, particularly non-human primates. Prerequisite: ANTH 143 or consent of instructor.

ANTH 346 Forensic Anthropology credit: 3 Hours.

Analysis of human skeletal remains of the medico-legal profession. Topics include the development of the field of forensic anthropology, biological profile and skeletal trauma analysis, interval since death estimation. Additional topics include investigation of crime scenes, the legal role of the biological anthropologist as an expert witness and case report preparation. Attention will also be drawn to the incorporation of anthropological and ethical approaches to dealing with death and using human remains for research. Prerequisite: ANTH 240 and ANTH 246.

ANTH 347 Human Osteology credit: 3 Hours.

Comprehensive knowledge of the human skeleton is central to reconstructing the anatomy, demography, health and evolution of past populations because most of our evidence is derived from preserved skeletal and dental remains. The primary goal of this course is the identification of isolated and fragmentary skeletal remains given that this is a prerequisite to all subsequent analysis. In addition to identifying the bones and landmarks of the human skeleton, students will learn about the structure and function of bone, understand the growth and development of the human skeleton and be introduced to analytical techniques used in human osteology including paleopathology, paleodemography and forensics. Prerequisite: ANTH 240.

ANTH 358 People of the Ice Age credit: 3 Hours.

Explores a vast period of human prehistory - 2 million to 10,000 years ago - before the first cities arose and before people domesticated plants and animals in the Old World; uses archaeological and paleoanthropological data to understand past life ways as well as reasons for change through time in human adaptation. Prerequisite: ANTH 102.

ANTH 360 Evolution and Human Health credit: 3 Hours.

Same as IB 360. See IB 360.

ANTH 361 Ecology and Human Health credit: 3 Hours.

Same as IB 361. See IB 361.

ANTH 362 Body, Personhood, and Culture credit: 3 Hours.

Examines basic cultural assumptions about the human body and what it means to be a "person" in Western and non-Western societies. Addresses key themes in cultural anthropology and the social sciences concerning the relationship of the individual and society and of nature and culture. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ANTH 363 Anth of Dance/Movement credit: 3 Hours.

Anthropological study of dance and other human movement systems in cultural contexts. Designed especially for students with little or no background in socio-cultural anthropology or the social sciences. Includes reading the works of major figures in the field, and learning how to study dances, signed languages and ritual events from an anthropological perspective. Students will also learn about socio-cultural theory and observation, doing fieldwork, movement literacy, problems of subjectivity and objectivity, and personal anthropology.

ANTH 364 Performing "America" credit: 3 Hours.

Introduction to theories of performance and performativity or enactment, and applies these to an understanding of public events like political rallies, music, the arts, protests, and everyday life in the U.S. Emphasis on how these practices of production and consumption help articulate social identity, including gendered, sexual, racial/ethnic, religious, class, and generational affiliations. Focus on the contemporary U.S. with comparative case studies drawn from other parts of the world and some historical materials. Draws on anthropological studies, as well as scholarly literatures from communication studies, literature, the arts, and social history. Prerequisite: At least one course in anthropology or the social sciences.

ANTH 368 'America' in the World credit: 3 Hours.

Study of the lure and rejection of the U.S. around the world, by drawing on long-standing anthropological approaches to the histories of peoplehood, selfhood, and otherness. Examines the historical, political, cultural, economic, and social context of both anti- and pro-Americanism, in various parts of the globe. Prerequisite: Any previous course in cultural anthropology.

ANTH 370 Latina/o Ethnography credit: 3 Hours.

Same as LLS 370. See LLS 370.

ANTH 372 Topics in Lang & Culture credit: 3 Hours.

Advanced topics in language and culture. May be repeated in separate terms. Prerequisite: ANTH 104, ANTH 270, or consent of instructor.

ANTH 373 Culture & Psychology credit: 3 Hours.

Same as PSYC 373. See PSYC 373.

ANTH 374 Anth of Science and Technology credit: 3 Hours.

Examination of science as a cultural system. Utilizing ethnographic methods and social theories, the course will locate scientific knowledge, institutions and practices within enduring anthropological questions around rationality and truth, meaning, personhood, sociality, power inequalities, social transformations, and social justice. Prerequisite: Junior standing.

ANTH 375 The Culture of Nature credit: 3 Hours.

Examines how the natural and the cultural are mutually-constitutive concepts, and investigates contemporary and historical constructions of notions of a natural world. We will see how these concepts have varied over time and among different social groups, with a special emphasis on the contemporary United States. Topics will include the idea of landscape and of nature as a resource to be used, appreciated, represented, controlled, or enjoyed. In addition, the course will feature a special unit on sustainability, and one devoted to analyzing our relationships to animals. Prerequisite: At least one anthropology course or a course in another social science.

ANTH 376 Aztec Civilization credit: 3 Hours.

Detailed description and analysis of Aztec culture, society, and empire at c. 1500 AD, based primarily on ethnohistorical documentation. Topics covered include life cycle, family and society, political and economic organization, warfare, religion, and intellectual and aesthetic traditions. External relationships with neighboring peoples and the indigenous view of the Spanish conquest are considered. Prerequisite: ANTH 102, ANTH 103, or ANTH 105.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 379 Medical Anthropology credit: 3 Hours.

Introduction to concepts and social aspects of health, illness, and curing in different cultures. Considers concepts of interaction between folk and modern medicine in developing nations and delivery of health care as an international social problem. Prerequisite: ANTH 230 or ANTH 260, or consent of instructor.

ANTH 380 Ethnography of the University credit: 3 Hours.

Introduces students to ethnographic research methods through research on the University of Illinois. Emphasizes qualitative research methods and institutional analysis. Student work builds on research done by prior students and student research is web archived. Reflection on and reconfiguration of research questions and hypotheses is encouraged as research projects proceed. Prerequisite: Any 100-level or 200-level sociocultural anthropology course: ANTH 103, ANTH 104, ANTH 230 etc.

ANTH 390 Individual Study credit: 2 to 4 Hours.

Supervised reading and research on anthropological topics chosen by the student with staff approval. Especially (but not exclusively) for students who are preparing for a summer field-work project, or who have some justifiable reason for doing independent study, but who do not qualify for the honors (departmental distinction) courses. Prerequisite: Junior or senior standing; 12 hours in anthropology; consent of instructor. May not be taken concurrently with ANTH 391 or ANTH 495.

ANTH 393 The World of Jewish Sepharad credit: 3 Hours.

Study of the cultural legacy and history of the Sephardic Jews, mostly focusing on the Mediterranean and the thriving communities they established in countries of Muslim governance and in the Balkans, and more recently in America. The Judeo-Spanish language, which has been preserved until the end of the twentieth century, the press, literature and music are components of this course. Same as HIST 393 and REL 393.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

ANTH 399 Special Topics credit: 1 to 3 Hours.

Topics are given on a one-time only, experimental basis. Faculty offer special topics in their areas of expertise that provide an opportunity for undergraduates to be exposed to some of the most current developments in faculty research. May be repeated.

ANTH 402 Transnational Islam, Europe-US credit: 3 or 4 Hours.

Anthropological approach to transnational Islam, focusing on its various expressions in Europe and the United States, particularly since World War II. Same as ASST 402 and REL 409. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as GLOBL 403, GWS 403, HIST 434, REL 403, and SAME 403. See REL 403.

ANTH 404 Disability, Culture & Society credit: 3 or 4 Hours.

Same as CHLH 407, KIN 407, and REHB 407. See CHLH 407.

ANTH 405 Contemporary Central America credit: 3 or 4 Hours.

Explores cultural, political and historical processes in 20th- and 21st-century Central America—focusing on Costa Rica, Nicaragua, Honduras, El Salvador, and Guatemala—through an anthropological lens. Grapples with a core set of questions arising from changes in the global relations, including the rise of global neoliberalism, the crises and renovations of political projects, the transformations of spatial relations through transnational migration, and the proliferation of various pan-hemispheric as well as local identity-based movements. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 or ANTH 182 or ANTH 230 or a course in Latin American history or consent of instructor.

ANTH 408 Human Evolutionary Anatomy credit: 3 or 4 Hours.

Comprehensive, comparative study of musculoskeletal anatomy in primates, focusing on functional and adaptive changes that have occurred in the masticatory apparatus, facial skeleton, and locomotor systems of New World monkeys, Old World monkeys, apes, and humans. Relationships between morphology, ecology, and behavior are discussed, applied to the fossil record, and used to address current issues in human evolution. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 443 or ANTH 440 or ANTH 456 or a course in human or comparative vertebrate anatomy.

ANTH 409 Human Evolutionary Anatomy Lab credit: 3 or 4 Hours.

Comparative detailed dissections of craniofacial, locomotor, neural, and alimentary systems in nonhuman primates, to understand the anatomical bases of human evolution. 3 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in ANTH 408.

ANTH 411 Research Methods in Socio-Cultural Anthropology credit: 3 or 4 Hours.

Exploration of qualitative forms of research used by sociocultural anthropologists when conducting field research. Emphasis is on formulating research questions, research design, and application of these ethnographic methods to a substantial research project. 3 undergraduate hours. 4 graduate hours.

ANTH 414 Writing Ethnography credit: 3 or 4 Hours.

Addresses issues of the theoretical divide between the humanities and the social sciences, the unique authority of the scholar/author, and the invisibility of the reader in producing scholarly texts. Focusing on the ways in which scholars are also authors, we explore current debates by reading a selection of contemporary anthropological texts (and some prescient precursors) that boldly experiment with how ethnography is written. Students will experiment with several ethnographic writing styles. This course is designed for advanced undergraduate anthropology students and graduate students in cultural anthropology, writing studies, and education. 3 undergraduate hours. 4 graduate hours. Prerequisite: Undergraduate students should have already taken at least one 300-level course in cultural anthropology, and graduate students in cultural anthropology, writing studies, and education. Other students should contact the instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

ANTH 416 Anthropology of Music credit: 3 Hours.

Same as MUS 416. See MUS 416.

ANTH 420 Case Studies Global Heritage credit: 3 or 4 Hours.

Cultural heritage encompasses major domains of social, economic, political, religious and environmental practice and policy-making under today's conditions of globalization. Students will critically examine cultural heritage case studies from around the world. 3 undergraduate hours. 4 graduate hours.

ANTH 421 Social Organization credit: 3 or 4 Hours.

Introduction to anthropological concepts of social organization and structure; considers kinship theory, descent and alliance systems, social stratification, nonkin association, social networks, group identification and boundaries, structural-functional interpretations of society, and the meaning of social or cultural structure. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 423 Economic Anthropology credit: 3 or 4 Hours.

Covers the emergence of economic anthropology as a subdiscipline; considers various definitions of economics with their implications for the study of human society; emphasizes the relationship between social organization and economic life from the perspectives of classical studies in anthropology and their contemporary interpretations. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230.

ANTH 425 Anthropology of Education credit: 2 or 4 Hours.

Same as EPS 425 and EPSY 466. See EPS 425.

ANTH 430 The History of Anthropology credit: 4 Hours.

Provides a selective overview of the history and historiography of anthropology in the 19th and 20th centuries. The class moves chronologically and topically, paying particular attention to the social, institutional, and historical contexts of paradigmatic shifts, the interconnections between various national traditions, and the negotiations of the discipline's boundaries. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate or senior standing in anthropology, or consent of instructor.

ANTH 432 Genes and Behavior credit: 3 Hours.

Same as IB 432, NEUR 432, and PSYC 432. See IB 432.

ANTH 435 The Neandertal Debate credit: 3 or 4 Hours.

A detailed investigation of the origin and biological adaptations of late archaic humans and the emergence of modern humans. Explores the practice and validity to using skeletal anatomy to interpret the behavior of past populations using evolutionary and comparative approaches. This course will interpret Neandertal biology and anatomy with particular emphasis on its relevance for theories about the origin and evolution of our species. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 240.

ANTH 436 Biogeography credit: 3 Hours.

Same as ESE 439, GEOG 436, IB 439 and NRES 441. See IB 439.

ANTH 437 Primate Behav Endocrinology credit: 3 or 4 Hours.

Introduction to behavioral endocrinology, focusing on primate, especially human behaviors. Examines the relationship between hormones and behavior using an evolutionary and comparative approach, considering both how hormones influences behavior and how behavioral interactions regulate endocrine physiology. The course covers basic endocrine system physiology and function, hormonal influences on primate social behaviors such as male and female reproductive behaviors, courtship, parental care, bonding and attachment, as well as aggression and territoriality. Other topics include stress, hormones, and health. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 and ANTH 143; or an equivalent course in behavioral ecology, primate behavior, physiology or psychology; or consent of instructor.

ANTH 438 Primate Life History Evolution credit: 3 or 4 Hours.

Life history seeks to explain why differences exist in the pathways that organisms follow from conception to death. Examination of the diversity in the evolution of primate (including human) life histories. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 102, ANTH 143, ANTH 240, ANTH 243 or equivalent.

ANTH 440 Human Paleontology credit: 3 or 4 Hours.

Principles of evolution and a survey of human evolution from the early primates through the Pleistocene epoch; emphasis on evolutionary theory as applied to humans and interpretation of the fossil record. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 240 or consent of instructor.

ANTH 441 Human Genetics credit: 3 or 4 Hours.

Principles of human genetics; anthropological aspects of race and race formation; and hereditary and environmental factors in the biological variation of modern humans. Same as ANSC 441. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 102 or equivalent.

ANTH 443 Primate Form and Behavior credit: 3 or 4 Hours.

Survey of primate social behavior and the classification, morphology, and distribution of living and extinct species; emphasis on interrelationships among behavior, biology, and ecology. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 240 or consent of instructor.

ANTH 444 Methods in Bioanthropology credit: 3 or 4 Hours.

Supervised participation in biological anthropology research projects; techniques, methods, and procedures discussed and practiced under actual field or laboratory working conditions. Normally taken concurrently with ANTH 445. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 240 or equivalent; consent of instructor.

ANTH 445 Research in Bioanthropology credit: 3 or 4 Hours.

Analysis, interpretation, evaluation, and organization of field and laboratory data in biological anthropology; preparation of written reports on research. May be taken concurrently with ANTH 444 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 240 or equivalent; consent of instructor.

ANTH 446 Behavioral Inference & Fossils credit: 3 or 4 Hours.

Theories and methods for interpreting behaviors inferred from the human and primate fossil record. Topics include discussions of adaptation, methods of inference in historical sciences, and practical experimental approaches to understanding aspects of diet, locomotor behavior and social organization in species known only from the fossil record. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 240.

ANTH 447 Advanced Skeletal Biology credit: 3 Hours.

Human skeletal and dental remains form the basis for research in both bioarchaeology and forensic anthropology. We will examine the bases for making inferences about individual skeletons and past populations, with particular emphasis placed on paleodemography, reconstruction of diet, paleopathology, and biological distance analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 347.

ANTH 448 The Prehistory of Africa credit: 3 or 4 Hours.

The study of cultural development in Africa from the appearance of hominids to the time of European domination. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 449 North American Archeology credit: 3 or 4 Hours.

Methods, techniques, and results of archaeology in North America; focuses on divergent approaches to the regional archaeology of North America; and surveys and synthesizes the archaeology of the subcontinent. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 451 Archaeological Surveying credit: 3 or 4 Hours.

Familiarization with methods used in the location and recording of archaeological sites, including techniques of mapping especially adapted to the needs of archaeology; attention given to means of presenting results and interpreting data derived from this work; and work both in the field and in the laboratory. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 452 Stone Tool Technology Analysis credit: 3 or 4 Hours.

Lecture and laboratory on the principles and techniques of stone and bone artifact manufacture, identification, classification, metrical analysis, interpretation, and integration with other classes of archaeological evidence. Emphasis on the use of lithics to test human behavioral models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220.

ANTH 453 Landscape Archaeology credit: 3 or 4 Hours.

The use of archaeological, documentary, and oral history evidence to study and interpret the ways past peoples shaped their landscapes through the deployment of cultural and social practices, and the ways, in turn, that such people were influenced, motivated, or constrained by their natural surroundings. Same as LA 454. 3 undergraduate hours. 4 graduate hours. Prerequisite: Introductory archaeology course, such as ANTH 220, or introductory landscape architecture course, such as LA 215, and a 300 level course in socio-cultural anthropology or archaeology, or equivalent with instructor's permission.

ANTH 454 Archaeological Field School credit: 3 or 4 Hours.

Participation in archaeological excavations; techniques, methods, and procedures discussed and practiced under actual working conditions. Normally taken concurrently with ANTH 455. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: Consent of instructor.

ANTH 455 Lab Analysis in Archaeology credit: 3 or 4 Hours.

Laboratory work including processing, classifying, dating, interpretation, evaluation, and preparation of written reports of archaeological research. May be taken concurrently with ANTH 454 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: ANTH 102 or consent of instructor.

ANTH 459 The Ancient Maya credit: 3 Hours.

Introduction to the Ancient Maya of Mexico, Guatemala, Belize, and Honduras. Evaluates theories that account for the rise and fall of Classic (c. A.D. 250-950) Maya rulership. Excavation data, iconography, and inscriptions are used to reconstruct political and social organization, ideology, subsistence activities, and inter-regional interactions. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 105.

ANTH 460 Heritage Management credit: 3 or 4 Hours.

Detailed examination of the theoretical and practical issues of archaeological heritage management. Focusing on the legal, environmental, ethical, social, political, educational, and touristic aspects of the management of ancient sites for their continued sustainability. Same as LA 460 and RST 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 and at least one ANTH 300- or 400-level archaeological area course.

ANTH 461 Hist of Archaeological Theory credit: 3 or 4 Hours.

Examines the prominent theories in archaeology from its inception to the present day and does so within the context of general developments in anthropological thought. Provides a foundation for graduate students and a capstone for major emphasizing archaeology. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduates: ANTH 220; anthropology major with focus on archaeology; senior standing or consent of the instructor. For graduate students: enrollment in ANTH 430 during the same term advised.

ANTH 462 Museum Theory and Practice credit: 3 or 4 Hours.

A foundational introduction to museology consisting of a critical examination of the history and social life of museums and how museums have been studied by scholars in a range of academic disciplines. Includes visits to campus and local museums. Same as ARTH 462 and LA 472. 3 undergraduate hours. 4 graduate hours.

ANTH 463 Religion and Society credit: 4 Hours.

Course focuses on theoretical issues raised by religion. Does religion address itself essentially to intellectual, emotional or pragmatic issues? Is religion created by rulers, clerics or worshippers? How does the individual experience religion, and (how) can s/he reshape it? In exploring these and related issues, we will read the writings of German, French, and British social scientists of the past 150 years as well as work by contemporary anthropologists. Theoretical perspectives covered include symbolic, processual, materialist, structural-functionalist, structuralist, and postmodernist approaches. Same as REL 463. 4 undergraduate hours. 4 graduate hours. Prerequisite: A 200-level course in cultural anthropology or consent of instructor; or graduate standing.

ANTH 465 Oceania's Peoples and Cultures credit: 3 or 4 Hours.

Survey of the Pacific Islands; regional geography, human ecology, culture history, and ethnography of Melanesia, New Guinea, Polynesia, New Zealand, Micronesia, and Australia; and some consideration of Pacific ethnohistory and the role of Oceania in the modern world. Same as ASST 465. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 102 and ANTH 103, or consent of instructor.

ANTH 466 Class, Culture and Society credit: 4 Hours.

Social hierarchies in a variety of cultural contexts; industrial societies and the process of industrialization; looks at other social forms for the purposes of comparison. A variety of social theories will be discussed and compared through ethnographic studies. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 and ANTH 230 or graduate standing.

ANTH 467 Cultures of Africa credit: 3 or 4 Hours.

Culture and social organization in traditional African societies with emphasis on the politics, kinship, and religion of a small sample of societies illustrating the main cultural variations found in sub-Saharan Africa; some discussion of ecological factors and ethnic group relations in precolonial times. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 468 Religions of Africa credit: 3 or 4 Hours.

Explores a variety of religious traditions and experiences in sub-Saharan Africa from an anthropological perspective. Local, indigenous traditions are emphasized, but African experiences of Islam and Christianity are also covered. Same as AFST 468 and REL 468. 3 undergraduate hours. 4 graduate hours. Prerequisite: A 200-level course in cultural anthropology or consent of instructor; or graduate standing.

ANTH 469 Kinship-Culture-Power-Africa credit: 2 or 4 Hours.

To present the classic approaches to kinship in anthropology that were developed for Africa; to explore the variety of kinship arrangements and strategies that exist in Africa; and to expose students to the panoply of contemporary critiques of classic works on kinship in Africa, and contemporary alternatives to them. Same as AFST 467. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: For students outside anthropology or African Studies, at least one previous course in cultural anthropology is strongly recommended.

ANTH 471 Ethnography through Language credit: 3 or 4 Hours.

Overview of theoretical perspectives and methodologies in linguistic anthropology, including sociolinguistics, ethnography of communication, performance and poetics, discursive practices, and structural analyses. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230 or ANTH 270 and preferably both.

ANTH 472 Border Latina, Latino Cultures credit: 3 or 4 Hours.

Explores and examines the production of U. S. Latina/Latino identities as instances of international, cultural, historical, and social border crossings. In both regional and global contexts, we will analyze the ways in which Mexican American, Cuban American and Puerto Rican identities have been shaped by colonial relations vis-a-vis Spain and by postcolonial conditions vis-a-vis the United States. Same as LLS 472. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103, and ANTH 259 or ANTH 359.

ANTH 473 Museums and Communities credit: 3 or 4 Hours.

Examination of museums and members of ethnographic source communities, and the development of new curatorial practices that incorporate source community needs and views. 3 undergraduate hours. 4 graduate hours.

ANTH 477 Pottery Analysis credit: 3 or 4 Hours.

Introduction to the theories and techniques of pottery analysis for archaeologists. In addition to presentation and discussion of the major literature, there is hands-on practice making, drawing, breaking and analyzing pottery. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 478 African Immigrants in Europe credit: 3 or 4 Hours.

Examines the pressing issues facing the new European Union as the realities of multicultural continent shape the daily lives of all. Begins with EU policy and theoretical models of immigration, but most readings emphasize perspectives of Africans' own experiences as immigrants and refugees in Europe. Same as AFST 478 and EURO 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: One prior 300-level anthropology or related social science course, or consent of instructor.

ANTH 479 Race, Medicine, and Society credit: 3 or 4 Hours.

Same as AAS 479 and LLS 479. See LLS 479.

ANTH 481 Andean Ethnography credit: 3 or 4 Hours.

Survey of Andean cultures at the time of the Spanish conquest, of their subsequent history, and of modern Indian culture in the Andean countries. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 182, ANTH 230 or consent of instructor.

ANTH 486 Peoples of Mainland SE Asia credit: 3 or 4 Hours.

Culture, cultural history, and social systems of mainland Southeast Asia: Burma, Thailand, Cambodia, Vietnam, Laos, Assam Hills, upland southwestern China, and Malaya; emphasis on the interaction of complementary ethnic types in the context of local ecology and the Hindu-Buddhist systems of religion and politics of the lowland states. Same as ASST 486. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or ANTH 230, or consent of instructor.

ANTH 488 Modern Europe credit: 4 Hours.

Historical studies which deploy anthropological methods in the study of early modern and modern Europe; looks at processes of twentieth century modernization through ethnographic studies. Western, Central and Eastern Europe will all receive attention, but the study of Western Europe will predominate. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 and ANTH 230 or three history courses or graduate standing.

ANTH 489 The Ethnography of Korea credit: 3 or 4 Hours.

Same as EALC 469. See EALC 469.

ANTH 494 Honors Senior Thesis I credit: 2 to 4 Hours.

The first of a two-term individual study and research project for those students who are candidates for departmental distinction in anthropology. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; 3.25 GPA in anthropology; and consent of instructor. May not be taken concurrently with ANTH 390.

ANTH 495 Honors Senior Thesis II credit: 2 to 4 Hours.

The second of a two-term individual study and research project for those students who are candidates for departmental distinction in anthropology. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; 3.25 GPA in anthropology; and consent of instructor. May not be taken concurrently with ANTH 390.

ANTH 496 Individual Field Research credit: 3 or 4 Hours.

Supervised participation in field research in ethnography, ethnology, linguistics, or social anthropology; techniques, methods, and procedures discussed and practiced under actual working conditions. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 230; some knowledge of the language of the area concerned; consent of instructor. Normally taken concurrently with ANTH 497.

ANTH 497 Individual Field Data Analysis credit: 3 or 4 Hours.

Analysis, interpretation, evaluation, and organization of field data in cultural anthropology; preparation of written reports on research in ethnography, ethnology, linguistics, or social anthropology. May be taken concurrently with ANTH 496 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: ANTH 230; some knowledge of the language of the area concerned; consent of instructor.

ANTH 498 Senior Capstone Seminar credit: 3 Hours.

A guided independent research seminar for Anthropology majors normally taken during the Fall of the senior year. Students may select to conduct significant and original research in any of the four sub-fields of anthropology or combine interdisciplinary interests. Working closely with the course instructors and with additional guidance from a chosen anthropology faculty advisor, student will develop a research topic of their choice, identify significant research questions, before collecting and analyzing their field data. 3 undergraduate hours. No graduate credit.

ANTH 499 Topics in Anthropology credit: 4 Hours.

Research seminar on specialized topics in anthropology. 4 undergraduate hours. 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

MUSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MUSE>)

Museum Studies Courses**MUSE 200 Introduction to Museums credit: 3 Hours.**

A broad introduction to the museum world, focusing on what a museum is, what differentiates various types of museums, and how museums function. Examines museums in terms of education, curation, exhibition, public relations, research, administration, ethical and legal obligations, funding and knowledge. Prerequisite: One year of college coursework.

MUSE 250 The World Through Museums credit: 3 Hours.

Examination of contemporary museums around the world, evaluating their roles as social institutions and communicators of heritage in increasingly global contexts. The first half of the course develops a framework for museum literacy (how to read museums) that incorporates anthropological, globalization, media and critical theories. The second half of the course is a virtual tour and evaluates museums using this analytical skill set. Same as ANTH 250.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

MUSE 330 Learning in Museums credit: 3 Hours.

An applied course in the multiple responsibilities of professionals in the field of Museum Education. Examines how people, ideas and objects connect in museums; trends in interpretation and museum ethics; best practice and current learning theories; and exemplary programs involving highly varied audiences, community collaboration and advanced technology. Provides practical experience in program development, facilitation, documentation and assessment. Requires some in-museum work outside of regularly scheduled class hours. Includes field trips to local museums. Prerequisite: MUSE 200.

MUSE 389 Seminar in Museum Studies credit: 3 Hours.

Study of special themes, selected topics or current issues in museum studies for undergraduate students with backgrounds in museology. Course may be in seminar or lecture format. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: MUSE 200 and ANTH 462.

MUSE 390 Museum Internship credit: 3 Hours.

Supervised field experience in museums, both on and off-campus, designed to introduce students to professional practice. Builds on museum studies coursework, and provides opportunities for applying academic knowledge and analyzing personal development. Students work part-time (150 hours) in a program-approved museum under the guidance of an instructional team. Requires an internship contract before the term, regular reporting and documentation during the term, and compilation of a project portfolio at the end of the term. May be repeated in same and separate terms to a maximum of six hours. Prerequisite: Three courses (nine hours) within the undergraduate minor in Museum Studies. Requires approval of the Museum Studies program advisor.

MUSE 420 Collections Management credit: 3 or 4 Hours.

An applied course in the preservation, documentation, and maintenance of the physical integrity of museum collections. Examines agents of deterioration and how to mitigate damage to collections; the chemical and physical properties of inorganic, organic, composite and textile materials; collections packing, shipping and storage methods; and collections hazards, safety and emergency planning. Provides practical experience and encourages skills development in collections management. Requires some in-museum work outside of regularly scheduled class hours. 3 undergraduate hours. 4 graduate hours. Prerequisite: MUSE 200 or MUSE 500.

MUSE 440 Museum Registration credit: 3 Hours.

An applied course in the management and care of museum collections through registration and records. Examines legal and ethical issues of collections stewardship, and current professional practices and standards. Provides practical experience and encourages skills development in museum registration. Requires some in-museum work outside of regularly scheduled class hours. Includes a field trip to a local museum. 3 undergraduate hours. 4 graduate hours. Prerequisite: MUSE 200 or MUSE 500.

Archaeology Concentration**For the Degree of Bachelor of Arts in Liberal Arts and Sciences**

Major in Sciences and Letters Curriculum

E-mail: anthro@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level Anthropology courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60- 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: The department may award distinction, high distinction, or highest distinction to any Anthropology major whose overall and major grade point averages are 3.25 or higher; and who successfully completes 33 hours of anthropology courses, including 4-6 hours of ANTH 494 and ANTH 495 resulting in an Honors Thesis. The level of distinction is based on evaluation of the honors thesis. See the departmental academic advisor for details.

All students must discuss their selection of coursework with a departmental adviser.

Code	Title	Hours
------	-------	-------

When a course is listed under two or more categories, the student may decide which of the requirements the course should fulfill; however, it may not be used to fulfill more than one of those requirements.

Anthropology Core Courses 9

Choose 3 of the following core courses. Students may make one substitution for 1 of the 3 required courses, choosing from the option listed.

ANTH 220	Introduction to Archaeology	
or ANTH 105	World Archaeology	
ANTH 230	Sociocultural Anthropology	
or ANTH 103	Anthro in a Changing World	
ANTH 240	Biological Anthropology	
or ANTH 102	Human Origins and Culture	
ANTH 270/271	Language in Culture	
or ANTH 104	Talking Culture	

Archaeology Courses (18 hours distributed as follows):

One course in Cultural archaeology history chosen from the following: 3

ANTH 358	People of the Ice Age
ANTH 376	Aztec Civilization
ANTH 448	The Prehistory of Africa
ANTH 449	North American Archeology
ANTH 459	The Ancient Maya

Two courses in Methods/Materials analysis chosen from the following: 6

ANTH 358	People of the Ice Age
ANTH 420	Case Studies Global Heritage
ANTH 451	Archaeological Surveying
ANTH 452	Stone Tool Technology Analysis
ANTH 453	Landscape Archaeology
ANTH 460	Heritage Management
ANTH 462	Museum Theory and Practice
ANTH 477	Pottery Analysis

Three Archaeology courses chosen from the following: 9

ANTH 358	People of the Ice Age
----------	-----------------------

ANTH 376	Aztec Civilization
ANTH 420	Case Studies Global Heritage
ANTH 448	The Prehistory of Africa
ANTH 449	North American Archeology
ANTH 451	Archaeological Surveying
ANTH 452	Stone Tool Technology Analysis
ANTH 453	Landscape Archaeology
ANTH 459	The Ancient Maya
ANTH 460	Heritage Management
ANTH 461	Hist of Archaeological Theory
ANTH 462	Museum Theory and Practice
ANTH 477	Pottery Analysis

Additional Archaeology Anthropology coursework (9 hours distributed as follows):

One course in Biological Anthropology	3
Two courses related to the student's area of emphasis and approved by the departmental advisor	6

Research and Service Learning Coursework

ANTH 454	Archaeological Field School	3
ANTH 455	Lab Analysis in Archaeology	3

Senior Capstone Project 3-6

Choose one option below (Honors Thesis or Senior Capstone Seminar or Research) in consultation with the departmental advisor:

Honors Thesis- 6 hours. Two consecutive semesters of research resulting in a written thesis

ANTH 494	Honors Senior Thesis I
ANTH 495	Honors Senior Thesis II

Senior Capstone Seminar (Independent Research)- 3 hours

ANTH 498	Senior Capstone Seminar
----------	-------------------------

Research and/or Additional Field School- 3-6 hours. Further data analysis and a research report associated with ANTH 455 or an additional approved ANTH 454-Archaeology Field School and ANTH 455- Lab Analysis in Archaeology)

Total Hours 45

General Anthropology Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:anthro@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level Anthropology courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60- 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: The department may award distinction, high distinction, or highest distinction to any Anthropology major whose overall and major grade point averages are 3.25 or higher; and who successfully completes 33 hours of anthropology courses, including 4-6 hours of ANTH 494 and ANTH 495 resulting in an Honors Thesis. The level of distinction is based on evaluation of the honors thesis. See the departmental academic advisor for details.

All students must discuss their selection of anthropology courses and supporting course work with a departmental adviser.

Code	Title	Hours
------	-------	-------

When a course is listed under two or more categories, the student may decide which of the requirements the course should fulfill; however, it may not be used to fulfill more than one of those requirements.

Code	Title	Hours
Anthropology Core Courses		9

Choose 3 of the following core courses. Students may make one substitution for 1 of the 3 required courses, choosing from the option listed.

ANTH 220 or ANTH 105	Introduction to Archaeology World Archaeology
ANTH 230 or ANTH 103	Sociocultural Anthropology Anthro in a Changing World
ANTH 240 or ANTH 102	Biological Anthropology Human Origins and Culture
ANTH 270/271 or ANTH 104	Language in Culture Talking Culture

Code	Title	Hours
Thematic Area Courses		21

Choose courses in Thematic Areas within the Department of Anthropology. Students must meet with the departmental advisor to discuss selection of courses. Thematic Areas:

Anthropology of North, Central and South America
Anthropology of Africa, Asia, Europe
Criminality, Law and Social Justice
Environment, Landscape and Sustainability
Family, Community and Social Life
Health, Wellness and Society
Heritage, Museums and Tourism
Human Evolution and Culture
Identity: Race, Class, Gender, Sexuality, Disability
Immigration, Transnationalism and Diaspora
Language, Culture and Communication
Performance, Body, Arts and Media
Science and Technology

Code	Title	Hours
Additional courses within Anthropology or closely related departments that complement the student's thematic area of study		9

Code	Title	Hours
Research and Service Learning Coursework		3

Choose one of the following areas in consultation with the departmental advisor:

Archaeology	
ANTH 454 or ANTH 455	Archaeological Field School Lab Analysis in Archaeology
Biological Anthropology	
ANTH 444	Methods in Bioanthropology

or ANTH 445	Research in Bioanthropology	
Sociocultural/Linguistic Anthropology		
ANTH 411	Research Methods in Socio-Cultural Anthropology (or ANTH 499- Research Methods in Linguistic Anthropology section)	
Museum Anthropology		
ANTH 462 or MUSE 390	Museum Theory and Practice Museum Internship	
Senior Capstone Project		3-6
Choose one option below (Honors Thesis, Senior Capstone Seminar, Internship, Study Abroad, Field School or Research) in consultation with the departmental advisor:		
Honors Thesis- 6 hours. Two consecutive semesters of research resulting in a written thesis		
ANTH 494	Honors Senior Thesis I	
ANTH 495	Honors Senior Thesis II	
Senior Capstone Seminar (Independent Research)- 3 hours		
ANTH 498	Senior Capstone Seminar	
Internship- 3 hours. A portfolio and report associated with an approved departmental internship		
ANTH 390	Individual Study	
Study Abroad- 3 hours. A portfolio and report associated with an approved Study Abroad experience		
ANTH 390	Individual Study	
Research and/or Field School- 3-6 hours. Data analysis and a research report associated with one of the following:		
ANTH 454 & ANTH 455	Archaeological Field School and Lab Analysis in Archaeology	
ANTH 444 & ANTH 445	Methods in Bioanthropology and Research in Bioanthropology	
Total Hours		45

Human Evolutionary Biology Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:anthro@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level Anthropology courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60- 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: The department may award distinction, high distinction, or highest distinction to any Anthropology major whose overall and major grade point averages are 3.25 or higher; and who

successfully completes 33 hours of anthropology courses, including 4-6 hours of ANTH 494 and ANTH 495 resulting in an Honors Thesis. The level of distinction is based on evaluation of the honors thesis. See the departmental academic advisor for details.

All students must discuss their selection of coursework with a departmental adviser.

Code	Title	Hours
When a course is listed under two or more categories, the student may decide which of the requirements the course should fulfill; however, it may not be used to fulfill more than one of those requirements. Twelve hours of 300 or 400-level courses in your major must be taken on this campus.		
Anthropology Core Courses		9
Choose 3 of the following core courses. Students may make one substitution for 1 of the 3 required courses, choosing from the option listed.		
ANTH 220 or ANTH 105	Introduction to Archaeology World Archaeology	
ANTH 230 or ANTH 103	Sociocultural Anthropology Anthro in a Changing World	
ANTH 240 or ANTH 102	Biological Anthropology Human Origins and Culture	
ANTH 270/271 or ANTH 104	Language in Culture Talking Culture	
Human Evolutionary Biology Courses		18
Students take courses from 4 different categories: 2 courses from each of 2 categories, plus 1 course in each of the 2 remaining categories.		
Evolution and Genetics		
ANTH 241	Human Biological Variation	
ANTH 242	History of Human Evolution	
ANTH 249	Evolution and Human Disease	
ANTH 408	Human Evolutionary Anatomy	
ANTH 435	The Neandertal Debate	
ANTH 438	Primate Life History Evolution	
ANTH 440	Human Paleontology	
ANTH 441	Human Genetics	
Health		
ANTH 258	Sex in Nature and Culture	
ANTH 343	Behavior and Biology of Women	
ANTH 347	Human Osteology	
ANTH 437	Primate Behav Endocrinology	
ANTH 438	Primate Life History Evolution	
ANTH 447	Advanced Skeletal Biology	
Behavior		
ANTH 243	Sociality of the Great Apes	
ANTH 258	Sex in Nature and Culture	
ANTH 343	Behavior and Biology of Women	
ANTH 347	Human Osteology	
ANTH 435	The Neandertal Debate	
ANTH 437	Primate Behav Endocrinology	
ANTH 438	Primate Life History Evolution	
ANTH 440	Human Paleontology	

ANTH 443	Primate Form and Behavior	
ANTH 446	Behavioral Inference & Fossils	
ANTH 447	Advanced Skeletal Biology	
Comparative Anatomy		
ANTH 243	Sociality of the Great Apes	
ANTH 346	Forensic Anthropology	
ANTH 347	Human Osteology	
ANTH 408	Human Evolutionary Anatomy	
ANTH 435	The Neandertal Debate	
ANTH 443	Primate Form and Behavior	
ANTH 446	Behavioral Inference & Fossils	
ANTH 447	Advanced Skeletal Biology	
3 additional courses from any of the 4 elective categories, or another field of anthropology, or a related field such as statistics, psychology, chemistry etc. Course selection should complement the student's Human Evolutionary Biology focus. Meet with the departmental advisor to discuss course selection.		9
Research and Service Learning Coursework		3
Choose one of the following:		
ANTH 444	Methods in Bioanthropology	
ANTH 445	Research in Bioanthropology	
Senior Capstone Project		3-6
Choose one option below (Honors Thesis, Senior Seminar, Internship, or Research) in consultation with the departmental advisor:		
Honors Thesis- 6 hours. Two consecutive semesters of research resulting in a written thesis		
ANTH 494	Honors Senior Thesis I	
ANTH 495	Honors Senior Thesis II	
Senior Capstone Seminar (Independent Research)- 3 hours		
ANTH 498	Senior Capstone Seminar	
Internship- 3 hours. A portfolio and report associated with an approved departmental internship		
ANTH 390	Individual Study	
Research and/or Additional Field School- 3-6 hours. If not taken to meet the Research and Service Learning Coursework requirement above choose one of the following:		
ANTH 444	Methods in Bioanthropology	
ANTH 445	Research in Bioanthropology	
Further data analysis- ANTH 445 or an additional approved biological anthropology research project- ANTH 444.		
Total Hours		42

Sociocultural and Linguistic Anthropology Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:anthro@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level Anthropology courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60- 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

The department may award distinction, high distinction, or highest distinction to any Anthropology major whose overall and major grade point averages are 3.25 or higher; and who successfully completes 33 hours of anthropology courses, including 4-6 hours of ANTH 494 and ANTH 495 resulting in an Honors Thesis. The level of distinction is based on evaluation of the honors thesis. See the departmental academic advisor for details.

All students must discuss their selection of coursework with a departmental adviser.

Code	Title	Hours
------	-------	-------

When a course is listed under two or more categories, the student may decide which of the requirements the course should fulfill; however, it may not be used to fulfill more than one of those requirements.

Code	Title	Hours
Anthropology Core Courses		9

Choose 3 of the following core courses. Students may make one substitution for 1 of the 3 required courses, choosing from the option listed.

ANTH 220 or ANTH 105	Introduction to Archaeology World Archaeology	
ANTH 230 or ANTH 103	Sociocultural Anthropology Anthro in a Changing World	
ANTH 240 or ANTH 102	Biological Anthropology Human Origins and Culture	
ANTH 270/271 or ANTH 104	Language in Culture Talking Culture	

Code	Title	Hours
Socio-cultural and Linguistic Anthropology Courses		21

7 courses selected from the list maintained in the advisor's office. Students select 3 courses from locations across at least 2 regions of the world and 4 courses from theoretical or topical areas course offerings in socio-cultural and linguistic anthropology chosen in consultation with the departmental advisor. Four courses must be at the 300- or 400-level.

Additional socio-cultural and linguistics anthropology courses or courses in related fields such as Sociology, Linguistics, Psychology, Education, History, Gender and Women's Studies, African American Studies, Latina/Latino Studies, Asian American Studies, African Studies, Jewish Studies that complement the student's sociocultural/linguistic focus. Meet with the departmental advisor to discuss the selection of courses.		9
--	--	----------

Code	Title	Hours
Research and Service Learning Coursework		3

Choose one of the following:

Research Methods in Cultural Anthropology - ANTH 411
Methods of Cultural Anth

Code	Title	Hours
Research Methods in Linguistic Anthropology - ANTH 499		
Senior Capstone Project		3-6
Choose one option below (Honors Thesis, Senior Seminar, Internship, or Study Abroad) in consultation with the departmental advisor:		
Honors Thesis- 6 hours. Two consecutive semesters of research resulting in a written thesis		
ANTH 494	Honors Senior Thesis I	
ANTH 495	Honors Senior Thesis II	
Senior Capstone Seminar (Independent Research)- 3 hours		
ANTH 498	Senior Capstone Seminar	
Internship- 3 hours. A portfolio and report associated with an approved departmental internship		
ANTH 390	Individual Study	
Study Abroad- 3 hours. A portfolio and report associated with an approved Study Abroad experience		
ANTH 390	Individual Study	
Total Hours		45

Asian American Studies

Martin Manalansan

Head

1208 West Nevada, Urbana

PH: (217) 244-9530

<http://aasp.illinois.edu>

The Asian American Studies Department offers an undergraduate major and interdisciplinary minor.

The major in Asian American Studies explores Asian Americans across disciplines and cultures. The program provides both a broad and a deep approach to theory, research, and multidisciplinary study. The major will prepare students with the research skills that may lead to graduate study in the humanities or social sciences, or career fields including health and medicine, education, law, business, social work, digital and media industries, policy advocacy, politics, academic administration, and other fields that address Asian American issues.

This minor represents a coherent program for students who wish to deepen their study of Asian American histories, experiences, contemporary issues and social problems as a part of their liberal education and understanding of race and diversity in the United States and transnationally. It is relevant to curricula such as letters and sciences, business, economics, education, health studies, pre-law, social work, or urban and regional planning.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: aas@illinois.edu

<http://www.asianam.illinois.edu/>

Minimum required courses: 33 hours.

General Education: The LAS General Education requirements will fulfill the Campus General Education (<https://courses.illinois.edu>)

requirements including the campus general education language requirement.

12 hours of 300- or 400-level courses in your major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Advising: The Department of Asian American Studies provides advising for students. Students must officially declare their major by registering with the Associate Head of Asian American Studies. Students will work with their advisor to choose appropriate courses from the Additional Coursework List and the Approved Elective List to help plan a coherent program of study. A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Code	Title	Hours
AAS 100	Intro Asian American Studies	3
AAS 200	U.S. Race and Empire	3
AAS 215	US Citizenship Comparatively	3
AAS 300	Theories of Race, Gender, and Sexuality	3
Additional Coursework		15
Complete at least 15 additional hours of substantive coursework offered by Department of Asian American Studies listed on the Approved Additional Coursework List.		
Electives		6
Choose 6 hours from the Approved Elective Course List.		
Total Hours		33

Approved Additional Coursework List and Approved Elective List are maintained in the department office and with the AAS advisor.

Interdisciplinary Minor in Asian American Studies

The Asian American Studies Department offers a campus-wide Interdisciplinary Minor. This minor represents a coherent program for students who wish to deepen their study of Asian American histories, experiences, contemporary issues and social problems as a part of their liberal education and understanding of race and diversity in the United States and transnationally. It is relevant to curricula such as letters and sciences, business, economics, education, health studies, pre-law, social work, or urban and regional planning.

Code	Title	Hours
AAS 100	Intro Asian American Studies	3
Asian American Studies Core Coursework		
AAS 200	U.S. Race and Empire	3
AAS 215	US Citizenship Comparatively	3
AAS 300	Theories of Race, Gender, and Sexuality	3
Approved Electives		6
Students complete 6 hours of AAS coursework (a minimum of 3 hours must be at the 300- or 400-level)		
Total Hours		18

AAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AAS>)

Courses

AAS 100 Intro Asian American Studies credit: 3 Hours.

Interdisciplinary introduction to the basic concepts and approaches in Asian American Studies. Surveys the various dimensions of Asian American experiences including history, social organization, literature, arts, and politics.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AAS 120 Intro to Asian Am Pop Culture credit: 3 Hours.

Introductory understanding of the way U.S. popular culture has affected Asian Americans and the contributions Asian Americans have made to U.S. media and popular culture since the mid 1880's.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AAS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 6 hours.

AAS 200 U.S. Race and Empire credit: 3 Hours.

Invites students to examine histories and narratives of U.S. imperialism and racism, drawing upon multiple theoretical and methodological works in Asian American studies and related fields. Same as LLS 200.

AAS 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AFRO 201, LLS 201, and PS 201. See PS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AAS 211 Asian Americans and the Arts credit: 3 Hours.

Examination of Asian American artistic expressions in the visual and the performing arts providing historical, theoretical, and conceptual foundations of understanding the history of various art genres in Asian American communities. Prerequisite: AAS 100 or AAS 120, or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AAS 215 US Citizenship Comparatively credit: 3 Hours.

Examines the racial, gendered, and sexualized aspects of US citizenship historically and comparatively. Interdisciplinary course taught from a humanities perspective. Readings draw from critical legal studies, history, literature, literary criticism, and ethnography. Same as AFRO 215, AIS 295, GWS 215, and LLS 215. Prerequisite: One of: AAS 100, AAS 120, AFRO 100 AIS 101, GWS 250, LLS 100.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AAS 224 Asian Am Historical Sociology credit: 3 Hours.

Explores concepts of colonization, international labor migration, race, nation, assimilation, and class formation through socio-historical examinations of diverse groups categorized as Asian Americans. Same as SOC 224. Prerequisite: AAS 100.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AAS 246 Asian American Youth in Film credit: 3 Hours.

Examines both mainstream and independent films and documentaries representing and/or produced by Asian American youth. Explores the role of multiculturalism and diversity issues in informing young people's experiences.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 250 Asian American Ethnic Groups credit: 3 Hours.

Intensive interdisciplinary study of a particular Asian American Ethnic group (specific ethnic group focus will change every semester). May be repeated in the same or separate terms to a maximum of 9 hours. Prerequisite: Any AAS course at the 100- or 200-level or consent of instructor.

AAS 258 Muslims in America credit: 3 Hours.

Introduction to the study of Muslims in the United States and broadly the history of Islam in the Americas. Using a comparative approach, we study how the historical narrative of African American and Latino Muslims relates to newer immigrant populations, primarily Arab American and South Asian American Muslim communities. Same as LLS 258 and REL 258.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 260 Intro Asian American Theatre credit: 3 Hours.

Same as THEA 260. See THEA 260.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AAS 265 Politics of Hip Hop credit: 3 Hours.

Same as LLS 265. See LLS 265.

AAS 281 Constructing Race in America credit: 3 Hours.

Same as AFRO 281, HIST 281, and LLS 281. See HIST 281.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AAS 283 Asian American History credit: 3 Hours.

Same as HIST 283. See HIST 283.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AAS 286 Asian American Literature credit: 3 Hours.

Same as ENGL 286. See ENGL 286.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AAS 287 Food and Asian Americans credit: 3 Hours.

Introduction to the interdisciplinary study of food to better understand the historical, social, and cultural aspects of Asian American food preparation, distribution and consumption. Students will investigate the politics and poetics of Asian American foodways by examining social habits, and rituals around food in restaurants, ethnic cookbooks, fictional works, memoirs, magazines, and television shows. Prerequisite: AAS 100 or AAS 120, or consent of instructor.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 290 Individual Study credit: 2 to 3 Hours.

Supervised reading and research in Asian American Studies chosen by the student with instructor approval. May be repeated to a maximum of 6 hours. Prerequisite: AAS 100.

AAS 291 Hinduism in the United States credit: 3 Hours.

Same as REL 291. See REL 291.

AAS 297 Asian Families in America credit: 3 Hours.

Same as HDFS 221 and SOCW 297. See SOCW 297.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 299 Begin Topics Asian Am Studies credit: 3 Hours.

May be repeated in the same or subsequent terms to a maximum of 6 hours.

AAS 300 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Explores theories for performing interdisciplinary, intersectional and comparative studies within the field of Asian American studies. Follows multiple genealogies of critical work in ethnic and American studies. Same as GWS 305 and LLS 305.

This course satisfies the General Education Criteria for:

Advanced Composition

AAS 310 Race and Cultural Diversity credit: 4 Hours.

Same as AFRO 310, EPS 310, and LLS 310. See EPS 310.

This course satisfies the General Education Criteria for:

Advanced Composition
Cultural Studies - US Minority

AAS 315 War, Memory, and Cinema credit: 3 Hours.

Interdisciplinary examination of the ways that memories of war, trauma, and immigration are produced through the medium of film. Because war has been key to discourses and practices of imperialism and globalization, some questions addressed will include how these wars have impacted the nation and the global order, as well as how images about these wars produced important constructions of race, gender, and sexuality for national and cultural identities. Also examines the aftereffects of war by analyzing connections between war's trauma, race, immigration, and incarceration. Students will read critical texts, film theory, screenplays, and view films. Same as GWS 315. Prerequisite: AAS 100 or AAS 120, or consent of the instructor.

AAS 317 Asian American Politics credit: 3 Hours.

Same as PS 317. See PS 317.

AAS 328 Asian Americans & Inequalities credit: 3 Hours.

Same as SOC 328. See SOC 328.

AAS 346 Asian American Youth credit: 3 Hours.

Explores cultural production of second-generation Asian American youth as a historical and social formation. Course examines how youth are actively shaping the U.S. landscape in terms of identity formation, youth, culture, education, juvenile justice, politics and activism, and community formations. These experiences are examined in backdrop of larger historical, economic, racial, social and political forces in the United States. Same as HDFS 341.

AAS 355 Race and Mixed Race credit: 3 Hours.

Same as LLS 355 and SOC 355. See LLS 355.

AAS 365 Asian American Media and Film credit: 3 Hours.

An examination of media generally and films and videos more specifically (experimental, documentary, independent, and Hollywood features) by, for, and about Asian Americans. Same as MACS 365. Prerequisite: Any AAS course at the 100- or 200-level, or consent of instructor.

AAS 370 Immigration, Law, and Rights credit: 3 Hours.

Exploration of the histories, cultures, and experiences of immigration to the United States by examining cultural production (literary and visual narratives and texts) alongside legal discourses (legislation, federal court cases). Same as LLS 372.

AAS 375 Prisons, Race, and Terror credit: 3 Hours.

Examination of the U.S. prison regime, focusing on three dimensions of U.S. imprisonment – criminal justice, immigrant detention, and martial imprisonment, particularly under the War on Terror. Same as LLS 377.

AAS 390 Intermed Topics Asian Am St credit: 3 Hours.

May be repeated in the same or subsequent terms to a maximum of 6 hours.

AAS 395 Adv Asian Am Undergrad Reading credit: 2 or 3 Hours.

Supervised reading and research in upper level Asian American Studies topics chosen by the student with instructor approval. May be repeated to a maximum of 6 hours. Prerequisite: AAS 100.

AAS 400 Critical Ethnic Studies credit: 3 or 4 Hours.

Examines the formation of the field of Critical Ethnic Studies and elaborates its key concepts, such as settler colonialism, indigeneity, heteropatriarchy, decolonization, and liberation. Same as LLS 460. 3 undergraduate hours. 4 graduate hours.

AAS 402 Asian American Education credit: 4 Hours.

Same as EPS 402. See EPS 402.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - US Minority

AAS 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AFRO 435, GWS 435, LLS 435, and MACS 432. See LLS 435.

AAS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AFRO 465, GWS 465, and LLS 465. See LLS 465.

AAS 479 Race, Medicine, and Society credit: 3 or 4 Hours.

Same as ANTH 479 and LLS 479. See LLS 479.

AAS 485 The Politics of Fashion credit: 3 or 4 Hours.

Same as GWS 485. See GWS 485.

AAS 490 Adv Topics in Asian Am Studies credit: 3 or 4 Hours.

Research seminar on specialized topics in Asian American Studies. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary. Students may register in more than one section per term if topics vary. Prerequisite: AAS 100 or any Asian American Studies course, or consent of instructor.

Astronomy

Leslie Looney

103 Astronomy Building, 1002 West Green, Urbana

PH: (217) 333-3090

<http://www.astro.illinois.edu>

The Department of Astronomy offers a major and a minor in astronomy. In addition, students may pursue astronomy as part of the LAS Major in Computer Science and Astronomy (p. 587).

The major in astronomy, administered by the Department of Astronomy, is based upon both a broad and an in-depth exploration into astronomy and allied disciplines, and is an excellent way to gain a general science education. It may be chosen by students who wish to have an astronomy research career or an astronomy background for use in related fields, such as working in national laboratories, observatories, planetariums,

NASA, aerospace industry, many computer-related fields, journalism, or science writing to name a few. Astronomy courses can also be customized to satisfy a secondary field for the undergraduate curriculum in General Engineering.

Astronomy students are also encouraged to double major or minor in a second field such as chemistry, computer science, geology, mathematics or physics. Specific programs of study in other areas such as biology, economics, English, history, or journalism for individual students can be designed and periodically updated through mutual discussions between the students and their academic advisers.

The Department of Astronomy also sponsors the Minor in Astronomy.

For the Degree of Bachelor of Science in Liberal Arts and Sciences Major in Sciences and Letters Curriculum

E-mail: astronomy@illinois.edu

Minimum required major and supporting course work normally equates to 47-48 hours.

General education: Students must complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Twelve hours of 300- and 400-level Astronomy/Physics courses must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction. A student majoring in astronomy may earn distinction or high distinction by attaining a minimum grade point average of 3.4 or 3.75, respectively, in required major courses (defined in the table below) taken at UIUC. For highest distinction, in addition to meeting the minimum requirements for high distinction, a senior thesis (ASTR 490) must be completed with strong endorsement by the research supervisor. Questions about eligibility for distinction status should be directed to an astronomy advisor before the senior year.

Code	Title	Hours
Astronomy Core		
ASTR 210	Introduction to Astrophysics ¹	3
Select three of the following:		9-10
ASTR 404	Stellar Astrophysics	
ASTR 405	Planetary Systems	
ASTR 406	Galaxies and the Universe	
ASTR 414	Astronomical Techniques	
Select at least 12 hours of 300- or 400-level ASTR or PHYS courses ^{2,3}		12
Supporting Technical Courses		
Physics		12
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	
Mathematics		11
MATH 221	Calculus I ⁴	

MATH 231	Calculus II
MATH 241	Calculus III

- ¹ Students without a background in physics or astronomy are encouraged to take ASTR 121 and ASTR 122 during their freshman year.
- ² Other 300- or 400-level technical classes, e.g. chemistry, computer science engineering, or statistics can be substituted with academic adviser approval.
- ³ A maximum of 4 hours of credit in ASTR 390 (or equivalent "Independent Study" course, such as PHYS 497) can be counted towards this requirement.
- ⁴ MATH 220 may be substituted for MATH 221. MATH 220 is appropriate for students with no background in calculus.

Minor in Astronomy

The minor in astronomy is designed to broaden the student's knowledge of science and our place in the universe. The minor in Astronomy will benefit especially those students who are eager to learn astronomy but who do not anticipate it to be their career. The Astronomy minor is also suitable for students who intend to pursue careers in areas that may benefit from a good knowledge of astronomy such as aerospace industry, science writing, scientific journalism, or science teaching in schools.

E-mail: astronomy@illinois.edu

Web address for department: <http://www.astro.illinois.edu/>

Code	Title	Hours
Basic Astronomy		
Select one of the following:		3-6
ASTR 100	Introduction to Astronomy ¹	
ASTR 121 & ASTR 122	Solar System and Worlds Beyond and Stars and Galaxies ¹	
ASTR 210	Introduction to Astrophysics	
Advanced Astronomy		
300- or 400-level courses taught by the Department of Astronomy ²		9
Courses at any level taught by the Department of Astronomy ²		3-6
Minimum total hours		18

- ¹ Credit not granted for both ASTR 100 and the ASTR 121/ASTR 122 sequence.
- ² No more than 4 hours of ASTR 390 will be counted towards the minor.

ASTR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ASTR>)

Courses

ASTR 100 Introduction to Astronomy credit: 3 Hours.

Introduces the student to the basic concepts of modern astronomy. Covers topics including the night sky; the solar system and its origin; the nature and evolution of stars; stellar remnants, including white dwarfs, neutron stars, and black holes; extrasolar planetary systems; galaxies and quasars; dark matter and dark energy; the Big Bang and the fate of the universe; and life in the universe. Credit is not given for ASTR 100 if credit in any of ASTR 121, ASTR 122, ASTR 210, or equivalent has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ASTR 121 Solar System and Worlds Beyond credit: 3 Hours.

Introductory survey of the Solar System; structure and motions of the Earth and Moon; planetary motions; natures and characteristics of the planets and smaller solar system bodies; planetary moons and rings; meteors, meteoroids, and meteorites; properties of the Sun; origin and evolution of the Solar System; discovery of extrasolar planetary systems; architecture of extrasolar planetary systems and comparison to our solar system; habitable extrasolar planets. Emphasis will be placed on problem-solving and scientific methods. Credit is not given for ASTR 121 if credit in either ASTR 100 or ASTR 210 has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ASTR 122 Stars and Galaxies credit: 3 Hours.

Introduction to celestial objects and phenomena beyond the Solar System, and their governing basic physical principles; galaxies, quasars, and structure of the universe; dark matter and dark energy; the Big Bang and the fate of the universe; the Milky Way; the interstellar medium and the birth of stars; stellar distances, motions, radiation, structure, evolution, and remnants, including neutron stars and black holes. Emphasis will be placed on problem-solving and scientific methods. Credit is not given for ASTR 122 if credit in either ASTR 100 or ASTR 210 has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ASTR 131 The Solar System Lab credit: 1 Hour.

Laboratory studies which complement the lecture course, ASTR 121. Laboratory exercises will include properties of telescopes, observations of the Moon and planets using telescopes at the Campus Observatory, and computer-based activities that illustrate modern astronomical techniques using digital data. Prerequisite: Credit in ASTR 100 or ASTR 121, or concurrent registration in ASTR 121.

ASTR 132 Stars and Galaxies Lab credit: 1 Hour.

Laboratory studies which complement the lecture course, ASTR 122. Laboratory exercises will include properties of telescopes, observations of star clusters, nebulae and galaxies using telescopes at the Campus Observatory, and computer-based activities that illustrate modern astronomical techniques using digital data. Prerequisite: Credit in ASTR 100 or ASTR 122, or concurrent registration in ASTR 122.

ASTR 150 Killer Skies: Astro-Disasters credit: 3 Hours.

Exploration of the most dangerous topics in the Universe, such as meteors, supernovae, gamma-ray bursts, magnetars, rogue black holes, colliding galaxies, quasars, and the end of the Universe, to name just a few.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

ASTR 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

See course schedule for topics. Approved for Letter and S/U grading. May be repeated in the same term up to 5 hours or separate terms up to 8 hours, if topics vary.

ASTR 210 Introduction to Astrophysics credit: 3 Hours.

Survey of modern astronomy for students with background in physics. Topics include: the solar system; nature and evolution of stars; white dwarfs, neutron stars, and black holes; galaxies, quasars and dark matter; large scale structure of the universe; the Big Bang; and Inflation. Emphasis will be on the physical principles underlying the astronomical phenomena. Prerequisite: PHYS 211.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

ASTR 330 Extraterrestrial Life credit: 3 Hours.

Scientific discussion of the search for extraterrestrial life. Topics include: cosmic evolution (protons to heavy elements to molecules); terrestrial evolution (chemical, biological, and cultural); high technology searches for extraterrestrial life in the solar system (Mars, Venus, outer planets); and beyond the solar system (Drake equation and current SETI projects).

ASTR 350 The Big Bang, Black Holes, and the End of the Universe credit: 3 Hours.

Studies the origin, evolution, and eventual fate of the universe, and the scientific tools used to study these issues. Topics include aspects of special and general relativity; curved spacetime; the Big Bang; inflation; primordial element synthesis; the cosmic microwave background; dark matter and the formation of galaxies; observational evidence for dark matter, dark energy, and black holes. Credit is not given for ASTR 350 if credit in ASTR 406 has been earned. Prerequisite: ASTR 100, or ASTR 121, or ASTR 122, or ASTR 210, or consent of instructor.

ASTR 390 Individual Study credit: 0 to 4 Hours.

Individual study at an advanced undergraduate level. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of advisor and of faculty member who supervises the work.

ASTR 401 Scientific Writing for Astronomy credit: 2 Hours.

Development of journal-style writing skills. Papers written in accordance with the Astrophysical Journal Manual of Style on topics approved by the instructor. Emphasis on developing adequate and critical coverage of the topic, brevity compatible with clarity, and effective presentation. Proper referencing, footnotes, and bibliography are covered. 2 undergraduate hours. No graduate credit. Prerequisite: Completion of campus Composition I general education requirement. Concurrent enrollment in a designated 400-level astronomy course. Not intended for graduate students.

This course satisfies the General Education Criteria for:

Advanced Composition

ASTR 404 Stellar Astrophysics credit: 3 Hours.

Introduction to astrophysical problems, with emphasis on underlying physical principles; includes the nature of stars, equations of state, stellar energy generation, stellar structure and evolution, astrophysical neutrinos, binary stars, white dwarfs, neutron stars and pulsars, and novae and supernovae. 3 undergraduate hours. 3 graduate hours.

Prerequisite: PHYS 212; or consent of instructor. Recommended:

ASTR 210, PHYS 213, PHYS 214.

ASTR 405 Planetary Systems credit: 3 Hours.

This course traces, from a physical perspective, the evolution of planetary systems from star formation in molecular clouds to the emergence of habitable worlds. Topics include the properties of HII regions and molecular clouds, gravitational collapse and disk formation, formation of planetesimals and planets, dynamics of the solar system, physics of planetary atmospheres, properties of individual planets and their rings and satellites, detection and characterization of extra-solar planets, and searches for life in the Solar System and beyond. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 212 or consent of instructor. Recommended: ASTR 210, PHYS 213.

ASTR 406 Galaxies and the Universe credit: 3 Hours.

Nature of the Milky Way galaxy: stellar statistics and distributions, stellar populations, spiral structure, the nucleus and halo. Nature of ordinary galaxies; galaxies in our Local Group, structure of voids and superclusters. Nature of peculiar objects: Seyfert galaxies, starburst galaxies, and quasars. Elementary aspects of physical cosmology. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 212; or consent of instructor. Recommended: ASTR 210, PHYS 213, PHYS 214.

ASTR 414 Astronomical Techniques credit: 4 Hours.

Introduction to techniques used in modern optical and radio astronomy with emphasis on the physical and mathematical understanding of the detection of electromagnetic radiation; includes such topics as fundamental properties of radio and optical telescopes and the detectors that are used with telescopes. Lectures and laboratory. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or equivalent; PHYS 212; or consent of instructor. Recommended: ASTR 210, PHYS 213, PHYS 214.

ASTR 450 Astrochemistry credit: 4 Hours.

Same as CHEM 450. See CHEM 450.

ASTR 451 Astrochemistry Laboratory credit: 3 or 4 Hours.

Same as CHEM 451. See CHEM 451.

ASTR 490 Senior Thesis credit: 3 Hours.

Research with thesis, under the direction of a faculty member in astronomy. This course is recommended for all students who plan to do research and graduate study, and it is a prerequisite for graduation with highest distinction in astronomy. In the term preceding their initial enrollment, those interested in taking the course should consult with an academic advisor as well as the potential research advisor. A thesis must be presented for credit to be received. 3 undergraduate hours. No graduate credit. Prerequisite: Two 400-level Astronomy courses and consent of academic advisor and of faculty member who supervises the work. Intended for Astronomy majors of senior standing.

This course satisfies the General Education Criteria for:

Advanced Composition

ASTR 496 Seminar in Astronomy credit: 1 to 4 Hours.

Lectures on topics of current interest in astronomy and astrophysics; for advanced undergraduates and graduates. See Class Schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

ASTR 499 Astronomy Laboratory credit: 2 Hours.

Provides hands-on observational experience: how to use a telescope, how to image sources using a modern CCD camera, how to use a modern CCD spectrometer, and how to apply data analysis to astrophysical problems. 2 undergraduate hours. 2 graduate hours. Prerequisite: One 400-level astronomy course.

Atmospheric Sciences

Robert Rauber

3072 Natural History Building

1301 W. Green Street

Urbana

PH: (217) 333-2046

<https://www.atmos.illinois.edu>

The Science and Letters Curriculum in Atmospheric Sciences prepares students for careers in a wide range of disciplines within the atmospheric sciences including meteorology, environmental science, climate, remote sensing, atmospheric chemistry, computational science and other areas. The curriculum is tailored to achieve the student's long term educational goals, their career aspirations in atmospheric sciences and their general interests in the field. All students receive a firm foundation in mathematics, physics and chemistry and develop data analysis and computational skills that can be used in a wide range of applications within and beyond the atmospheric sciences. Students can emphasize specific areas of interest in their elective choices. Students majoring in Atmospheric Sciences will have opportunities for employment within agencies of government (e.g. the National Weather Service/NOAA, NASA, EPA, DOD, DOE), many private firms and in colleges and universities for those who continue with graduate education. All students can take part in independent study, internship or research projects as a capstone experience in their senior year. Students interested in a research career in atmospheric sciences are encouraged to undertake research projects in the capstone experience.

The undergraduate curriculum in atmospheric sciences is modeled on the recently published recommendations of the American Meteorological Society. The American Meteorological Society is the professional society for atmospheric scientists and meteorologists in the United States. Their "recommended attributes" for undergraduate degree programs in the atmospheric sciences are guidelines for graduates to be successful in finding employment or in seeking admission to graduate programs. Therefore, we have closely adhered to these recommended attributes in designing our program.

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Email: atmos-sci@illinois.edu

Minimum required major and supporting course work normally equates to 58-59 hours including at least 32 hours in Atmospheric Sciences.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in Atmospheric Sciences can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

For distinction: A minimum cumulative grade point average of 3.2 in all of their Atmospheric Sciences courses, and completing three Atmospheric Sciences Elective courses.

For high distinction: A minimum cumulative grade point average of 3.4 in all of their Atmospheric Sciences courses, and completing four Atmospheric Sciences Elective courses.

For highest distinction: A minimum cumulative grade point average of 3.6 in all of their Atmospheric Sciences courses, and completing five Atmospheric Sciences Elective courses.

Code	Title	Hours
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
MATH 220	Calculus	4-5
or MATH 221	Calculus I	
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations	3
ATMS 201	General Physical Meteorology	3
ATMS 301	Atmospheric Thermodynamics	3
ATMS 302	Atmospheric Dynamics I	3
ATMS 303	Synoptic-Dynamic Wea Analysis	4
ATMS 304	Radiative Transfer-Remote Sens	3
ATMS 305	Computing and Data Analysis	3
ATMS 306	Cloud Physics	3
ATMS 307	Climate Processes	3
ATMS 313	Synoptic Weather Forecasting	4
ATMS 314	Mesoscale Dynamics	3
Total Hours		58-59

Minor in Atmospheric Sciences

The minor in Atmospheric Sciences is designed for students who desire a significant background in Atmospheric Sciences to support work in their major field. This minor will especially benefit students who choose to pursue careers in environmental areas in which multidisciplinary background is essential. The Atmospheric Science minor can complement majors in engineering and agriculture; or scientific pursuits such as chemistry, physics, biology, and scientific writing.

Code	Title	Hours
Choose from the following:		0-6
ATMS 100	Introduction to Meteorology	
ATMS 120	Severe and Hazardous Weather	
ATMS 140	Climate and Global Change	
ATMS 201	General Physical Meteorology	

300- and 400-level courses from the approved course list. Please see the Atmospheric Sciences advisor for a current list.	12-18
Total Hours	18

ATMS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ATMS>)

Courses

ATMS 100 Introduction to Meteorology credit: 3 Hours.

Introduces the student to the basic concepts and principles of meteorology via the interpretation of weather maps and charts; uses current weather information to illustrate key concepts, emphasizes the physical atmospheric processes responsible for weather. By the end of the class students will be able to interpret and make basic weather forecasts as well as be able to explain basic atmospheric phenomena. Same as GEOG 100.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ATMS 120 Severe and Hazardous Weather credit: 3 Hours.

Most extreme manifestations of weather and climate are analyzed in terms of their physical basis and their historical, economic and human consequences. Emphasis is placed on the interplay between technological advances, the evolution of meteorology as a science, and the impacts of extreme weather (winter storms, floods, severe thunderstorms, hurricanes, El Nino). Technological advances include satellites, weather radars and profilers, and computer models used for weather prediction. Same as ESE 120.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ATMS 140 Climate and Global Change credit: 3 Hours.

Introduces climate change and its interactions with the global environment; surveys the physical, chemical, biological and social factors contributing to global change; includes topics such as greenhouse warming, acid rain, ozone depletion, distinguishes anthropogenic influences and natural variability of the earth system; addresses societal impacts, mitigation strategies, policy options and other human responses to global change. Same as ESE 140.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ATMS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics each term. May be repeated.

ATMS 201 General Physical Meteorology credit: 3 Hours.

Introduction to physical processes in the atmosphere, focusing on those relevant to weather and storms. Emphasizes quantitative problem solving. Topics include atmospheric structure, atmospheric thermodynamics, clouds, synoptic meteorology, weather forecasting, and storms. For students in atmospheric sciences, physics, mathematics, engineering, and other physical and natural sciences. Prerequisite: MATH 220 or MATH 221; credit or concurrent registration in MATH 231 and PHYS 211.

ATMS 205 Introduction to Computational Geosciences credit: 3 Hours.

Enables students to use computers to solve real-world problems in the geosciences. Students will: Develop a fundamental level of programming knowledge, including Linux computing; Learn to use MATLAB and Python on local and remote computing systems to address geosciences problems; Understand the structure and use of geosciences datasets; Use computers for data representation, presentation and visualization; and Understand introductory methods for geosciences data reduction and statistical analysis. No programming background is required.

ATMS 301 Atmospheric Thermodynamics credit: 3 Hours.

Introduction to fundamental thermodynamic processes that occur in Earth's atmosphere. Defines, describes, and derives various thermodynamic concepts including (1) the conservation of energy, (2) laws of thermodynamics, (3) kinetic theory, (4) phase transitions of water, and (5) thermodynamic processes of the atmosphere. Applies thermodynamic concepts to atmospheric structure and stability, water phase transformations, and energy and mass transport within the atmosphere. Prerequisite: ATMS 201, MATH 241, and PHYS 211.

ATMS 302 Atmospheric Dynamics I credit: 3 Hours.

Introduction to fundamental dynamical processes in the atmosphere through a descriptive and quantitative analysis of dynamical meteorology at the synoptic and global scale. Covers basic laws of fluid mechanics as applied to the atmospheric sciences, vorticity and circulation in 2-D and 3-D flows, boundary layer dynamics and friction, basic concepts of geophysical waves, and baroclinic instability. These topics will be covered both descriptively and mathematically with emphasis on computer representation of the fundamental processes governing atmospheric motion and application of theory to real-world examples. Same as PHYS 329. Prerequisite: ATMS 201, MATH 241 and PHYS 211.

ATMS 303 Synoptic-Dynamic Wea Analysis credit: 4 Hours.

Conceptualizes the structure and dynamics of the atmosphere through interpretation and analysis of weather charts, time and cross sections, soundings, and forecast products. Students develop case studies of weather system structure, and participate in discussions of weather processes as depicted by weather maps. Depiction of atmospheric kinematic and dynamic processes on weather charts is emphasized. Students learn conceptual models of the structure of mid-latitude cyclones and convective weather systems, including cyclogenesis, frontogenesis, the process of storm intensification, occlusion and frontolysis. Prerequisite: ATMS 201 and credit or concurrent registration in MATH 241.

ATMS 304 Radiative Transfer-Remote Sens credit: 3 Hours.

Introduction to the laws governing the propagation of electromagnetic radiation in the Earth's atmosphere. Topics include absorption, emission, and scattering of radiation, absorption and scattering properties of atmospheric constituents, the Sun as a source of radiation, the radiative transfer equation, and simple radiative balance models. Emphasis will be placed on the role of radiation in weather and climate, the description of atmospheric optical phenomena, and the application to remote sensing. Prerequisite: MATH 241 and PHYS 212.

ATMS 305 Computing and Data Analysis credit: 3 Hours.

Introduction to the statistical treatment and graphical representation of atmospheric sciences data, both in the space and time domain. Emphasis is placed on applications and real-world examples. Discusses relevant statistics, methods of interpolation and least squares, and linear and nonlinear correlations. Students gain experience using PYTHON for data analysis, develop theoretical skills for analyzing and modeling data, and perform virtual experiments and analyze real-world publicly available data sets. Prerequisite: MATH 241 or consent of instructor.

ATMS 306 Cloud Physics credit: 3 Hours.

Develops an understanding of microphysical processes occurring within clouds through use of in-situ observations, modeling, and theoretical studies; topics covered include nucleation, diffusional growth of water and ice particles, the warm rain process, the cold rain process (including riming, aggregation, graupel and hail), weather modification, and an introduction to radar meteorology. Prerequisite: ATMS 301.

ATMS 307 Climate Processes credit: 3 Hours.

Introduces students to Earth's climates and the processes that determine them. Examines factors that control natural climate change over long and short time scales, processes by which humans impact climate and climate change, methods to predict climate change, and climate change response by policymakers. Prerequisite: ATMS 201.

ATMS 311 Environmental Issues Today credit: 3 Hours.

Same as ESE 311. See ESE 311.

ATMS 312 Atmospheric Dynamics II credit: 3 Hours.

Rigorous examination of the dynamical nature of various manifestations of the atmospheric circulation. Topics include the intrinsic effects of earth's rotation and stratification, vorticity and potential vorticity dynamics, various forms of boundary layer, wave dynamics (gravity waves and Rossby waves), geostrophic adjustment, cyclogenesis, frontogenesis and a potpourri of instability theories. Same as PHYS 330. Prerequisite: ATMS 301, ATMS 302.

ATMS 313 Synoptic Weather Forecasting credit: 4 Hours.

Examines the tools and techniques of weather forecasting, with heavy emphasis on actual forecasting. Numerical models used to forecast weather are reviewed and compared. Forecasting using numerical, statistical and probabilistic forecasting techniques is studied. Forecasts of significant winter weather, convection, floods and other weather hazards are emphasized. Students learn the process behind Severe Weather Watches and Warnings, Quantitative Precipitation Forecasts, precipitation type forecasts, flood forecasts and forecasts of other significant weather. Prerequisite: ATMS 302, ATMS 303 or consent of instructor.

ATMS 314 Mesoscale Dynamics credit: 3 Hours.

Examination of the structure and dynamics of weather systems that occur on the mesoscale. The course first reviews what is meant by "mesoscale". Examines the structure and dynamics of both free and forced mesoscale circulations. Free circulations are those internal to the atmosphere, such as thunderstorms, mesoscale convective systems, squall lines, hurricanes, jet streaks, and fronts. Forced circulations are those tied to features external to the atmosphere, such as shorelines (the sea breeze), lakes (lake effect storms), and mountains. Prerequisite: ATMS 301, ATMS 302, ATMS 303, or consent of instructor.

ATMS 315 Meteorological Instrumentation credit: 3 Hours.

Introduction to the instruments and meteorology of measuring weather variables. The focus is to explore modern methods of weather observation while training each student to gather, assess and interpret weather data. This class will also focus on research applications, and industrial applications in addition to routine weather observation. Prerequisite: ATMS 201.

ATMS 322 Soc Impacts Weather & Climate credit: 3 Hours.

Examines the interconnectedness of weather, climate and society. Focus is on the complex relationship between weather, climate and society from both a physical and social perspective with an examination of the role of sustainability in both impacts and future mitigation. Discussions focused on the physical principles driving the weather and climate and how they interact with all aspects of society. Same as ENSU 301.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ATMS 323 Air Pollution to Global Change credit: 3 Hours.

Develops the science of air pollution across spatial scales with an Earth-systems approach. Considers how fossil fuel combustion, agriculture development, waste generation, synthetic chemicals production, biomass burning, and changes in land use are significantly altering levels of radiatively and chemically active gases and aerosols in the atmosphere, and how these pollutants interact at local, regional, and global scales. The systems nature of the processes through which air pollution is linked to global change will be examined via integrated science assessment modeling that includes feedbacks from societal policies, industrial practices, and human populations. Same as ENSU 302.

ATMS 324 Field Studies of Convection credit: 2 Hours.

Students learn to recognize the structural features characteristic of supercellular convection, organized mesoscale convective systems, frontal squall lines, and ordinary thunderstorms, and to relate these structures to theory and conceptual models. Students forecast atmospheric convection, providing daily meteorological forecast discussions and analysis of current and future weather conditions. This course includes a mandatory 12-14 day field trip. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ATMS 201. ATMS Majors or Minors only with consent of instructor.

ATMS 391 Topics in Atmospheric Sciences credit: 1 to 3 Hours.

Special topics in atmospheric sciences at the undergraduate level. See Class Schedule for topics and prerequisites. Additional fees may apply. See Class Schedule. May be repeated in the same or separate terms to a maximum of 12 hours if topics vary.

ATMS 401 Applied Meteorology credit: 3 Hours.

Examines how providers of meteorological information work with stakeholders who value that information to develop decision support systems in fields such as aviation, hydrometeorology, energy, health, national security, transportation, agriculture, emergency management, air quality, and climate sustainability. 3 undergraduate hours. 3 graduate hours.

ATMS 404 Risk Analysis in Earth Science credit: 3 or 4 Hours.

Introduction to concepts and methods of quantitative risk analysis in the Earth system. Key concepts will include probability, impacts, risk, uncertainty, statistical estimation, and decision making. Students will use simple risk analysis methods to apply these concepts to example problems related to drought, flooding, weather extremes, and anthropogenic climate change. The students will learn the R programming language for statistical computing, which will be used to integrate concepts and methods using observational data sets and model output. Same as GEOL 485. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or consent of instructor.

ATMS 405 Boundary Layer Processes credit: 4 Hours.

Course will qualitatively and quantitatively describe atmospheric boundary layer characteristics and processes. The course will focus on the turbulent structure of the boundary layer and the factors that influence this structure over a variety of surfaces (e.g., soil, vegetation, marine) and under a variety of atmospheric conditions (e.g., stability, diurnal/nocturnal). This atmospheric layer is important to our daily lives because it is where humans live and it connects the small-scale fluxes of energy and mass to the large-scale atmospheric circulation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 301, ATMS 302, and ATMS 304; MATH 285; or consent of instructor.

ATMS 406 Tropical Meteorology credit: 4 Hours.

Covers the mesoscale, synoptic scale and planetary scale motions in the tropical circulation. Emphasis will be on delineating the unique characteristics of tropical dynamics. Topics include Hadley circulation, Walker circulation, Madden-Julian oscillation, monsoons, easterly waves, equatorial waves, hurricanes, the quasi-biennial oscillation, El Niño and the Southern Oscillation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 301 and ATMS 302 and MATH 285; or consent of instructor.

ATMS 410 Radar Remote Sensing credit: 4 Hours.

Basic principles of radar and references to other ground based remote sensing systems, with emphasis on radar. Discusses principles of conventional and Doppler radar, data processing, and use of Doppler radar in meteorology. Emphasizes radar observations of meteorological phenomena, such as severe thunderstorms and wind shear. Students analyze data from national radar facilities. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 201 and MATH 231 and credit or concurrent registration in MATH 241; or consent of instructor.

ATMS 411 Satellite Remote Sensing credit: 4 Hours.

Review of the basic techniques used in satellite remote sensing of the Earth's surface and atmosphere, as well as other planets in our solar system. Topics include radiative transfer, scattering and absorption processes, the Sun, mathematics of inversion, atmospheric properties and constituents, surface properties, precipitation, radiation budgets, image classification, satellite technology and orbital configurations. Laboratory work on radiative transfer modeling and satellite data analysis emphasized. All students participate in a team project that has novel and practical applications. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285 and PHYS 212.

ATMS 420 Atmospheric Chemistry credit: 4 Hours.

Biochemical cycles of atmospheric trace gases, their interactions on global and regional scales, and their significance for the chemistry in the atmosphere. Important fundamental concepts central to understanding air pollutants, e.g., the formation of aerosols and the transformation and removal of species in the atmosphere. Same as CEE 447. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 102, PHYS 211, and MATH 241.

ATMS 421 Earth Systems Modeling credit: 4 Hours.

Introduction to systems modeling with applications to the earth and environmental sciences. Basic systems concepts and systems thinking in the contexts of hydrological, climatic, geochemical, and other environmentally relevant systems. Students identify key processes and relationships in systems, represent these elements quantitatively in models, test the models, use them to predict system behavior, and assess the validity of the predictions. No special mathematical or computing background is required. Same as ESE 421, GEOG 421, GEOL 481, and NRES 422. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing in a natural science, geography, natural resources and environmental studies, or engineering.

ATMS 422 Environmental Stable Isotopes credit: 3 Hours.

Same as GEOL 488, IB 488, and NRES 478. See IB 488.

ATMS 425 Air Quality Modeling credit: 4 Hours.

Same as CEE 445. See CEE 445.

ATMS 446 Climate & Social Vulnerability credit: 3 or 4 Hours.

Same as GEOG 496 and SOC 451. See GEOG 496.

ATMS 447 Climate Change Assessment credit: 3 Hours.

Provides students with first-hand experience with computer models used to study climate change and permits them to test hypotheses, develop scenarios, learn about the implications of various structures of the modeled system, and evaluate the climatic impacts of anthropogenic emissions. Students perform calculations and produce model scenarios using a web interface to our Integrated Science Assessment Model (ISAM). 3 undergraduate hours. 3 graduate hours.

ATMS 449 Biogeochemical Cycles credit: 4 Hours.

Presents the key physical, biological, and chemical concepts of biogeochemical cycles central to understanding the causes of global changes in climate and air quality, focusing on an atmospheric sciences view of these cycles and their influences. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

ATMS 490 Individual Study credit: 1 to 4 Hours.

Individual study or reading at an advanced undergraduate level in a subject not covered in normal course offerings. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. May not be used to satisfy requirements for an M.S. or Ph.D. degree in Atmospheric Sciences. Prerequisite: Consent of advisor and of staff member supervising work.

ATMS 491 Adv Topics in Atmospheric Sci credit: 2 to 4 Hours.

Special topics in atmospheric sciences. See Class Schedule for topics and prerequisites. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated in the same or separate terms as topic varies to a maximum of 12 hours.

ATMS 492 Capstone Undergraduate Research credit: 4 Hours.

All senior Atmospheric Sciences undergraduate majors have the opportunity to take a Capstone Undergraduate Research experience. Students will either be engaged in an atmospheric science research project or will participate in an approved internship program with an agency involved in atmospheric science research or in meteorological operations. A research or internship project will be with a program at UIUC or with an allied organization. The student will need to first gain approval for their research or internship. 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 undergraduate hours. Prerequisite: Senior standing in Atmospheric Sciences, or permission of Department Head.

Chemical and Biomolecular Engineering

Paul Kenis

99 Roger Adams Laboratory, 600 South Mathews, Urbana

PH: (217) 333-3640

<http://chbe.illinois.edu>

Chemical engineering is the study and practice of transforming substances on a large scale to produce products or energy for the improvement of society. Such processes are the fundamental core of the chemical, petroleum, pharmaceutical, and electronics industries. Chemical Engineers work in a variety of segments within these industries,

including processing, manufacturing, research and development, management, environmental compliance, and business. Chemical Engineering differs from Chemistry in that Chemical Engineers produce products on a large scale, so that they are affordable and available to as many consumers as possible. In this way, Chemical Engineering emphasizes fundamentals required to design, optimize, and operate chemical processes as safely and efficiently as possible.

For the Degree of Bachelor of Science in Chemical Engineering

Major in Specialized Curriculum in Chemical Engineering

The first two years of the Chemical Engineering curriculum provide a strong foundation in basic sciences through Physics, Mathematics, Chemistry, an introduction to what Chemical Engineers do, and the fundamental basis of Chemical Engineering (Mass and Energy Balances and Thermodynamics.) In the third year, students delve deeper into more specialized Chemistry courses such as Physical and Analytical Chemistry, while exploring fundamental Chemical Engineering courses such as Momentum Transfer, Separations, and Reactor Design. The Senior year incorporates all of this learning through high level technical electives, Process Control, Capstone Lab, and Capstone Design courses. It is through the lab and design class that students apply everything they have learned in previous Chemical Engineering courses to real-world team projects and presentations.

The Chemical Engineering specialized curriculum provides two concentrations: Chemical Engineering and Biomolecular Engineering. Each concentration is based on a strong fundamental understanding of Chemical Engineering, however the Biomolecular concentration's technical electives focus more on bio-applied processing and technology.

Areas of Concentration

- **Chemical Engineering:** The chemical engineering concentration is designed to prepare students for careers in the energy, chemical, food, energy, pharmaceutical, semiconductor processing, personal care, fiber and materials industries.
- **Biomolecular Engineering:** The Biomolecular Engineering concentration builds upon the traditional principles of chemical engineering, but specializes in biological and biotechnological systems in order to better prepare students who are interested in or seek employment in the food, pharmaceutical, and biotechnology industries.

Overview of Curricular Requirements

The curriculum requires 129 hours for graduation and is organized as shown below.

A grade point average of 2.5 or higher in all courses required for the major earned on the UIUC campus is required in order to be accepted by the department as juniors and seniors.

Orientation and Professional Development

These courses introduce opportunities and resources the college, department, and curriculum offers students. They also provide background on the Chemical Engineering curriculum, what chemical engineers do, and the skills to work effectively and successfully in the engineering profession.

Code	Title	Hours
CHBE 121	CHBE Profession ¹	1
ENG 100	Engineering Orientation ¹	0
Total Hours		1

¹ For students entering the curriculum after the freshman year, 1 additional hour of credit from the list of approved engineering technical electives may be substituted in place of CHBE 121.

Foundational Mathematics and Science

These courses stress the basic mathematical and scientific principles upon which the engineering discipline is based.

Code	Title	Hours
CHEM 202	Accelerated Chemistry I ¹	3
CHEM 203	Accelerated Chemistry Lab I	2
CHEM 204	Accelerated Chemistry II	3
CHEM 205	Accelerated Chemistry Lab II	2
MATH 221	Calculus I ²	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285	Intro Differential Equations ³	3
MATH 415	Applied Linear Algebra	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 214	Univ Physics: Quantum Physics	2
Total Hours		37

¹ Students who do not place into CHEM 202, or who do not satisfy the mathematics prerequisite for CHEM 202, may substitute the sequence CHEM 102, CHEM 103, CHEM 104, CHEM 105, CHEM 222, and CHEM 223 for CHEM 202, CHEM 203, CHEM 204, and CHEM 205.

² MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

³ MATH 441 may be substituted for MATH 285. MATH 286 (4 hours) may be substituted for MATH 285 (3 hours).

Chemical and Biomolecular Engineering Technical Core

These courses stress fundamental concepts and basic laboratory techniques that comprise the common intellectual understanding of chemical engineering and chemical science.

For Both Concentrations

Code	Title	Hours
CHBE 221	Principles of CHE	3
CHBE 321	Thermodynamics	4
CHBE 421	Momentum and Heat Transfer	4
CHBE 422	Mass Transfer Operations	4
CHBE 424	Chemical Reaction Engineering	3
CHBE 430	Unit Operations Laboratory	4
CHBE 431	Process Design	4
CHBE 440	Process Control and Dynamics	3
CHEM 236	Fundamental Organic Chem I	4
CHEM 237	Structure and Synthesis	2
CHEM 315	Instrumental Chem Systems Lab ¹	2
CHEM 420	Instrumental Characterization	2

CHEM 442	Physical Chemistry I	4
CS 101	Intro Computing: Engrg & Sci	3
IE 300	Analysis of Data	3
Total Hours		49

¹ Students must register in one of the Chemical Engineering-specific CHEM 315 lab sections.

For the Concentration in Chemical Engineering

Code	Title	Hours
Technical Core		49
CHEM 436 or MCB 450	Fundamental Organic Chem II Introductory Biochemistry	3
Total Hours		52

For the Concentration in Biomolecular Engineering

Code	Title	Hours
Technical Core		49
MCB 450	Introductory Biochemistry	3
Total Hours		52

Technical Electives

These courses stress the rigorous analysis and design principles practiced in the major subdisciplines of chemical engineering embodied in the chemical engineering and biomolecular engineering concentrations.

For the Concentration in Chemical Engineering

Code	Title	Hours
Selected from the departmentally approved List of Approved Chemical Engineering Technical Electives, satisfying these distribution requirements: ¹		
400-level ChBE courses, with not more than 3 hours being CHBE 497 or CHBE 499 ²		6
Any 400-level course from List 1 ²		3
Any courses from List 1 ²		6
Any 400-level course from List 2		4
Total Hours		19

¹ List of Approved Chemical Engineering Technical Electives. (<http://chbe.illinois.edu/wp-content/uploads/2015/11/Technical.Electives.Current.pdf>)

² A maximum of 10 total hours of undergraduate research may be counted toward Technical Elective credit.

For the Concentration in Biomolecular Engineering

Code	Title	Hours
Selected from the departmentally approved List of Approved Biomolecular Engineering Technical Electives Categories A and B, satisfying these distribution requirements: ¹		
Any courses from Category A ^{2,3}		9
Any courses from Category B ³		6
Any 400-level course from List ³		4
Total Hours		19

¹ List of Approved Biomolecular Engineering Technical Electives Categories A and B (<http://chbe.illinois.edu/wp-content/uploads/2015/11/Technical.Electives.Current.pdf>)

² A maximum of 3 hours from this Category may be undergraduate research credit.

³ A maximum of 9 total hours of undergraduate research may be counted toward Technical Elective credit.

Social Sciences and Humanities

The social sciences and humanities courses ensure that students have exposure in breadth and depth to areas of intellectual activity that are essential to the general education of any college graduate.

Code	Title	Hours
Electives in social sciences and humanities satisfying the campus general education requirements for social sciences and humanities, including cultural studies western and non-western components.		16

Composition

These courses teach fundamentals of expository writing.

Code	Title	Hours
RHET 105	Writing and Research	4
Advanced Composition (satisfied by completing the sequence CHBE 430 and CHBE 431 in the Chemical Engineering Technical Core).		
Total Hours		4

Suggested Sequence

The schedule that follows is illustrative, showing the typical sequence in which courses would be taken by a student with no college course credit already earned and who intends to graduate in four years. Each individual's case may vary, but the position of required named courses is generally indicative of the order in which they should be taken. The first three semesters of the Suggested Sequence is the same for all chemical engineering students. The fifth through eighth semesters vary with the Concentration chosen. Refer to the appropriate sequence continuation below.

First Year

First Semester	Hours	
CHEM 202 ¹ Accelerated Chemistry I	3	
CHEM 203 Accelerated Chemistry Lab I	2	
ENG 100 ² Engineering Orientation	0	
MATH 221 ³ Calculus I	4	
RHET 105 Writing and Research	4	
Elective in Social Sciences or Humanities ^{4,5}	3	
Semester Hours		16

Second Semester

CHBE 121 ² CHBE Profession	1	
CHEM 204 Accelerated Chemistry II	3	
CHEM 205 Accelerated Chemistry Lab II	2	
CS 101 Intro Computing: Engrg Sci	3	
MATH 231 Calculus II	3	
PHYS 211 ⁶ University Physics: Mechanics	4	
Semester Hours		16

Second Year

First Semester	Hours
CHBE 221 Principles of CHE	3
CHEM 236 Fundamental Organic Chem I	4

CHEM 237 Structure and Synthesis	2	Elective in Social Sciences or Humanities or Technical	10
MATH 241 Calculus III	4	Elective ^{4,5,8a}	
PHYS 212 ⁶ University Physics: Elec Mag	4		
Semester Hours	17	Semester Hours	14
Total Hours:	49	Total Hours:	97

Concentration in Chemical Engineering

For the Concentration in Biomolecular Engineering, see below (p. 357)

Second Year

First Semester	Hours
Second Year First Semester course information is above in the Suggested Sequence that is common for all students	17
Semester Hours	17
Second Semester	
CHBE 321 Thermodynamics	4
CHEM 436 Fundamental Organic Chem II or MCB 450	3
MATH 285 ^{7a} Intro Differential Equations	3
MATH 415 Applied Linear Algebra	3
PHYS 214 ⁶ Univ Physics: Quantum Physics	2
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	3
Semester Hours	18

Third Year

First Semester	Hours
CHBE 421 Momentum and Heat Transfer	4
CHEM 315 ⁹ Instrumental Chem Systems Lab	2
CHEM 420 Instrumental Characterization	2
CHEM 442 Physical Chemistry I	4
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	3
Semester Hours	15

Second Semester

CHBE 422 Mass Transfer Operations	4
CHBE 424 Chemical Reaction Engineering	3
IE 300 Analysis of Data	3
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	7
Semester Hours	17

Fourth Year

First Semester	Hours
CHBE 430 ^{10,11} Unit Operations Laboratory	4
CHBE 440 Process Control and Dynamics	3
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	9
Semester Hours	16

Second Semester

CHBE 431 ^{10,11} Process Design	4
--	---

Concentration in Biomolecular Engineering

Second Year

First Semester Hours
Second Year First Semester course information is above in the Suggested Sequence that is common for all students

Semester Hours	17
Second Semester	
CHBE 321 Thermodynamics	4
MCB 450 Introductory Biochemistry	3
MATH 285 ^{7b} Intro Differential Equations	3
MATH 415 Applied Linear Algebra	3
PHYS 214 ⁶ Univ Physics: Quantum Physics	2
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	3
Semester Hours	18

Third Year

First Semester	Hours
CHBE 421 Momentum and Heat Transfer	4
CHEM 315 Instrumental Chem Systems Lab	2
CHEM 420 Instrumental Characterization	2
CHEM 442 Physical Chemistry I	4
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	3
Semester Hours	15

Second Semester

CHBE 422 Mass Transfer Operations	4
CHBE 424 Chemical Reaction Engineering	3
IE 300 Analysis of Data	3
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	7
Semester Hours	17

Fourth Year

First Semester	Hours
CHBE 430 ^{10,11} Unit Operations Laboratory	4
CHBE 440 Process Control and Dynamics	3
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	9
Semester Hours	16

Second Semester

CHBE 431 ^{10,11} Process Design	4
Elective in Social Sciences or Humanities or Technical Elective ^{4,5,8a}	10
Semester Hours	14
Total Hours:	97

¹ Students who do not place into CHEM 202, or who do not satisfy the mathematics prerequisite for CHEM 202, may substitute the sequence CHEM 102, CHEM 103, CHEM 104, CHEM 105, CHEM 222, and CHEM 223 for CHEM 202, CHEM 203, CHEM 204, and CHEM 205.

- ² For students entering the curriculum after the freshman year, 1 additional hr of credit from the list of approved engineering technical electives (List 1) may be substituted in place of CHBE 121. The ENG 100 requirement will be waived. Under no circumstances will these requirements be waived for students who are in the chemical engineering curriculum during their freshman year.
- ³ MATH 220 may be substituted, with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.
- ⁴ At least 16 hours must be taken. All Campus General Education requirements must be satisfied, including those in approved course work in the Humanities/Arts, Social/Behavioral Sciences, and Cultural Studies, including the Western, Non-Western and/or U.S. Minorities components. The requirements for the Campus General Education categories Natural Sciences/Technology, Quantitative Reasoning I and II, Composition I, and Advanced Composition are fulfilled through required course work in the curriculum.
- ⁵ Three semesters of college credit in one foreign language is required. Three years of high school credit in one foreign language are equivalent to three semesters of college credit and satisfy the requirement.
- ⁶ Under no circumstances will PHYS 101-PHYS 102 be accepted as a substitute for any part of the Physics sequence.
- ^{7a} MATH 441 may be substituted for MATH 285. MATH 286 may be substituted for MATH 285.
- ^{7b} MATH 441 may be substituted for MATH 285. MATH 286 may be substituted for MATH 285.
- ^{8a} At least 19 hours must be selected from the departmentally approved List of Approved Chemical Engineering Technical Electives (<http://chbe.illinois.edu/wp-content/uploads/2015/11/Technical.Electives.Current.pdf>), satisfying these distribution requirements:
- 6 hours must be 400-level ChBE courses, with not more than 3 hours being CHBE 497 or 499.
 - 3 hours any 400-level course from List 1.
 - 6 hours any courses from List 1.
 - 4 hours any 400-level courses from List 2.
- A maximum of 10 total hours of undergraduate research may be counted toward Technical Elective credit. The List of Approved Chemical Engineering Technical Electives may be obtained in 209 RAL or from the department Web site. (<http://chbe.illinois.edu/undergraduate/explore-chbe-at-illinois/curriculum-academic-advising>)
- ^{8b} At least 19 hours must be selected from the departmentally approved List of Approved Biomolecular Engineering Technical Electives Categories (<http://chbe.illinois.edu/wp-content/uploads/2015/11/Technical.Electives.Current.pdf>), satisfying these distribution requirements:
- 9 hours must be from Category A
 - 6 hours must be from Category B
 - 4 hours must be 400-level courses from List 2.
- A maximum of 3 hours from Category A may be undergraduate research credit. A maximum of 9 total hours of undergraduate research may be counted toward Technical Elective credit. The List of Approved Biomolecular Engineering Technical Electives may be obtained in Room 209 RAL or from the department Web site. (<http://chbe.illinois.edu/undergraduate/explore-chbe-at-illinois/curriculum-academic-advising>)
- ⁹ Students must register in one of the Chemical Engineering-specific CHEM 315 lab sections.

¹⁰ Enrollment in CHBE 430 is limited. Thus CHBE 430 may need to be taken in the second semester and CHBE 431 and/or additional electives taken in the first semester instead. Students in their final semester will have priority for getting into CHBE 430 and CHBE 431.

¹¹ The sequence CHBE 430 and CHBE 431 satisfies the General Education Advanced Composition requirement.

Minor in Biomolecular Engineering

Biomolecular Engineering is a broad, interdisciplinary field with its main goal of engineering value-added biomolecules and biomolecular systems for applications in medical, chemical, agricultural and food industries. Its practice ranges from fundamental study of biomolecules and biomolecular systems to the design of cellular factories and artificial organs. The Biomolecular Engineering minor is designed to better prepare non-chemical engineering students for careers in the food, pharmaceutical, personal care, and biotechnology industries. This minor is not open to students majoring in chemical engineering. Those students should instead take the biomolecular engineering concentration if they are interested in biomolecular engineering coursework.

Students may fulfill the requirements for a minor in biomolecular engineering by completing the following course sequence. For further information, please contact the Department of Chemical and Biomolecular Engineering.

Code	Title	Hours
MCB 450	Introductory Biochemistry	3
CHBE 221	Principles of CHE	3
CHEM 232	Elementary Organic Chemistry I	3
	Biomolecular Engineering Electives ¹	9
	Technical Electives ²	3
Total Hours		21

¹ Students must take at least three "Biomolecular Engineering" courses offered by the Department of Chemical and Biomolecular Engineering (for example, including CHBE 471, CHBE 472, CHBE 473, and CHBE 474). Students may obtain a current list of courses that may be used to satisfy this requirement in Room 209 RAL.

² Course to be selected from a departmentally approved list of biomolecular engineering related technical electives.

For more information regarding to the Biomolecular Engineering minor, contact the Chemical and Biomolecular Engineering Department Office, 114 Roger Adams Laboratory, (217) 244-2021, chbe-advising@scs.illinois.edu.

CHBE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHBE>)

Courses

CHBE 101 Hidden World of Engineering credit: 3 Hours.

Tells the stories of everyday objects: bathtubs, pop cans and screws. These simple objects shape our lives, yet are engineering masterpieces. To unveil this hidden world the course uses a humanistic approach. Designed to appeal to all majors, it uses human stories - filled with failures and triumphs - to reveal the methods of engineers. The course enchants with tales of ancient steel making, today's pop cans, huge stone monuments, and salt. The course will change how a student looks at his or her world. Several sessions focus on women engineers and the environment.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHBE 121 CHBE Profession credit: 1 Hour.

Lectures and problems on the history and scope of chemical engineering endeavors; decisions and criteria for process development and plant design. Approved for S/U grading only. Prerequisite: CHEM 102 or CHEM 202.

CHBE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

CHBE 202 Cooperative Education Practice credit: 0 Hours.

Same as CHEM 293. See CHEM 293.

CHBE 210 CHBE Internship credit: 0 Hours.

Full-time practice of chemical science in an off-campus industrial setting or research laboratory environment. Summary report required. Approved for S/U grading. May be repeated. Prerequisite: Completion of freshman year or equivalent, or consent of Director of Cooperative Education in Chemical and Biomolecular Engineering.

CHBE 221 Principles of CHE credit: 3 Hours.

Lectures and problems on material and energy balances. Prerequisite: CHEM 104 or CHEM 204; credit or concurrent registration in CS 101.

CHBE 297 Individual Study Sophomores credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. May be repeated to a maximum of 6 hours. Prerequisite: Sophomore standing and consent of instructor.

CHBE 321 Thermodynamics credit: 4 Hours.

Fundamental concepts and the laws of thermodynamics; the first and second law applications to phase equilibrium and chemical equilibrium and other applications in the Chemical and Biomolecular Engineering profession. Prerequisite: CHBE 221.

CHBE 397 Individual Study for Juniors credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing and consent of instructor.

CHBE 421 Momentum and Heat Transfer credit: 4 Hours.

Introduction to fluid statics and dynamics; dimensional analysis; design of flow systems; introduction to heat transfer; conduction, convection, and radiation. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CHBE 421 AND ABE 341. Prerequisite: CHBE 221.

CHBE 422 Mass Transfer Operations credit: 4 Hours.

Introduction to mass transfer processes and design methods for separation equipment. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 421.

CHBE 424 Chemical Reaction Engineering credit: 3 Hours.

Chemical kinetics; chemical reactor design; the interrelationship between transport, thermodynamics, and chemical reaction in open and closed systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or registration in CHBE 422.

CHBE 430 Unit Operations Laboratory credit: 4 Hours.

Experiments and computation in fluid mechanics, heat transfer, mass transfer, and chemical reaction engineering. Exercises in effective Chemical and Biomolecular Engineering communications. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 422; credit or concurrent registration in CHBE 424; senior standing in Chemical and Biomolecular Engineering.

This course satisfies the General Education Criteria for:
Advanced Composition

CHBE 431 Process Design credit: 4 Hours.

Capstone design course where students apply principles from previous courses to the design of complete chemical process systems.

Topics include: techniques used in the synthesis and analysis of chemical processes, process simulation and optimization, effective communication in a chemical process engineering environment. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 422; credit or concurrent registration in CHBE 424.

This course satisfies the General Education Criteria for:
Advanced Composition

CHBE 440 Process Control and Dynamics credit: 3 Hours.

Techniques used in the analysis of process dynamics and in the design of process control systems. Laplace transforms, stability analysis, and frequency response methods. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 421 and senior standing in Chemical and Biomolecular Engineering; MATH 285; CS 101.

CHBE 451 Transport Phenomena credit: 3 Hours.

Unifying treatment of physical rate processes with particular emphasis on the formulation and solution of typical boundary value problems associated with heat, mass, and momentum transport. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 421; MATH 285.

CHBE 452 Chemical Kinetics & Catalysis credit: 3 Hours.

Problems in chemical kinetics; techniques for the prediction and measurement of rates of reactions; homogeneous and heterogeneous catalysis chain reactions. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 442 or CHBE 321.

CHBE 453 Electrochemical Engineering credit: 2 or 3 Hours.

Fundamentals of analysis, design, and optimization of electrochemical systems. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: Senior standing in physical science or engineering.

CHBE 454 CHBE Projects credit: 2 Hours.

Laboratory; development of an individual project. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior standing in Chemical and Biomolecular Engineering.

CHBE 455 Polymers Synthesis and Industrial Applications credit: 3 Hours.

Explores the fundamentals of polymer production by providing a broad overview of several topics within the field. Students will gain an appreciation of the relationships between polymer composition, synthesis, and processing, all of which ultimately determine bulk polymer properties. 3 undergraduate hours. No graduate credit. Credit is not given for both CHBE 455 and MSE 457.

CHBE 456 Polymer Science & Engineering credit: 3 Hours.

Fundamentals of polymer science and engineering: polymerization mechanisms, kinetics, and processes; physical chemistry and characterization of polymers; polymer rheology, mechanical properties, and processing. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CHBE 456 and MSE 450. Prerequisite: CHBE 321; credit or concurrent registration in CHBE 421; CHEM 444.

CHBE 457 Microelectronics Processing credit: 3 Hours.

Introductory survey of chemical processing principles applied to microelectronic fabrication. Key concepts originate from chemical kinetics; thermodynamics; mass and energy balances; transport of mass, momentum and heat; and process synthesis and integration. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior or senior standing in Chemical and Biomolecular Engineering, Electrical and Computer Engineering, or Materials Science and Computer Engineering.

CHBE 471 Biochemical Engineering credit: 3 or 4 Hours.

Applications of chemical engineering principles to biological processes. Topics include enzyme mechanisms and kinetics, bioreactor design, cellular growth and metabolism, fermentation, and bioseparations. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing, or consent of instructor.

CHBE 472 Techniques in Biomolecular Eng credit: 3 or 4 Hours.

Engineering principles that underlie many of the powerful tools in biotechnology and how scientific discoveries and engineering approaches are used in current industrial applications. Physical principles that govern self-organization and repair in biological systems; tools developed to characterize, manipulate, and quantify biomolecules; use of analytical tools and genetic manipulation in modern bioengineering and biotechnology applications. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 202, CHEM 203, CHEM 204 or equivalent; MATH 220 or MATH 221; PHYS 211, PHYS 214 or equivalent; MCB 450.

CHBE 473 Biomolecular Engineering credit: 3 or 4 Hours.

Fundamental principles of biomolecular engineering and its applications in pharmaceutical, agriculture, chemical and food industries. Topics include gene discovery, rational design, directed evolution, pathway engineering, and functional genomics and proteomics. 3 undergraduate hours. 4 graduate hours.

CHBE 474 Metabolic Engineering credit: 3 or 4 Hours.

Introduction to the principles and methodology of metabolic engineering. Experimental and mathematical techniques for the quantitative description, modeling, control, and design of metabolic pathways. Same as BIOE 474. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 225 and MATH 285.

CHBE 475 Tissue Engineering credit: 3 Hours.

Principles and practices of Chemical Engineering will be applied to the topic of tissue engineering. Topics include: methods for employing selected cells, biomaterial scaffolds, soluble regulators or their genes, and mechanical loading and culture conditions for regenerative repair of tissues and organs in vitro and in vivo; understanding intrinsic wound healing processes; quantifying cell behaviors/phenotypes; regulatory compliance and clinical translation. 3 undergraduate hours. 3 graduate hours. Prerequisites: CHBE 421 and CHBE 422, or consent of instructor.

CHBE 476 Biotransport credit: 3 Hours.

Investigates the critical roles the transports of mass, energy and momentum play in the function of living systems at varied levels (e.g., cells, tissues, and organs) and time scales. Transport phenomena are also central to the design and operation of devices for biological research, imaging, biochemical processes, and therapeutic interventions including drug delivery, gene therapy and tissue engineering. Students will explore conservation laws of mass, energy, and momentum to mathematically describe cell and molecular biology, immunology, physiology and biomedical engineering systems. 3 undergraduate hours. No graduate credit. Prerequisites: CHBE 421 and CHBE 422 or consent of instructor.

CHBE 478 Bioenergy Technology credit: 3 Hours.

Introduction to emerging bioenergy technologies including: world energy consumption and greenhouse gas concerns; fundamental biochemistry of biomass conversion; structural chemistry of lignocelluloses; pretreatment of biomass; enzymatic deconstruction; bioethanol production and fermentation; metabolic engineering for improved biofuels production; feedstock development; industrial fermentation and fermentor design; economics of bioethanol; alternative biofuels, including biodiesel, syngas, Fischer-Tropsch diesel, butanol, ABE fermentation and biohydrogen; anaerobic microbiology; and the biorefinery concept. 3 undergraduate hours. No graduate credit. Prerequisites: CHBE 321; MCB 450.

CHBE 494 Special Topics credit: 1 to 3 Hours.

Study of topics in chemical engineering; content varies from term to term. Typical topics include optimization, chemical kinetics, phase equilibrium, biochemical engineering, kinetic theory, and transport properties. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated. Prerequisite: Senior standing in Chemical and Biomolecular Engineering or consent of instructor.

CHBE 496 Undergraduate Research Abroad credit: 1 to 3 Hours.

Study assist in research under faculty supervision at a location outside of the United States. Topic and type of assistance vary. 1 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Research credit hours in the course are included under department limits for maximum hours of research/independent study credit allowed toward degree requirements. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of the department. Not available to freshman.

CHBE 497 Individual Study for Seniors credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. 1 to 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing and consent of instructor.

CHBE 499 Senior Thesis credit: 1 to 6 Hours.

Limited in general to seniors in the curriculum in chemical and biomolecular engineering. Any others must have the consent of the head of the department. Each student taking the course must register in a minimum of 5 hours either in one term or divided over two terms. A maximum registration of 10 hours in two terms is permitted. 1 to 6 undergraduate hours. No graduate credit. In order to receive credit, a thesis must be presented by each student registered in CHBE 499.

Chemistry

Martin Gruebele

107 Noyes Laboratory, 505 South Mathews, Urbana
PH: (217) 333-0711

<http://chemistry.illinois.edu>

Students may pursue chemistry by following either the specialized curriculum in chemistry (p. 367) (leading to the Bachelor of Science in Chemistry), or one of two concentrations (Chemistry Concentration (p. 365) or Chemistry Teaching Concentration (p. 365)) in the Sciences and Letters Curriculum (leading to the Bachelor of Science in Liberal Arts and Sciences). Students within the specialized curriculum in Chemistry may choose the Environmental Chemistry concentration (p. 366). In addition, students may pursue chemistry as part of the LAS Major in Computer Science and Chemistry (p. 588). The department also sponsors a minor in chemistry (p. 361). These programs of study are administered by the Department of Chemistry.

The specialized curriculum in chemistry (p. 367) is a rigorous, specialized program suitable for those planning careers in chemistry. It meets standards prescribed by the American Chemical Society. The chemistry concentration (p. 365) in the Sciences and Letters Curriculum is used by some students planning chemistry careers, but it is more often chosen by students wishing to obtain chemistry backgrounds for use in related fields.

Cooperative Education Program: Students accepted into the School of Chemical Sciences Cooperative Education Program spend alternate periods of attendance at the University with periods of employment in industry or government. Transcript recognition is given as well as a certificate of participation at graduation. Additional information and applications are available in the School of Chemical Sciences Placement and Student Services office.

Chemistry Advising Information:

For the Chemistry Majors and Minor, contact SCS Academic Advising (<http://publish.illinois.edu/scsadvicing>).

110 AB&C Noyes Lab

scs-advicing@illinois.edu

To schedule an appointment, please call 217-333-1051

For the Degree of Bachelor of Science in Chemistry

- Major in Specialized Curriculum in Chemistry (p. 367)
- Environmental Chemistry Concentration (p. 366)

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students must select one concentration:

- Chemistry Concentration (p. 365)
- Chemistry Teaching Concentration (p. 365)

Minor in Chemistry

For advising see the Chemistry Overview Section (p. 361).

Code	Title	Hours
Choose one group of Chemistry courses below		8-10
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
CHEM 232	Elementary Organic Chemistry I	3 or 4
or CHEM 236	Fundamental Organic Chem I	
CHEM 233	Elementary Organic Chem Lab I	2
or CHEM 237	Structure and Synthesis	
Choose two 3-4 credit hour courses from the List of Advanced Courses Approved for Chemistry Minor Credit (300- and 400-level Chemistry courses, not research or independent study, 3 hours credit or more) ¹		6-8
Total Hours		19-24

¹ *The following courses may not be used to complete the minor: CHEM 315, CHEM 397, CHEM 420, CHEM 445, CHEM 447, CHEM 492, CHEM 494, CHEM 496, CHEM 497 and CHEM 499.*

CHEM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHEM>)

Courses

CHEM 101 Introductory Chemistry credit: 3 Hours.

Introduction to the basic concepts and language of chemistry; lectures, discussions, and lab. Preparatory chemistry course for students who require additional background before enrolling in CHEM 102. This course has been approved for graduation credit for all students in the College of LAS. Students in other colleges should check with their college office. Additional fees may apply. See Class Schedule. Prerequisite: 2.5 years of high school mathematics, or credit or concurrent registration in MATH 112.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 102 General Chemistry I credit: 3 Hours.

For students who have some prior knowledge of chemistry. Principles governing atomic structure, bonding, states of matter, stoichiometry, and chemical equilibrium. Credit is not given for both CHEM 102 and CHEM 202. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit. Prerequisite: Credit in or exemption from MATH 112; one year of high school chemistry or equivalent. All students enrolled in CHEM 102 should also enroll in CHEM 103.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 103 General Chemistry Lab I credit: 1 Hour.

Laboratory studies to accompany CHEM 102. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 103 and CHEM 203. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit. Prerequisite: Credit or concurrent registration in CHEM 102 is required.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 104 General Chemistry II credit: 3 Hours.

Lecture and discussions. Chemistry of materials, including organic and biological substances, chemical energetics and equilibrium, chemical kinetics, and electrochemistry. Credit is not given for both CHEM 104 and CHEM 204. Prerequisite: CHEM 102 or CHEM 202 or advanced placement credit for one semester of college-level chemistry.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 105 General Chemistry Lab II credit: 1 Hour.

Laboratory studies to accompany CHEM 104. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 105 and CHEM 205. Prerequisite: CHEM 102 and CHEM 103; credit or concurrent registration in CHEM 104 is required.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 108 Chemistry, Everyday Phenomena credit: 3 Hours.

Laboratory-based work in which students will evaluate products (such as antacids), synthesize materials (such as soap), and gain a better understanding of forensic chemistry. Additional fees may apply. See Class Schedule. Credit in CHEM 108 does not count toward Chemistry requirements for students in the Specialized Curriculum in Chemistry, the Science and Letters Chemistry major, the Chemistry Teaching Option, or the Chemistry minor; however the course may be taken by students in any of these groups for general education hours. Prerequisite: Credit or concurrent registration in MATH 112.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 123 Teaching Elementary & Middle School Chemistry credit: 3 Hours.

Inquiry-based, hands-on study of chemistry for prospective elementary and middle school teachers. Next Generation Science Standards are emphasized. Credit is not given toward the hours of chemistry required for chemistry and related majors. Prerequisite: Preference given to students in Elementary Education.

CHEM 197 Individual Study Freshman credit: 1 to 2 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms to a maximum of 4 hours. A maximum of 2 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

CHEM 202 Accelerated Chemistry I credit: 3 Hours.

Lectures and discussions. Beginning chemistry course for students in the chemical sciences and others with strong high school chemistry and mathematics preparation. Chemical calculations, structure, bonding and equilibrium. Credit is not given for both CHEM 202 and CHEM 102. Prerequisite: Credit or concurrent registration in MATH 220 or MATH 221; concurrent registration in CHEM 203.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 203 Accelerated Chemistry Lab I credit: 2 Hours.

Companion laboratory course to CHEM 202. Comprehensive skills-oriented approach to learning laboratory technique and safety. Additional fees may apply. See Class Schedule. Students may receive no more than two credit hours for both this course and CHEM 103. Prerequisite: Concurrent registration or credit in CHEM 202 or consent of instructor.

CHEM 204 Accelerated Chemistry II credit: 3 Hours.

Continuation of CHEM 202. Lectures and discussions. Emphasizes chemical thermodynamics, equilibrium, chemical kinetics, and coordination chemistry. Prerequisite: CHEM 202 and/or CHEM 203 and concurrent registration in CHEM 205, or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 205 Accelerated Chemistry Lab II credit: 2 Hours.

Laboratory and discussion. Includes experiments in qualitative analysis, inorganic synthesis, and kinetics as well as an individual project. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 205 and CHEM 223. Prerequisite: Concurrent registration in CHEM 204 or consent of department.

CHEM 222 Quantitative Analysis Lecture credit: 2 Hours.

Fundamentals of quantitative analysis, chemical equilibrium and kinetics. This lecture course is intended to accompany CHEM 223. Students with credit in CHEM 222 can receive credit for CHEM 203. Prerequisite: CHEM 104 and CHEM 105 or equivalent.

CHEM 223 Quantitative Analysis Lab credit: 2 Hours.

Laboratory course covers the fundamentals of quantitative analysis, equilibrium and kinetics. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 223 and CHEM 205. Prerequisite: Credit or concurrent registration in CHEM 222.

CHEM 232 Elementary Organic Chemistry I credit: 3 or 4 Hours.

Presents structural and mechanistic chemistry with emphasis on applications of this material to closely related areas. For students in agricultural, nutritional and biological sciences, as well as premedical, pre-dental, and pre-veterinary programs. One-term survey course; may be followed by CHEM 332. Credit is not given for both CHEM 232 and CHEM 236. 3 hours of credit is an option for those not registered in a discussion-recitation section. 4 hours of credit requires registration in a discussion-recitation section and a live lecture or an online section. Prerequisite: CHEM 104 and CHEM 105, or CHEM 204.

CHEM 233 Elementary Organic Chem Lab I credit: 2 Hours.

Basic laboratory techniques in organic chemistry are presented with emphasis on the separation, isolation, and purification of organic compounds. For students in agricultural science, dairy technology, food technology, nutrition, dietetics, premedical, pre-dental, and pre-veterinary programs. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 233 and CHEM 237. Prerequisite: Credit or concurrent registration in CHEM 232.

CHEM 236 Fundamental Organic Chem I credit: 4 Hours.

Fundamental structural, synthetic, and mechanistic organic chemistry is presented. For students whose major is chemistry or for those in the specialized curricula in chemistry or chemical engineering. The first term of a two-term integrated sequence (to be followed by CHEM 436). This lecture course is intended to accompany CHEM 237. Credit is not given for both CHEM 236 and CHEM 232. Prerequisite: CHEM 204 or CHEM 222 through CHEM 223.

CHEM 237 Structure and Synthesis credit: 2 Hours.

Laboratory course introduces synthesis and the basic techniques for the separation, isolation and purification of organic and inorganic compounds. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 237 and CHEM 233. Prerequisite: Credit or concurrent registration in CHEM 236.

CHEM 293 Cooperative Education Practice credit: 0 Hours.

Off-campus cooperative practice of chemistry or chemical engineering in industrial or governmental facilities. Each chemistry or chemical engineering student participating in cooperative education must register for CHEM 293 for each off-campus term. Same as CHBE 202. Approved for S/U grading only. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CHEM 295 Chemistry Internship credit: 0 Hours.

Full-time practice of chemical science in an off-campus industrial setting or research laboratory environment. Summary report required. Approved for S/U grading only. May be repeated. Prerequisite: Completion of freshman year or equivalent, or consent of Director of Cooperative Education in Chemistry.

CHEM 297 Individual Study Sophomore credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 312 Inorganic Chemistry credit: 3 Hours.

Basic chemical bonding in molecules, introduction to symmetry, chemistry of the main group elements, coordination chemistry of the transition elements, organometallic chemistry, solid state chemistry, bioinorganic chemistry, chemistry of the lanthanide and actinide elements. Prerequisite: CHEM 232 or CHEM 236.

CHEM 315 Instrumental Chem Systems Lab credit: 2 Hours.

Laboratory course emphasizes the application of modern instrumental techniques for characterizing the kinetic behavior and equilibrium properties of chemical systems. Prerequisite: Either CHEM 237 or both CHEM 223 and CHEM 233.

CHEM 317 Inorganic Chemistry Lab credit: 3 Hours.

Emphasizes modern techniques for the synthesis, purification, and characterization of inorganic and organometallic compounds. There are three components to the course: lectures on laboratory methodology and reporting, laboratory experiments, and report writing. The final third of the course is dedicated to special individualized projects. Additional fees may apply. See Class Schedule. Prerequisite: CHEM 312; completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for: Advanced Composition

CHEM 332 Elementary Organic Chem II credit: 4 Hours.

Continuation of CHEM 232 focuses on organic chemistry and its applications to biochemistry, enzyme mechanisms and the life sciences. Credit is not given for both CHEM 332 and CHEM 436. This course should not be taken by students who have completed CHEM 236. Prerequisite: CHEM 232 and CHEM 233.

CHEM 360 Chemistry of the Environment credit: 3 Hours.

Study of the chemistry of the atmosphere, the chemistry of soil and minerals in the Earth's crust, chemistry of natural waters, agricultural chemicals and organic pollutants, and topics related to energy use. Prerequisite: One year of general chemistry (CHEM 102-105 or CHEM 202-205) and one semester of organic chemistry (CHEM 232 or CHEM 236). The organic chemistry class may be taken concurrently with CHEM 360.

CHEM 397 Individual Study Junior credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 420 Instrumental Characterization credit: 2 Hours.

Lecture course covers the fundamentals of instrumental characterization including: nuclear magnetic resonance spectroscopy, potentiometry, voltammetry, atomic and molecular spectroscopy, mass spectrometry, and gas and liquid chromatography. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 440; or credit or concurrent registration in CHEM 442; or consent of the instructor.

CHEM 436 Fundamental Organic Chem II credit: 3 Hours.

Course is the second term of a two-term integrated sequence and should be taken the term following enrollment in CHEM 236. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CHEM 436 and CHEM 332. Prerequisite: CHEM 236 and CHEM 237; or CHEM 232 and CHEM 233 with consent of instructor.

CHEM 437 Organic Chemistry Lab credit: 3 Hours.

Laboratory experiments in organic chemistry with emphasis on synthesis, purification and spectroscopic identification of organic compounds. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 233 or CHEM 237 and credit or concurrent registration in CHEM 332 or CHEM 436. This course satisfies the General Education Criteria for: Advanced Composition

CHEM 438 Advanced Organic Chemistry credit: 3 Hours.

Advanced topics in structure, synthesis and reactions of organic chemistry. Lecture only course. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 332 or CHEM 436.

CHEM 440 Physical Chemistry Principles credit: 4 Hours.

One-term course in physical chemistry emphasizing topics most important to students in the biological and agricultural sciences. Not open to students in the specialized curricula in chemistry and chemical engineering. Laboratory experience in this area provided by CHEM 315 to be taken preferably after CHEM 440. Same as BIOC 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 222 and CHEM 232, or equivalent; PHYS 102; and MATH 241 or equivalent calculus including partial derivatives.

CHEM 442 Physical Chemistry I credit: 4 Hours.

Lectures and problems focusing on microscopic properties. CHEM 442 and CHEM 444 constitute a year-long study of chemical principles. CHEM 442 focuses on quantum chemistry, atomic and molecular structure, spectroscopy and dynamics. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CHEM 442 and PHYS 485. Prerequisite: CHEM 204 or CHEM 222; MATH 225 or MATH 415, and a minimal knowledge of differential equations, or equivalent; and PHYS 211, PHYS 212, and PHYS 214 or equivalent.

CHEM 444 Physical Chemistry II credit: 4 Hours.

Continuation of CHEM 442, focusing on thermodynamics, statistical mechanics and kinetics from single molecules to the bulk, in gases and in the condensed phase. 4 undergraduate hours. 4 graduate hours. Credit is not given for CHEM 444 and MSE 401 or PHYS 427. Prerequisite: CHEM 442.

CHEM 445 Physical Principles Lab I credit: 2 Hours.

Laboratory course features experiments concerning the fundamental physical nature of chemical phenomena. Experiments include infrared spectroscopy, protein folding, x-ray diffraction and laser induced fluorescence. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 315, and credit or concurrent registration in CHEM 444; or consent of instructor.

CHEM 447 Physical Principles Lab II credit: 2 Hours.

Laboratory course features advanced experiments concerning the fundamental physical nature of chemical phenomena. This course is a continuation of CHEM 445. Experiments include low-energy electron diffraction from surfaces, raman spectroscopy and ion cyclotron resonance mass spectroscopy. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 445 or consent of instructor.

CHEM 450 Astrochemistry credit: 4 Hours.

Covers the foundations of astrochemistry, a young field at the intersection between chemistry and astronomy. Topics to be discussed include the interstellar medium, atomic and molecular physics, interstellar chemistry, molecular astronomy, and unresolved enigmas in the field. Same as ASTR 450. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 442 and CHEM 444, or PHYS 427 and PHYS 486, or equivalent experience in quantum mechanics, thermodynamics, and statistical mechanics.

CHEM 451 Astrochemistry Laboratory credit: 3 or 4 Hours.

An active, hands-on introduction to observational astrochemistry, laboratory astrochemistry and theoretical astrochemistry. Activities will include astronomical observations of interstellar molecules at the Observatory, spectroscopy of molecules in the laboratory, quantum chemical calculations and simulations of molecular spectra, and modeling of interstellar chemistry. Same as ASTR 451. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CHEM 450.

CHEM 460 Green Chemistry credit: 3 or 4 Hours.

This course seeks to reduce the environmental consequences of the chemical industry. It includes modifying engineering practices, the development of new catalytic processes, modification of existing chemical processes, and bioremediation. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 312, CHEM 332, CHEM 360, or consent of instructor.

CHEM 472 Physical Biochemistry credit: 3 Hours.

Same as MCB 446 and BIOC 446. See BIOC 446.

CHEM 474 Drug Discovery & Development credit: 3 Hours.

Lecture course on fundamentals of drug discovery and development. Topics include case studies of top-selling, mechanistically diverse drugs, chemistry of drug contraindications, structural biology of drug targets, mechanisms of drug resistance, and drug metabolism and toxicity. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 332 or CHEM 436; and MCB 354 or MCB 450, or consent of instructor.

CHEM 480 Polymer Chemistry credit: 3 or 4 Hours.

Same as MSE 457. See MSE 457.

CHEM 482 Polymer Physics credit: 3 or 4 Hours.

Same as MSE 458. See MSE 458.

CHEM 483 Solid State Structural Anlys credit: 4 Hours.

Lectures and laboratory on various aspects of X-ray diffraction studies of solids; topics include the properties of crystals, symmetry, diffraction techniques, data collection methods, and the determination and refinement of crystal structures. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 442 or consent of instructor.

CHEM 488 Surfaces and Colloids credit: 3 or 4 Hours.

Same as MSE 480. See MSE 480.

CHEM 492 Special Topics in Chemistry credit: 1 to 3 Hours.

Open to advanced undergraduates and graduate students. Deals with subjects not ordinarily covered by regularly scheduled courses. 1 to 3 undergraduate hours. 1 to 3 graduate hours. Approved for letter and S/U grading. Prerequisite: Credit or concurrent registration in any 400-level course in chemistry.

CHEM 494 Lab Safety Fundamentals credit: 1 Hour.

Same as MSE 492. See MSE 492.

CHEM 495 Teaching Secondary Chemistry credit: 4 Hours.

Intended for undergraduates working toward certification to teach high school chemistry and graduate students working towards a Master's degree in the Teaching of Chemistry. Course aims to provide future teachers with hands-on experience in conducting laboratory experiments, demonstrations, and teaching strategies. 4 undergraduate hours. 4 graduate hours. Course does not count toward the eleven advanced hours in chemistry required in the specialized curriculum, nor does it apply to coursework required for the Ph.D. in Chemistry. Prerequisite: Undergraduate background in general chemistry and credit or concurrent enrollment in CI 403.

CHEM 496 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of the department. Not available to freshman.

CHEM 497 Individual Study Senior credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. Course Information: 1 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 499 Senior Thesis credit: 2 to 6 Hours.

Research with thesis, under the direction of a senior staff member in chemistry. Normally the student takes two terms of CHEM 499 in the senior year. 2 to 6 undergraduate hours. No graduate credit. May be repeated up to 10 hours in separate terms. CHEM 499 is recommended for all those who plan to do research and graduate study and it is a prerequisite for graduation with distinction in chemistry. In the term preceding their initial enrollment, those interested in taking the course should consult with their advisers and with the graduate adviser for the area of interest in which they plan to work. A maximum of 10 hours may be counted toward graduation and a thesis must be presented for credit to be received.

Chemistry Concentration

For advising contact SCS Academic Advising (<http://publish.illinois.edu/scsadvising>)

Degree title: Bachelor of Science in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 48-51 hours including at least 30 hours in Chemistry or Biochemistry courses

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in Chemistry and/or Biochemistry must be taken on this campus.

NOTE: Transfer credit in chemistry must be approved by an adviser in chemistry in order to be included in the 30 hours.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have a major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75 respectively. Final decisions on awarding Distinction honors will be made by the Head or designee.

Code	Title	Hours
Chemistry and biochemistry courses including: ^{1,2}		22-26
CHEM 440 or CHEM 442	Physical Chemistry Principles Physical Chemistry I	
Two other 300- or 400-level courses, at least one of which must be outside physical chemistry.		4-8
MATH 220 or MATH 221	Calculus Calculus I	4-5
MATH 231	Calculus II	3
MATH 241	Calculus III	4
Select one of the following:		8-10
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	

PHYS 211 University Physics: Mechanics
& PHYS 212 and University Physics: Elec & Mag

¹ Excluding CHEM 101, CHEM 108, and CHEM 199.

² No more than 10 hours of the following courses may count toward the 22-26 hours in Chemistry: CHEM 197, CHEM 199, CHEM 297, CHEM 397, CHEM 496, CHEM 497, and CHEM 499.

Chemistry Teaching Concentration

For advising contact SCS Academic Advising (<http://publish.illinois.edu/scsadvising>).

Degree title: Bachelor of Science in Liberal Arts and Sciences

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in Chemistry must be taken on this campus.

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school (grades 9-12) chemistry through the AP/honors level and biology, earth and space science, environmental science and physics up to but not including the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters. Some students require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have an major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75, respectively. Students in the Chemistry Teaching Concentration may submit their final teaching portfolio for evaluation in lieu of taking CHEM 499 and submitting a senior thesis. Final decisions on awarding Distinction honors will be made by the Head or designee.

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		

Select one group of courses (Accelerated or General Chemistry): 10-12

CHEM 202 & CHEM 203 & CHEM 204 & CHEM 205	Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II	
---	---	--

or

CHEM 102 & CHEM 103 & CHEM 104 & CHEM 105 & CHEM 222 & CHEM 223	General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II and Quantitative Analysis Lecture and Quantitative Analysis Lab	
---	---	--

Select one of the following Organic Chemistry course groups: 5-6

CHEM 236 & CHEM 237	Fundamental Organic Chem I and Structure and Synthesis	
---------------------	--	--

or

CHEM 232 & CHEM 233	Elementary Organic Chemistry I and Elementary Organic Chem Lab I	
---------------------	--	--

MATH 220 or MATH 221	Calculus	4-5
----------------------	----------	-----

MATH 231	Calculus II	3
----------	-------------	---

Additional Required Coursework

Teacher Education Minor in Secondary School Teaching (p. 139)		39
---	--	----

CHEM 495	Teaching Secondary Chemistry	4
----------	------------------------------	---

CHEM 440 or CHEM 442	Physical Chemistry Principles	4
----------------------	-------------------------------	---

At least four additional hours of 300- or 400-level chemistry and/or biochemistry course work.		4
--	--	---

ASTR 100	Introduction to Astronomy	3
----------	---------------------------	---

GEOL 107	Physical Geology	4
----------	------------------	---

IB 100	Biology in Today's World	3
--------	--------------------------	---

MATH 241	Calculus III	4
----------	--------------	---

PHYS 211	University Physics: Mechanics	4
----------	-------------------------------	---

PHYS 212	University Physics: Elec & Mag	4
----------	--------------------------------	---

PHYS 214	Univ Physics: Quantum Physics	2
----------	-------------------------------	---

Environmental Chemistry Concentration

For advising see the Chemistry Overview Section (p. 361)

This concentration is designed to provide a background in environmental chemistry that is sufficient in breadth and depth to prepare a person to work as an environmental chemist in the public or private sectors and/or to pursue an advanced degree in the field. Students who complete this concentration will be certified in environmental chemistry by the American Chemical Society (ACS). The Environmental Chemistry Concentration is based on the Specialized Curriculum in Chemistry. Students will take a 3-hour, 300-level course in environmental chemistry and three 3-hour, upper level technical courses in environmental areas. These courses can be used as part of the required 14 hours of technical electives for the Specialized Curriculum in Chemistry.

Code Title Hours

Required Courses for the Specialized Curriculum in Chemistry

Core Chemistry¹ 35

CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II ²	
CHEM 236	Fundamental Organic Chem I	
CHEM 237	Structure and Synthesis	
CHEM 312	Inorganic Chemistry	
CHEM 315	Instrumental Chem Systems Lab	
CHEM 420	Instrumental Characterization	
CHEM 436	Fundamental Organic Chem II	
CHEM 442	Physical Chemistry I	
CHEM 444	Physical Chemistry II	
CHEM 445	Physical Principles Lab I	

Advanced Chemistry 11

Chemistry/Biochemistry courses numbered 300 or higher, which must include one from the following:³

CHEM 317	Inorganic Chemistry Lab	
CHEM 437	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II	

Additional laboratory work:^{3,4}

BIOC 445	Current Topics in Biochemistry	
CHEM 317	Inorganic Chemistry Lab	
CHEM 437	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II	
CHEM 483	Solid State Structural Anlysis	
CHEM 494	Lab Safety Fundamentals (lab sections only)	

Additional chemistry/biochemistry courses to complete the 11-hour requirement in advanced chemistry (excluding CHEM 499)

Mathematics:¹ 11-12

MATH 220 or MATH 221	Calculus	
MATH 231	Calculus II	
MATH 241	Calculus III	

Physics:¹ 10

PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 214	Univ Physics: Quantum Physics	

Technical Electives, including the following Mathematics courses:^{4,5}

MATH 225 or MATH 415	Introductory Matrix Theory	2
MATH 285	Applied Linear Algebra	
MATH 285	Intro Differential Equations (or equivalent)	3

Code Title Hours

Required Technical Elective Courses for the Environmental Chemistry Concentration

Basic Courses		
CHEM 360	Chemistry of the Environment	3

or CEE 330	Environmental Engineering	
Advanced Courses: Select three courses from the following:		9
CHEM 460	Green Chemistry	
CEE 443	Env Eng Principles, Chemical	
GEOL 380	Environmental Geology	
IB 485	Environ Toxicology & Health	
CHEM 397	Individual Study Junior	
CHEM 497	Individual Study Senior	
CHEM 499	Senior Thesis	
Other 400-level courses dealing with economic, engineering, biological aspects of environmental chemistry upon consultation with the faculty advisor.		

Code	Title	Hours
Nontechnical Requirements for the Specialized Curriculum in Chemistry ⁷		
General education:		
Foreign language - three semesters of college study (or three years of high school study) in a single foreign language		
Composition I writing requirement (RHET 105, CMN 111 and CMN 112, or equivalent)		
Advanced Composition writing requirement ⁸		
Humanities/Arts to satisfy the campus general education requirements		
Social/Behavioral sciences to satisfy the campus general education requirements		
Cultural Studies to satisfy the campus general education requirement ⁹		
Free electives ¹⁰		31

¹ Hours given are those typical to meet requirement.

² If necessary, CHEM 102 and CHEM 103, CHEM 104 and CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205. Warning: CHEM 222 and CHEM 223 are offered only in the fall semester.

³ The course chosen from CHEM 317, CHEM 437, or CHEM 447 cannot be used to satisfy the additional chemistry lab requirement.

⁴ Students who present less than 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation must complete two additional courses chosen from the list maintained in the advising office. Students who will present at least 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation are required to complete only one laboratory course from the list maintained in the advising office.

⁵ Students contemplating transfer to the chemical engineering curriculum should choose MATH 225.

⁷ The requirements for the Campus General Education categories Natural Sciences and Technology and Quantitative Reasoning I and II are fulfilled through required course work in the curriculum.

⁸ The course taken to satisfy the Advanced Composition requirement may also be used to partially satisfy one of the core chemistry, advanced chemistry, mathematics, physics, or technical electives requirements (if appropriate), or may be used to partially satisfy the free electives requirements.

⁹ The courses taken to satisfy Western and/or Non-Western Civilization requirements may also be used to satisfy nontechnical and/or free elective categories.

¹⁰ Restrictions: (1) Courses preparatory to or used to satisfy the minimum requirements specified in the above requirements may not be included as free electives. (2) No first-year foreign language course (e.g., 101, 102, or equivalent) may be included unless it is a different language than used to satisfy the foreign language nontechnical requirement.

Major in Specialized Curriculum in Chemistry

The typical program of courses required to satisfy this degree totals 128-134 hours; in no case will a program totaling less than 120 hours qualify for graduation. Graduation requires grade point averages of at least 2.0 overall and 2.0 in chemistry, mathematics, and physics courses. The Department of Chemistry will supply, upon request, a brochure showing recommended semester-by-semester programs for the completion of the curriculum.

Students in the specialized curriculum in Chemistry must include a course in Biochemistry in the Advanced Hours area or the Technical Elective area to be certified by the American Chemical Society as having met its specifications.

For advising contact SCS Academic Advising (<http://advising.scs.illinois.edu>)

Web address for department: www.chemistry.illinois.edu (<http://www.chemistry.illinois.edu>)

Degree title: Bachelor of Science in Chemistry

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students qualify for graduation with distinction by exhibiting superior performance in both course work and in senior thesis research. To be eligible, a student must have an major grade point average of 3.25, must take CHEM 499 (normally for two semesters) and submit a senior thesis for evaluation, and must have their undergraduate research advisor submit to the department Head a letter of support attesting to the effort invested by the student. The minimum major GPAs for Distinction, High Distinction, and Highest Distinction are 3.25, 3.5, and 3.75, respectively. Final decisions on awarding Distinction honors will be made by the Head or designee.

Code	Title	Hours
Core Chemistry ¹		35
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II ²	
CHEM 236	Fundamental Organic Chem I	
CHEM 237	Structure and Synthesis	
CHEM 312	Inorganic Chemistry	
CHEM 315	Instrumental Chem Systems Lab	
CHEM 420	Instrumental Characterization	
CHEM 436	Fundamental Organic Chem II	

CHEM 442	Physical Chemistry I	
CHEM 444	Physical Chemistry II	
CHEM 445	Physical Principles Lab I	
Advanced Chemistry		11
Chemistry/Biochemistry courses numbered 300 or higher, which must include one from the following: ³		
CHEM 317	Inorganic Chemistry Lab	
CHEM 437	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II	
Additional laboratory work: ^{3,4}		
BIOC 455	Technqs Biochem & Biotech	
CHEM 317	Inorganic Chemistry Lab	
CHEM 437	Organic Chemistry Lab	
CHEM 447	Physical Principles Lab II	
CHEM 483	Solid State Structural Anlys	
Additional chemistry/biochemistry courses to complete the 11-hour requirement in advanced chemistry (excluding CHEM 499)		
Mathematics: ¹		11-12
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	
MATH 241	Calculus III	
Physics: ¹		10
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 214	Univ Physics: Quantum Physics	
Technical Electives, including the following ⁴		14
Required Mathematics: ⁵		
MATH 225	Introductory Matrix Theory	
or MATH 415	Applied Linear Algebra	
MATH 285 or equivalent		
Strongly Recommended:		
CHEM 499 Senior Thesis (maximum of 10 hours)		
Recommended: basic computer science		
Other technical courses chosen from:		
Chemistry (300 or higher), biochemistry, chemical engineering (200 or higher)		
Courses in life sciences (all courses at 200 or higher)		
Mathematics or computer science above the basic level		
Other courses in the physical and biological sciences and engineering including CHEM 199 ⁶		
Nontechnical Requirements ⁷		variable
General education:		
Foreign language - three semesters of college study (or three years of high school study) in a single foreign language		
Composition I writing requirement (RHET 105, CMN 111 and CMN 112, or equivalent)		
Advanced Composition writing requirement ⁸		
Humanities/Arts to satisfy the campus general education requirements		
Social/Behavioral sciences to satisfy the campus general education requirements		

Cultural Studies to satisfy the campus general education requirement ⁹	
Free electives ¹⁰	31

- ¹ Hours given are those typical to meet requirement.
- ² If necessary, CHEM 102 and CHEM 103, CHEM 104 and CHEM 105, CHEM 222, and CHEM 223 may be substituted for CHEM 202, CHEM 203, CHEM 204, and CHEM 205. Warning: CHEM 222 and CHEM 223 are offered only in the fall semester.
- ³ The course chosen from CHEM 317, CHEM 437, or CHEM 447 cannot be used to satisfy the additional chemistry lab requirement.
- ⁴ Students who present less than 6 semester hours credit in a combination of CHEM 397, CHEM 497 and/or CHEM 499 for graduation must complete two additional courses chosen from the list. Students who will present at least 6 semester hours credit in a combination of CHEM 397, CHEM 497 and /or CHEM 499 for graduation are required to complete only one laboratory course from the list.
- ⁵ Students contemplating transfer to the chemical engineering curriculum should choose MATH 415 .
- ⁶ Three hours maximum credit in CHEM 199. Additional courses in the sciences and engineering can be taken upon the approval of the chair of the chemistry department advising committee. Most approved courses must have a strong technical prerequisite, such as one year of college-level math or science.
- ⁷ The requirements for the Campus General Education categories Natural Sciences and Technology and Quantitative Reasoning I and II are fulfilled through required course work in the curriculum.
- ⁸ The course taken to satisfy the Advanced Composition requirement may also be used to partially satisfy one of the core chemistry, advanced chemistry, mathematics, physics, or technical electives requirements (if appropriate), or may be used to partially satisfy the free electives requirements.
- ⁹ The courses taken to satisfy Western and/or Non-Western Civilization requirements may also be used to satisfy nontechnical and/or free elective categories.
- ¹⁰ Restrictions: (1) Courses preparatory to or used to satisfy the minimum requirements specified in the above requirements may not be included as free electives. (2) No first-year foreign language course (e.g., 101, 102, or equivalent) may be included unless it is a different language than used to satisfy the foreign language nontechnical requirement.

Classics

Antony Augoustakis

4080 Foreign Languages Building, 707 South Mathews, Urbana

PH: (217) 333-1008

<http://www.classics.illinois.edu/>

The Department of the Classics offers two majors:

BALAS in Classics:

The study of the languages and cultures of ancient Greece and Rome is valuable for those seeking a broad education in the liberal arts or preparing for graduate study in one of the many fields of Classical, Medieval, or Renaissance scholarship. It is also excellent preparation for the advanced study of law and medicine; it is increasingly admired in the business world. Within the general requirements of the major, the Department of the Classics offers individual programs designed to meet the needs and interests of each student. Close interaction between

faculty and students, individual attention, tutorial instruction, opportunity for study abroad in Greece and Italy, and the unmatched resources of the Classics Library and the collections of ancient art and other objects from classical antiquity in the museums on campus provide unique advantages for the pursuit of classical studies.

B.A. in the Teaching of Latin prepares students to teach Latin.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students in Classics must choose one of the following concentrations. Each concentration requires an additional 12 hours of approved supporting course work which may be drawn from a wide range of fields and disciplines. Students must plan their programs in consultation with a departmental adviser.

- Classical Archaeology Concentration (p. 372)
- Classical Civilization Concentration (p. 372)
- Classics Concentration (p. 372)
- Greek Concentration (p. 373)
- Latin Concentration (p. 374)

For the Degree of Bachelor of Arts in the Teaching of Latin

Curriculum Preparatory to the Teaching of Latin (p. 373)

The department sponsors minors in Classical Archaeology (p. 374), Classical Civilization (p. 374), Greek (p. 374), and Latin (p. 374).

CLCV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CLCV>)

Classical Civilization Courses

CLCV 100 Vocab Building-GRK & LAT Roots credit: 2 Hours.
Vocabulary building assistance for students through an analysis of Greek and Latin roots, prefixes, and suffixes found in English.

CLCV 102 Medical Terms-GRK & LAT Roots credit: 3 Hours.
Introduction to the study of the Greek and Latin roots of contemporary medical terminology and to the linguistic patterns governing their combination and usage.

CLCV 111 Mythology of Greece and Rome credit: 2 Hours.
Study of the major myths of Greece and Rome and their impact upon later art, music, and literature. Credit is not given for both CLCV 111 and CLCV 115.

CLCV 114 Introduction to Greek Culture credit: 3 Hours.
Studies the social and cultural life in Greece during the classical period. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CLCV 115 Mythology of Greece and Rome credit: 3 Hours.
Studies the major myths of Greece and Rome and their impact upon later art, music, and literature. Shares two hours of lecture with CLCV 111; additional hour of lecture-discussion for a closer analysis of topics. Credit is not given for both CLCV 115 and CLCV 111.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CLCV 116 The Roman Achievement credit: 3 Hours.
Introduces Roman civilization through the study of the social and cultural life of ancient Rome.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CLCV 120 The Classical Tradition credit: 3 Hours.
Survey of the Greco-Roman tradition from late antiquity to the present. Examination of pagan culture in medieval Christianity and Islam, the literary tradition of the Troy tale, the rediscovery of Greek texts and the Florentine Renaissance, classical allusions in Shakespeare and Milton, the political foundation of the U.S. constitution, and the persistence of the classical tradition in contemporary American popular culture.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CLCV 131 Classical Archaeology, Greece credit: 3 Hours.
Introduction to the archaeology of ancient Greece and the Aegean world. This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CLCV 132 Class Archaeology, Rome-Italy credit: 3 Hours.
Introduction to the archaeology of Italy and Rome to the fall of the Roman Empire.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CLCV 160 Ancient Greek & Roman Religion credit: 3 Hours.
Study of Greek and Roman Paganism and the rise of Christianity within that context. Readings are confined to ancient sources in English translation. Same as REL 160.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CLCV 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
Approved for both letter and S/U grading. May be repeated.

CLCV 203 Ancient Philosophy credit: 4 Hours.
Same as PHIL 203. See PHIL 203.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil

CLCV 206 Classical Allusions in Cinema credit: 3 Hours.
Examination of hundreds of contemporary films containing allusions to Greco-Roman antiquity. From the Matrix to Napoleon Dynamite, today's films often mention an ancient character, story or art object. These motifs are conscious and often essential to the theme of the film. We examine this interesting phenomenon by discussing film segments in class, reading about the history of the classical tradition in popular culture, and finally, forming into groups and examining specific types of films. Same as CWL 206. Prerequisite: CLCV 111 or CLCV 115 or consent of instructor.

CLCV 217 Greek Art credit: 3 Hours.
Same as ARTH 215. See ARTH 215.

CLCV 220 Origins of Western Literature credit: 3 Hours.

Origins and development of selected major genres in Western literature, emphasizing the relationship between classical representatives and their modern successors. Same as CWL 220. May be repeated as topic varies.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 221 The Heroic Tradition credit: 3 Hours.

Study of ancient epics and their relation to the social consciousness of their period; introductory and background lectures; and readings in the epic tradition of antiquity and its successors. Same as CWL 263.

Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 222 The Tragic Spirit credit: 3 Hours.

Readings in the tragic drama of Greece and Rome; a systematic study of the contents and development of this classical literary/dramatic genre. Same as CWL 264 and THEA 210. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 223 Myth,History,Fiction,Tradition credit: 3 Hours.

A unique examination of several legendary figures from Greco-Roman antiquity. Employing the disciplines of mythology, historiography, and the study of popular culture, the student develops a synchronic, multi-millennial understanding of such men and women as Achilles, Medea, Alexander the Great, and Cleopatra by studying primary ancient, medieval, Renaissance, and modern sources from such diverse perspectives as those of epic, lyric, and dramatic poetry, scientific and romantic biography, political propaganda, painting, popular fiction, and documentary television, as well as feature film.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

CLCV 225 Greco-Roman Demo, Econ, Cult credit: 3 Hours.

Greco-Roman Democracies, Economic Policies, and Cultures: Examines the ancient city-states of Athens and Rome; the creation, development and demise of their democratic governments, the relationship between their democracies and militarized empires as well as their economics and fiscal policies; and how these influenced or were represented by their cultural products - including literature, architecture, sculpture, and coinage. Examines the influence of Greco-Roman culture and political institutions on late-medieval and neo-Roman Renaissance city-states, as well as on the foundation of the United States.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 231 Development of Ancient Cities credit: 3 Hours.

Monuments and archaeological remains illustrating the development of the Greek and Roman city (polis). Same as ARTH 217. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 232 Ancient Greek Sanctuaries credit: 3 Hours.

Survey of the archaeological remains of ancient Greek sanctuaries and their importance to ancient society and religion. Same as ARTH 218, and REL 232. Prerequisite: Sophomore standing or consent of instructor.

CLCV 240 Sex & Gender in Antiquity credit: 3 Hours.

Understanding of the place of women in ancient societies can be gained through the examination of the ways in which the ancients conceptualized sex and gender. The myths, religion, art and literature of Egypt, Greece, Rome and the Near East contain a wide array of representations of men and women, of their emotions, as well as of their social, legal and political status and relations. Same as CWL 262 and GWS 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 291 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

CLCV 323 The Comic Imagination credit: 3 Hours.

Study of Greek and Roman comedies in their historical context, with attention to formal elements, stylistic features, aspects of performance and central themes and ideas. Same as CWL 322 and THEA 323.

Prerequisite: Sophomore standing or consent of the instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CLCV 410 Ancient Egyptian & Greek Arch credit: 3 Hours.

Same as ARCH 410. See ARCH 410.

CLCV 411 Ancient Roman Architecture credit: 3 Hours.

Same as ARCH 411. See ARCH 411.

CLCV 415 Classical Rhetorics credit: 3 or 4 Hours.

Same as CMN 415 and MDVL 415. See CMN 415.

CLCV 430 History of Translation credit: 3 or 4 Hours.

Same as CWL 430, ENGL 486, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

CLCV 440 Roman Republic to 44 B C credit: 3 or 4 Hours.

Same as HIST 440. See HIST 440.

CLCV 443 The Archaeology of Greece credit: 3 Hours.

Monuments, material remains, and sculpture and other arts illustrating the development of Greek civilization to 323 B.C. Same as ARTH 415. 3 undergraduate hours. 3 graduate hours. Prerequisite: A course in ancient history, art, or language, or consent of instructor.

CLCV 444 The Archaeology of Italy credit: 3 Hours.

Monuments, material remains, and sculpture and other arts illustrating the development of Greco-Roman and other ancient Italian civilizations to 330 A. D. Same as ARTH 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: A course in ancient history, art, or language, or consent of instructor.

CLCV 490 Topics in Classical Literature credit: 3 or 4 Hours.

Study of selected topics in Greek and Latin literature in translation; content is variable. Same as CWL 490. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: A 200-level classical civilization course or consent of instructor.

CLCV 491 Topics Classic Arch & Civ credit: 3 or 4 Hours.

Study of selected topics; variable content. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

CLCV 492 Senior Thesis credit: 2 to 4 Hours.

Thesis and honors; for candidates for departmental distinction in classical civilization and for other seniors. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

CLCV 493 Independent Reading credit: 1 to 4 Hours.

Reading in selected fields in consultation with the instructor. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours if topics vary. Prerequisite: 9 hours of CLCV classes. For majors and minors only.

CLCV 498 Senior Survey credit: 2 to 4 Hours.

For candidates for departmental distinction in the classics major. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

GRK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GRK>)

Greek Courses**GRK 101 Elementary Greek I credit: 4 Hours.**

Introduces ancient Greek (both classical and koine), including the reading of simple prose. Same as REL 111.

GRK 102 Elementary Greek II credit: 4 Hours.

Continuation of GRK 101. Grammar and reading in classical and koine Greek. Same as REL 112. Prerequisite: GRK 101.

GRK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GRK 201 Classical & Koine Greek I credit: 4 Hours.

Readings in classical Greek prose, and narrative and epistolary New Testament texts. Same as REL 200. Prerequisite: GRK 102.

GRK 202 Classical & Koine Greek II credit: 4 Hours.

Continuation of GRK 201. Further readings in classical Greek prose, and narrative and epistolary New Testament texts. Same as REL 204. Prerequisite: GRK 201 or equivalent.

GRK 251 Elementary Modern Greek I credit: 5 Hours.

Same as GRKM 201. See GRKM 201.

GRK 252 Elementary Modern Greek II credit: 5 Hours.

Same as GRKM 202. See GRKM 202.

GRK 401 Homeric Greek credit: 2 or 3 Hours.

Introduction to Epic Greek; readings of Homer. 3 undergraduate hours. 2 graduate hours. Prerequisite: GRK 202 or equivalent.

GRK 403 Intermediate Modern Greek I credit: 4 Hours.

Same as GRKM 403. See GRKM 403.

GRK 404 Intermediate Modern Greek II credit: 4 Hours.

Same as GRKM 404. See GRKM 404.

GRK 411 Greek Prose Composition credit: 3 Hours.

Practice in the writing of Greek prose. 3 undergraduate hours. 3 graduate hours. Prerequisite: GRK 201 or equivalent.

GRK 491 Readings in Greek Literature credit: 3 or 4 Hours.

Readings in authors or special topics chosen by the instructor from the entire extant literature in Greek. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: GRK 401 or equivalent.

GRK 492 Senior Thesis credit: 2 to 4 Hours.

Thesis and honors. Open to candidates for distinction in Greek. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

GRK 493 Independent Reading credit: 1 to 4 Hours.

1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 undergraduate hours or 12 graduate hours. Prerequisite: GRK 401 and consent of instructor.

GRK 498 Senior Survey credit: 2 or 4 Hours.

For candidates for honors in Greek and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

LAT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAT>)

Latin Courses**LAT 101 Elementary Latin I credit: 4 Hours.**

Grammar and reading for students who have had no work in Latin.

LAT 102 Elementary Latin II credit: 4 Hours.

Grammar and reading of easy prose. Prerequisite: LAT 101 or one year of high school Latin.

LAT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LAT 201 Intermediate Latin credit: 4 Hours.

Review of grammar; reading of easy narrative prose. Prerequisite: LAT 102 or two years of high school Latin.

LAT 202 Intro to Latin Literature credit: 4 Hours.

Continuation of LAT 201, with readings chiefly in Latin poetic literature.

LAT 401 Survey of Latin Literature credit: 2 or 3 Hours.

Intermediate level readings in classical Latin literature. 3 undergraduate hours. 2 graduate hours. May be repeated for a total of 6 undergraduate hours or 4 graduate hours in separate semesters, if topics vary. Prerequisite: LAT 104 or four years of high school Latin.

LAT 411 Intermediate Prose Composition credit: 3 Hours.

Practice in the writing of Latin prose. 3 undergraduate hours. 3 graduate hours. Prerequisite: LAT 104 or the equivalent.

LAT 460 Medieval Latin credit: 3 or 4 Hours.

Literary and historical texts in prose and poetry will be read in the original; the course will also cover patristic writings. Same as MDVL 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two years of college Latin or consent of instructor.

LAT 491 Readings in Latin Literature credit: 3 or 4 Hours.

Readings in authors or special topics chosen by the instructor from the entire extant literature in Latin. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: Three years of college Latin or equivalent; consent of instructor.

LAT 492 Senior Thesis credit: 2 or 4 Hours.

Thesis and honors. For candidates for honors in Latin and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

LAT 493 Independent Reading credit: 1 to 4 Hours.

1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 undergraduate hours or 12 graduate hours. Prerequisite: LAT 302 and consent of instructor.

LAT 498 Senior Survey credit: 2 or 4 Hours.

For candidates for honors in Latin and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

Classical Archaeology Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: classics@illinois.edu

Minimum required major and supporting course work normally equates to 42-48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

NOTE: Majors choosing the Classical Civilization and Classical Archaeology concentrations are advised, but not required, to satisfy the campus general education language requirement with one of the classical languages.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Classical Civilization courses of which at least 20 hours must be chosen from the following list:		30
CLCV 131	Classical Archaeology, Greece	
CLCV 132	Class Archaeology, Rome-Italy	
CLCV 217	Greek Art	
CLCV 231	Development of Ancient Cities	
CLCV 232	Ancient Greek Sanctuaries	
CLCV 240	Sex & Gender in Antiquity	
CLCV 443	The Archaeology of Greece	
CLCV 444	The Archaeology of Italy	
CLCV 491	Topics Classic Arch & Civ	
Supporting courses selected with the approval of the adviser		12

Classical Civilization Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: classics@illinois.edu

Minimum required major and supporting course work normally equates to 42-48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

NOTE: Majors choosing the Classical Civilization and Classical Archaeology concentrations are advised, but not required, to satisfy the campus general education language requirement with one of the classical languages.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Classical Civilization courses at the level of 114 and above		30
Supporting courses selected with the approval of the adviser		12

Classics Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: classics@illinois.edu

Minimum required major and supporting course work normally equates to 42-48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

NOTE: Majors choosing the Classical Civilization and Classical Archaeology concentrations are advised, but not required, to satisfy the campus general education language requirement with one of the classical languages.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Greek and Latin courses including the following: ¹		36
LAT 411	Intermediate Prose Composition	

GRK 411	Greek Prose Composition	
Six additional hours at the 300 or 400 level in each language		
Supporting courses selected with the approval of the adviser		12

¹ Only 4 hours at the 100-level may be counted.

Curriculum Preparatory to the Teaching of Latin

<http://classics.illinois.edu>

For the Degree of Bachelor of Arts in the Teaching of Latin

A concentration in Latin (p. 374) is sponsored by the Department of the Classics. See Classics (p. 368).

In order to remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

E-mail: classics@illinois.edu

Degree title: Bachelor of Arts in the Teaching of Latin

Minimum required course work normally equates to 71 hours. The total hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to LAT 101-LAT 102-LAT 201-LAT 202 taken in secondary school.

General education: Consult the Curricula Preparatory to Teaching Foreign Languages (p. 410). Minimum hours required for graduation: A minimum of 120 hours of credit is required for graduation. Consult the certification officer at 505 East Green Suite 203 for additional information.

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Professional Education Requirements. Foreign Languages (p. 410)		29
LAT 101	Elementary Latin I	4
LAT 102	Elementary Latin II (or equivalent)	4
LAT 201	Intermediate Latin	4
LAT 202	Intro to Latin Literature (or equivalent)	4
LAT 401	Survey of Latin Literature	2 or 3
LAT 302	(or equivalent)	3
LAT 411	Intermediate Prose Composition	3
LAT 491	Readings in Latin Literature (or equivalent) ¹	6
HIST 241	History of Ancient Rome (or equivalent)	3
CLCV 131	Classical Archaeology, Greece	3

CLCV 132	Class Archaeology, Rome-Italy (or equivalent)	3
Total Hours		68-69

¹ Repeated for up to 6 hours.

Greek Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: classics@illinois.edu

Minimum required major and supporting course work normally equates to 42-48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

NOTE: Majors choosing the Classical Civilization and Classical Archaeology concentrations are advised, but not required, to satisfy the campus general education language requirement with one of the classical languages.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Greek courses (excluding GRK 101), including GRK 411 and 9 additional hours at the 400 level		24
Select two of the following:		6
CLCV 114	Introduction to Greek Culture	
CLCV 131	Classical Archaeology, Greece	
CLCV 217	Greek Art	
CLCV 232	Ancient Greek Sanctuaries	
CLCV 443	The Archaeology of Greece	
CLCV 490	Topics in Classical Literature ¹	
CLCV 491	Topics Classic Arch & Civ ¹	
Supporting courses selected with the approval of the adviser		12

¹ CLCV 490 and CLCV 491 apply only when offered on Greek topics.

Latin Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: classics@illinois.edu

Minimum required major and supporting course work normally equates to 42-48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

NOTE: Majors choosing the Classical Civilization and Classical Archaeology concentrations are advised, but not required, to satisfy the campus general education language requirement with one of the classical languages.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students seeking departmental distinction must have at least a 3.5 average in relevant courses and should consult a member of the department's honors committee at the earliest opportunity.

Code	Title	Hours
Latin courses (excluding LAT 101 and LAT 102), including LAT 411 and 9 additional hours at the 400 level		24
Select two of the following:		6
CLCV 116	The Roman Achievement	
CLCV 132	Class Archaeology, Rome-Italy	
CLCV 444	The Archaeology of Italy	
CLCV 490	Topics in Classical Literature ¹	
CLCV 491	Topics Classic Arch & Civ ¹	
Supporting courses selected with the approval of the adviser		12

¹ CLCV 490 and CLCV 491 apply only when offered on Latin/Roman topics.

Minor in Classical Archaeology

<http://classics.illinois.edu/>

Email: classics@illinois.edu

This minor is sponsored by the Department of the Classics. The department also sponsors minors in Classical Civilization (p. 374), Greek (p. 374), and Latin (p. 374).

Code	Title	Hours
Classical Archaeology courses selected from the following: ¹		18
CLCV 131	Classical Archaeology, Greece	
CLCV 132	Class Archaeology, Rome-Italy	

CLCV 217	Greek Art	
CLCV 231	Development of Ancient Cities	
CLCV 232	Ancient Greek Sanctuaries	
ARCH/CLCV 410	Ancient Egyptian & Greek Arch	
ARCH/CLCV 411	Ancient Roman Architecture	
CLCV 443	The Archaeology of Greece	
CLCV 444	The Archaeology of Italy	
CLCV 491	Topics Classic Arch & Civ	
Total Hours		18

¹ 6 hours must be at the 300 or 400 level.

Minor in Classical Civilization

<http://classics.illinois.edu>

Email: classics@illinois.edu

This minor is sponsored by the Department of the Classics. The department also sponsors minors in Classical Archaeology (p. 374), Greek (p. 374), and Latin (p. 374).

Code	Title	Hours
Classical Civilization Courses, including:		18
6 hours maximum of 100-level courses		
6 hours minimum advanced-level courses		
Total Hours		18

Minor in Greek

<http://www.classics.illinois.edu>

Email: classics@illinois.edu

This minor is sponsored by the Department of the Classics. The department also sponsors minors in Classical Archaeology (p. 374), Classical Civilization (p. 374), and Latin (p. 374).

Code	Title	Hours
Greek courses, excluding GRK 101 and including at least 6 hours of 300 or 400-level courses		18
Total Hours		18

Minor in Latin

<http://www.classics.illinois.edu>

Email: classics@illinois.edu

This minor is sponsored by the Department of the Classics. The department sponsors minors in Classical Archaeology (p. 374), Classical Civilization (p. 374), and Greek (p. 374).

Code	Title	Hours
Latin courses, excluding LAT 101 and LAT 102 including at least 6 hours at the advanced level.		18
Total Hours		18

Communication

John Caughlin, Head of Department
3001 Lincoln Hall, 702 South Wright, Urbana
PH: (217) 333-2683
<http://communication.illinois.edu>

The Communication major prepares 21st century students to become critical thinkers, avid consumers of information, and effective problem solvers in both their personal and professional lives.

The goal of the Communication course of study is for undergraduates to learn about communication from a broad liberal arts perspective.

Students will study the nature of effective communication across domains, develop effective communication skills, and gain knowledge of how to help others improve their skills. Students gain theoretical and practical knowledge of public advocacy and debate and the critical capacity to evaluate the face-to-face and mediated political and cultural information upon which we all depend. They also should achieve a sophisticated understanding of the political and social import of communication on all aspects of public and private life, from public policy and health care to cultural norms, personal interactions, and notions of racial, class, gender, and sexual identity.

Communication is an appropriate major for:

- students seeking a general liberal arts education, with a particular focus on communication issues
- students preparing for careers in many different fields involving communication skills (for example, law, business management, sales, public relations, human resources, corporate communication, consulting, media-related fields, or politics)
- students preparing for graduate work in areas such as communication, media studies, public policy, or public health
- students preparing for advanced study in law, medicine, business, or human resources

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: communication@illinois.edu

Minimum required major course work equates to a minimum of 37 hours of Communication courses.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

At least 15 hours of the required 37 hours in Communication must be at the 300 level or above.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: Superior students are encouraged to consult the departmental honors adviser about requirements and opportunities for participation in the departmental honors program.

Code	Title	Hours
CMN 101 or CMN 112	Public Speaking ¹ Oral & Written Comm II	3
CMN 102	Intro to Comm Theory & Res	4
Communication Courses: Students will select an option (A or B) and a specialization (if Option B is chosen) in consultation with an undergraduate advisor in Communication.		30
OPTION A: Students who wish a general course of study will take at least one course from five of the following six areas and the remaining hours will be selected in consultation with an advisor.		
OPTION B: Students who choose to concentrate within an area must take four courses from one of the six areas listed below and the remaining hours will be selected in consultation with an advisor. Students may complete more than one specialization by completing four courses in each area desired; however, individual courses may not be counted toward more than one specialization.		
Special topics courses (CMN 199, CMN 396, or CMN 496) may count toward a specialization with the approval of an advisor; however, CMN 199, CMN 390, CMN 491, and CMN 493 taken as independent studies may not count toward the four required courses for a specialization.		
Approved lists of courses within these areas are available from the Communication academic advisor:		
Communication and Culture		
Communication and Health		
Communication and Organizations		
Interpersonal Communication		
Mediated Communication and Technology		
Rhetoric and Public Communication		
Total Hours		37

¹ *CMN 111 is a prerequisite for CMN 112. Credit in CMN 111 will not count towards the minimum of 37 hours of Communication courses required for the major.*

Minor in Communication

E-mail: communication@illinois.edu

The undergraduate minor in Communication is designed for students who wish to obtain a deeper understanding of communication processes and how they influence social, cultural, and political processes. It is appropriate for students majoring in a variety of disciplines in the social sciences or humanities and for students in professionally-oriented programs.

Code	Title	Hours
CMN 101 or CMN 112	Public Speaking ¹ Oral & Written Comm II	3
CMN 102	Intro to Comm Theory & Res	4

At least one course from each of two areas of specialization within the Department of Communication (Communication and Culture, Communication and Health, Communication and Organizations, Interpersonal Communication, Mediated Communication and Technology, and Rhetoric and Public Communication). These courses must be numbered at the 200-level or above. A list of courses is available from the Communication undergraduate advisor.

Additional hours in Communication. These courses must be numbered at the 200-level or above.	6
--	---

Total Hours	19
-------------	----

¹ *CMN 111 is a prerequisite for CMN 112. Credit in CMN 111 will not count towards the 19 hours of Communication courses required for the minor.*

At least 6 hours must be at the 300-level or 400-level.

CMN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CMN>)

Courses

CMN 101 Public Speaking credit: 3 Hours.

Preparation and presentation of short informative and persuasive speeches; emphasis on the selection and organization of material, methods of securing interest and attention, and the elements of delivery. Credit is not given for both CMN 101 and either CMN 111 or CMN 112.

CMN 102 Intro to Comm Theory & Res credit: 4 Hours.

Survey of the questions probed, the methods employed, and the current status of knowledge in the study of communication. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

CMN 111 Oral & Written Comm I credit: 3 Hours.

Principles and practice in communication; stress on fundamentals of critical thinking in writing and speaking. The campus rhetoric requirement is fulfilled by this course in conjunction with CMN 112. Credit is not given for both CMN 111 + CMN 112, and other courses that fulfill the Composition I requirement (i.e., RHET 100, RHET 101+RHET 102, RHET 103+RHET 104, RHET 105, ESL 114+ESL 115). Credit is also not given for both CMN 111+CMN 112, and CMN 101. CMN 111+CMN 112 cannot be taken by students who have completed the University's Composition I requirement.

This course satisfies the General Education Criteria for: Composition I

CMN 112 Oral & Written Comm II credit: 3 Hours.

Continuation of Oral & Written Comm I; stress on deliberation and fundamentals of communication and public argument through speaking and writing. The campus rhetoric requirement is fulfilled by this course in conjunction with CMN 111. Credit is not given for both CMN 111+CMN 112 and other courses that fulfill the Composition I requirement (i.e., RHET 100; RHET 101+ RHET 102; RHET 103+RHET 104; RHET 105; ESL 114+ESL 115). Credit is also not given for both CMN 111+CMN 112 and CMN 101. CMN 111+CMN 112 may not be taken by students who have completed the University's Composition I requirement. Prerequisite: CMN 111.

This course satisfies the General Education Criteria for: Composition I

CMN 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to Chancellors Scholars, Cohn Scholars and James Scholars. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

6 CMN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

May be repeated to a maximum of 6 hours.

CMN 204 Internship in Teaching Comm credit: 3 Hours.

Supervised experience in assisting in the teaching of an undergraduate course in communication; practice in preparing and presenting brief lectures, conducting activities within class, and assisting students outside of class. Prerequisite: Junior standing, cumulative 3.0 grade-point average, 3.5 grade-point average in Communication coursework, recommendation from an instructor, and approval by application.

CMN 210 Public Comm in Everyday Life credit: 3 Hours.

Introduces concepts useful for the critical analysis of public communication in everyday life. Drawing on communication theory and practice, especially theories of rhetoric, the course investigates techniques of persuasion, offers tools for critical analysis of public discourse, and considers the political and ethical implications of various forms of public communication.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CMN 211 Business Communication credit: 3 Hours.

Focus on relevant theory and research on communication strategies and skills vital to diverse business contexts. Topics include personal branding and self-marketing; job interviewing basics; business ethics; business writing; networking; professional etiquette and behaviors; and business presentations. Activities include presentations, written assignments, and practice interviews. Prerequisite: CMN 101.

CMN 212 Intro to Organizational Comm credit: 3 Hours.

Considers major theories, research questions, and approaches to organizational communication.

CMN 213 Small Group Communication credit: 3 Hours.

Considers major theories, processes, and practical measures contributing to effective communication in small group and team contexts. Credit is not given for CMN 113 and CMN 213.

CMN 215 Interviewing Principles & Practices credit: 3 Hours.

Provides a survey of communication-based interviewing theories and practices. Students will learn theoretical and practical principles related to major types of interviews, the ethics and legalities of interviewing, and apply this knowledge through repeated practice, as both an interviewer and interviewee, leading to competency in employment, informational, and persuasive scenarios. Credit is not given for both CMN 115 and CMN 215. Prerequisite: CMN 101 or CMN 111 and CMN 112.

CMN 220 Communicating Public Policy credit: 3 Hours.

Study of the nature of policy-oriented communication; analysis and formulation of positions on issues of professional, personal, or public interest; design and presentation of public policy messages addressed to varying tasks and audiences, with special emphasis on advanced writing skills. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

CMN 230 Intro to Interpersonal Comm credit: 3 Hours.

Study of communication theory and its application to interpersonal relationships; extensive discussion of problems of conflict and misunderstanding in personal affairs to facilitate the development of knowledge, insights, and skills in the processes of face-to-face interaction.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

CMN 231 Communication and Conflict credit: 3 Hours.

Examines how people experience and manage conflict in both private and public settings. Units focus on conflict in interpersonal, small group, and organizational contexts.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

CMN 232 Intro to Intercultural Comm credit: 3 Hours.

Introduction to the study of intercultural communication in a variety of contexts, including domestic and international; examines theory and research to explain what happens when people from different cultural and linguistic backgrounds interact. Requires students to think critically about the ways in which "taken-for-granted" ways of thinking, acting, and interacting are culturally specific.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

CMN 260 Intro to Health Communication credit: 3 Hours.

Introduces theory and research on communication in health and illness contexts. Explores how messages from media, interpersonal, and organizational sources affect health beliefs and behaviors.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci
Cultural Studies - Western

CMN 275 Media, Money and Power credit: 3 Hours.

Describes the political economy of the media in the U.S. Acquaints students with a core understanding of how the media system operates, and with what effects, in a capitalist society. Examines the role of advertising, public relations, corporate concentration, and government regulation upon news reporting, entertainment, culture, and participatory democracy. Also examines issues related to the Internet, globalization, and public broadcasting.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CMN 277 Intro to Mediated Comm credit: 4 Hours.

Survey of the history, structure, forms, and social effects of the American mass media.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CMN 280 Comm Technology & Society credit: 3 Hours.

Introduction to theory and research on both old and new communication technologies; focus will be on how these technological systems develop and are used, and what implications of these systems have for culture and society.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CMN 304 Communication Internship credit: 1 to 3 Hours.

Directed internship experience for Communication majors. Students must have consent of the Internship Coordinator. May be repeated in separate terms to a maximum of 6 hours.

CMN 310 The Rhetorical Tradition credit: 3 Hours.

Survey of major trends in the development of rhetorical theory from Homer to the present.

CMN 320 Comm Controversy Public Policy credit: 3 Hours.

Examines how public policy shapes American life, by providing an advanced analysis of the controversies, discourses and effects of public policy with a focus on sustainability issues. Explores the American landscape, energy sources, environment, food systems, political process, and government lobbying rules and reform. Provides in-depth analysis of the definitions and histories of public policy and the tensions between public and private spheres that shape it. Develops a fundamental understanding of public versus private spheres; analyzes and critiques how public policy shapes American historical and cultural landscapes; increases skillfulness in oral and written analysis of controversies, institutions, political and economic power brokers, and social norms. Prerequisite: CMN 220 or consent of instructor.

CMN 321 Strategies of Persuasion credit: 3 Hours.

Studies of powerful instances of public persuasion; students examine key means of public influence.

CMN 323 Argumentation credit: 3 Hours.

Study of the theory of argument, e.g., evidence, reasoning, and construction of briefs; practice in formal and informal forms of debate and public discourse on current public questions. Prerequisite: CMN 101.

CMN 325 Politics and the Media credit: 3 Hours.

Same as MACS 322 and PS 312. See PS 312.

CMN 326 Mass Media and the Audience credit: 3 Hours.

Presents information on how to conceptualize audiences, mass media use, and reception of media messages. Also examines the character of the audience experience, uses and gratifications of mass media, social cognition, and studies of audiences as interpretive communities.

CMN 336 Family Communication credit: 3 Hours.

Examines the nature and functions of communication in various family configurations (e.g. nuclear families, single-parent families, stepfamilies); discusses both problematic interaction patterns and links between family interaction and strong families.

CMN 338 Relationships and Technologies credit: 3 Hours.

Examines the uses, functions, and effects of communication technologies in personal relationships (e.g., friendships, dating relationships, families). Emphasis on contemporary and emerging modes of communication with some consideration of historical and enduring modes of interaction.

CMN 340 Visual Politics credit: 3 Hours.

Explores the role of visual images in U.S. culture, paying special attention to the ways that images function persuasively as political communication. Provides tools for analyzing historical and contemporary images and artifacts, such as photographs, prints, paintings, advertisements, and memorials. Emphasis on how visual images are used for remembering and memorializing; confronting and resisting; consuming and commodifying; governing and authorizing; and visualizing and informing.

CMN 345 Visual Media Effects credit: 3 Hours.

Provides an introduction to visual media effects in communication, and is intended for students with little or no experience with visual aspects of communication. Focuses on social scientific approaches to understanding visual media effects and theories of visual communication.

CMN 357 Intro to Conversation Analysis credit: 3 Hours.

Same as LING 357. See LING 357.

CMN 361 Storytelling as Oral Communication credit: 3 Hours.

Explores the role of traditional oral narrative in contemporary social life. Examines some major genres: folktales, family stories, personal growth narratives, professional autobiographical presentations, TED talks. Each of these genres will be examined in terms of content, context in a larger community of discourse, and performance demands. In addition, students will create and perform their own stories representing these genres.

CMN 362 Folklore as Communication credit: 3 Hours.

Study of unofficial, noncommercial and face-to-face modes of communication, called "folklore" or "vernacular culture." For purposes of this course, "folklore" includes speech, stories, legends, sayings, proverbs, customs, rituals and performances. Students will be asked to develop and use a variety of cultural description and documentation skills. The goal is to give students a strong sense of variety, persistence, and flexibility of traditional culture as it lives in the present, and practice in recording it, writing about it, and analyzing it.

CMN 368 Sexual Communication credit: 3 Hours.

Describes sex as a fundamental activity in the development and maintenance of human relationships. Communication about sex happens in a variety of interpersonal, group, organizational, and mediated contexts. Explores the many ways in which sexual communication intersects our personal, relational, cultural, and institutional norms and values. Topics will include social norms about sexual communication, sexual harassment, family communication about sex, sexual health education, doctor-patient communication about sex, and sex in the media and in advertising. Theory and research on communication processes will be used to elaborate how talk about sex can achieve multiple goals.

CMN 370 Political Economy of Communication credit: 3 Hours.

Addresses significant contemporary social issues from the perspective of the political economy of communication. Issues may include, but are not limited to, the influence of money on political communication, the role of the media in American attitudes toward racial inequalities, or the politics of science reporting. This course will feature a number of recent books on social problems in the United States that have a communication twist. Class-time will be focused on discussing the books. Prerequisite: Junior or senior standing required.

CMN 375 Popular Media and Culture credit: 3 Hours.

Using the critical lens of theories on race, class, gender, and sexuality, this class will investigate the complicated relations among popular media and culture, including how our everyday life and attitudes are thought to be shaped by the media, and how cultural systems can be said to inform the media. By exploring a wide range of media (e.g., film, television, music, the internet, and computer games), students will investigate the national, political, and personal dimensions of popular media and the varied ways in which media construct, reflect and intersect with specific cultural systems, identities, and classifications. May be repeated in separate terms to a maximum of 6 hours.

CMN 377 Propaganda and Modern Society credit: 3 Hours.

Traces the social, economic, and political underpinnings of propaganda and public relations. Examines the rise of corporate propaganda in the early 20th century and explores how these strategies were adapted by a wide range of social and political actors. The second part of the course discusses the above issues from contemporary perspectives. The role of WWI, WWII, and the more recent Iraqi war, in solidifying the role of government and commercial propaganda in society and the frequently blurry distinctions between government propaganda and commercial public relations will also be discussed. The relationship between propaganda, PR and the mass media will constitute a constant site of inquiry. This course focuses on theory, especially critical theory.

CMN 390 Individual Study credit: 1 to 3 Hours.

Individual investigation of special problems. May be repeated to a maximum of 6 hours. Prerequisite: Twelve hours of communication coursework; a grade-point average of 3.25; and consent of head of department.

CMN 396 Special Topics in Comm credit: 3 Hours.

Special topics in communication not treated in regularly scheduled courses. See Class Schedule for current topics. May be repeated as topics vary.

CMN 410 Workplace Comm Technology credit: 3 or 4 Hours.

Focuses on how communication technologies are designed, implemented, adopted, and used within and across organizations. Reviews a broad array of theories used to conceptualize technology in the workplace. Emphasis on how theory may be used to understand applications such as knowledge management, telecommuting, distributed work, and virtual organizations. Further focus on analyzing real-world cases to develop skills necessary for working in contemporary organizations. 3 undergraduate hours. 4 graduate hours.

CMN 411 Organizational Comm Assessment credit: 3 or 4 Hours.

Organizational communication theory applied to the assessment of communication practices in organizations; systematic procedures for diagnosing communication problems and facilitating effective communication in organizations. Extensive use of case studies. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 212.

CMN 412 Adv Organizational Comm credit: 3 or 4 Hours.

Advanced study of theory and research in organizational communication; considers such topics as communication networks, superior-subordinate communications, task-related and social information processing, and communicating with the external environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 212.

CMN 413 Adv Small Group Communication credit: 3 or 4 Hours.

Advanced study of theory, research, techniques, and training methods in interviewing and group discussion; emphasis on empirical research findings concerning communication processes in face-to-face groups. 3 undergraduate hours. 4 graduate hours.

CMN 415 Classical Rhetorics credit: 3 or 4 Hours.

Survey of the contributions to the theory and practice of rhetoric from Homer to the Renaissance. Same as CLCV 415 and MDVL 415. 3 undergraduate hours. 4 graduate hours.

CMN 416 Early Modern Rhetorics credit: 3 or 4 Hours.

Significant developments in European rhetorical theory from 1500 to the 20th Century. 3 undergraduate hours. 4 graduate hours.

CMN 417 Contemporary Rhetorics credit: 3 or 4 Hours.

Major contributors to rhetorical theory from I.A. Richards to the present. 3 undergraduate hours. 4 graduate hours.

CMN 421 Persuasion Theory & Research credit: 3 or 4 Hours.

Survey of major theories of persuasion, research on factors influencing persuasive effectiveness, and application to problems of persuasive discourse. 3 undergraduate hours. 4 graduate hours.

CMN 423 Rhetorical Criticism credit: 3 or 4 Hours.

Methods of interpreting and judging persuasive discourse with emphasis on political speaking and writing; extensive practice in criticism of rhetorical texts. 3 undergraduate hours. 4 graduate hours.

CMN 424 Campaigning to Win credit: 3 or 4 Hours.

Using a case study approach to illustrate how campaigns attempt to persuade and mobilize voters, students learn how to plan and manage effective political campaigns. Same as PS 411. 3 undergraduate hours. 4 graduate hours.

CMN 427 Children and the Media credit: 3 or 4 Hours.

Examines the role of the mass media in the lives of children. Focuses on how developmental differences influence how children process and respond to the media. Topics include media violence, media advertising, stereotypes in the media, and educational content. 3 undergraduate hours. 4 graduate hours.

CMN 429 Race and the Mass Media credit: 3 or 4 Hours.

Presents an overview of racial stereotypes in the mass media and the effects of stereotypical imagery on viewers. Discussion of the structural and social origins of stereotypic media from multiple perspectives focusing on published scholarship that systematically assesses the content and effects of racial representations from a social scientific perspective. Intersections between race, ethnicity, class, and gender also will be explored. 3 undergraduate hours. 4 graduate hours.

CMN 432 Gender and Language credit: 3 or 4 Hours.

Study of actual and perceived differences and similarities in the use of language by women and by men; emphasizes the social contexts of speech. Same as GWS 432, and LING 432. 3 undergraduate hours. 4 graduate hours.

CMN 435 Adv Interpersonal Comm credit: 3 or 4 Hours.

Study of the major processes involved in an individual's adjustment to the communication situations of everyday life; emphasis on the development of interpersonal competency and orientations, social perception, interpersonal sentiment and hostility, trust, and the social context as factors influencing the understanding and evaluation of interpersonal messages. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 230 or consent of instructor.

CMN 437 Comm in Personal Relationships credit: 3 or 4 Hours.

Examines theories of communication within personal relationships, including family, friendship, and romantic associations. Specific topics include relationship development, conflict, power, self-disclosure, and relational uncertainty. 3 undergraduate hours. 4 graduate hours.

CMN 450 Adv Topics in Public Discourse credit: 3 or 4 Hours.

Study of selected periods and genres of public discourse in historical context, including British, American, French, Russian, German, Chinese, and Japanese. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: One course in rhetorical criticism or consent of instructor.

CMN 462 Interpersonal Health Comm credit: 3 or 4 Hours.

Examines the role of communication in the management of mental and physical health. Focuses on topics such as communication and illness identity, health and interpersonal relationships, health care provider-patient interactions, impacts of technology on health communication, and health education and prevention efforts. 3 undergraduate hours. 4 graduate hours.

CMN 463 Organizational Health Comm credit: 3 or 4 Hours.

Focuses on organizational issues shaping communication between providers, patients, and consumers of health care and information, including background on financing personal medical services; organizations, professions, and their interrelationships involved in providing medical services; theorizing communication and organization in personal medical services; and communication between organizations and the public on health issues. Topics include managed care, professional communication, the hospital as a unique communication site, ethics in health communication, direct-to-consumer drug advertising, and health crisis communication. 3 undergraduate hours. 4 graduate hours.

CMN 464 Health Communication Campaigns credit: 3 or 4 Hours.

Focuses on the theoretical principles behind designing, implementing, and evaluating a health communication campaign. Students will be exposed to campaigns pertaining to alcohol abuse, illicit drug use, organ donation, safe sex, tobacco use, among others. The first part of the course reviews theories used in health communication campaigns, derived from the disciplines of communication, social psychology, and public health. The second part of the course focuses on designing campaigns and creating messages as well as evaluating the effects of those campaigns and messages. 3 undergraduate hours. 4 graduate hours.

CMN 465 Social Marketing Health&Behav credit: 3 or 4 Hours.

Applies marketing concepts and practices to bring about behavior change for a social good. Social marketing is an approach to planning and implementing projects and programs that emphasizes a customer-centered mindset to learn what people want and need to change their behavior. Designed to give students a thorough orientation to the discipline of social marketing and its application to a range of problems with an emphasis on issues in health contexts. Topics will include audience research, segmentation strategies, communication channels, marketing mix, and the application of behavioral theory. Students will acquire practical skills in the design, implementation, and evaluation of health intervention initiatives that use social marketing. Same as CHLH 465. 3 undergraduate hours. 4 graduate hours.

CMN 467 Communication & Health Equity credit: 3 or 4 Hours.

Explores the role that communication plays as both a potential contributor to existing health inequalities and a means of helping to reduce them. Drawing on theories and research from communication, public health, and related social science disciplines, the course reviews relevant academic literature and utilizes media and policy examples to engage with key topics, such as communication inequalities and public discourse surrounding inequality and social determinants of health. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above.

CMN 476 Commercialism and the Public credit: 3 or 4 Hours.

Explores the influences of advertising and commercialism and their role in defining our political culture, social institutions, and personal lives. Through readings, written reflection, visual presentations, and class discussions, the course explores a wide range of advertising and consumer issues and discusses how consumers negotiate these forces. The first part of the course is devoted to a historical overview; discussing the risk and evolving nature of advertising throughout the 20th century. Having established a historical framework, the course offers six contemporary topics to be discussed in the remainder of the semester. Topics may include, but not be limited to: the commercial mass media; the public relations industry; gender in advertising; commercialization of childhood; the commercialization of medicine and science; contemporary consumer society; advertising in schools; and food, advertising, and body image. 3 undergraduate hours. 4 graduate hours.

CMN 491 Honors Individual Study credit: 2 Hours.

Individual investigation of special problems. 2 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Twelve hours of communication; a grade-point average of 3.50; and consent of head of department.

CMN 493 Honors Senior Thesis credit: 2 Hours.

Individual study leading to a thesis for honors in the Department of Communication. 2 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Senior standing; a grade-point average of 3.50; and consent of head of department.

CMN 496 Adv Topics in Communication credit: 3 or 4 Hours.

Advanced topics in communication not treated in regularly scheduled courses; see Class Schedule for current topics. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary.

Comparative and World Literature, Program in

Lilya Kaganovsky

3080 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 333-4987

<http://www.complit.illinois.edu/Welcome.html>

A student who elects comparative literature as a major must complete 48 hours, including at least 12 hours in courses numbered 300 or above. The major comprises two concentrations, a Comparative Literature concentration (p. 385) and a World Literature concentration (p. 386) (foreign literatures in translation). Besides knowing English, the student who chooses the Comparative Literature concentration must have sufficient linguistic skill in at least one foreign language to participate in 200- to 400-level literature courses offered by the various foreign language and literature departments.

As soon as a student contemplates choosing comparative and world literature as a major, the faculty adviser should be consulted. The adviser will assist the student in selecting appropriate courses that will be especially helpful as preparation for the advanced comparative literature training beginning with the junior year. Courses in classical civilization and in literature (particularly courses dealing with works from several countries) are especially recommended at relatively early stages of study. An ample selection of such courses at the 100- and 200-levels exists in the various literature departments.

The distribution of course work allows for considerable flexibility. The major is administered by the Program in Comparative and World Literature.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: complit@illinois.edu

Students must select one concentration in consultation with an advisor.

- Comparative Literature Concentration (p. 385)
- World Literature Concentration (p. 386)

Minor in World Literature

This minor is sponsored by the Program in Comparative and World Literature. Students must choose from either the Europe and the Americas Track or the Asia and Africa Track.

E-mail: complit@illinois.edu

Europe and the Americas Track

Code	Title	Hours
CWL 241	Early Masterpieces of Western Culture	3
CWL 242	Modern Masterpieces of Western Culture	3
CWL 201	Comparative Lit Studies	3
CWL 202	Literature and Ideas	3
Select two of the following:		6
CWL 395	Special Topics Comp Lit I	
CWL 441	Themes in Narrative	
CWL 461	Lit Genres and Forms	
CWL 471	International Lit Relations	
CWL 496	Special Topics in Comp Lit II	
Other advanced courses approved by the undergraduate comparative literature adviser.		
Total Hours		18

Asia and Africa Track

Code	Title	Hours
CWL 189	Lit of Asia & Africa I	3
CWL 190	Lit of Asia & Africa II	3
CWL 201	Comparative Lit Studies	3
CWL 202	Literature and Ideas	3
Select two of the following:		6
CWL 395	Special Topics Comp Lit I	
CWL 441	Themes in Narrative	
CWL 461	Lit Genres and Forms	
CWL 471	International Lit Relations	
CWL 496	Special Topics in Comp Lit II	
Other advanced courses approved by the undergraduate Comparative Literature adviser.		
Total Hours		18

CWL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CWL>)

Courses

CWL 111 Bible as Literature credit: 3 Hours.

Same as ENGL 114 and REL 101. See REL 101.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 112 Literature of Global Culture credit: 3 Hours.

Same as ENGL 112. See ENGL 112.

CWL 114 Global Consciousness and Lit credit: 3 Hours.

Exploration of the cultural and historical roots of globalization and the development of global consciousness from ancient Greece to the present, as reflected primarily in literature, but also with reference to historiography, cartography, religion, art, politics, economics, and popular culture. Course materials including literary texts, articles, historical accounts, political tracts, films, and paintings focus on the mutual perception of, and historical relationships among Europe, the Arab world, Africa, Asia, and the Americas.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 117 Russ & E Euro Science Fiction credit: 3 Hours.

Same as SLAV 117. See SLAV 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 119 Literature of Fantasy credit: 3 Hours.

Same as ENGL 119. See ENGL 119.

CWL 151 Cross-Cultural Thematics credit: 3 Hours.

Explores a combination of western and non-western literature through the focus on a shared theme, exploring differences in treatment both within and among different cultures. Two such thematic focuses are offered in rotation; one on concepts of love and one on ways of writing about death. Both themes introduce students to a wide array of famous texts from different cultures and also offer some varied perspectives for their own inevitable thoughts on these major topics. May be repeated to a maximum of 6 hours if topics vary. Students may register in more than one section per term.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 189 Lit of Asia & Africa I credit: 3 Hours.

Comparative study of major works from Africa, the Middle East, South and East Asia, from ancient times through the medieval period, emphasizing literary, cultural, philosophical, and religious traditions, and cross-cultural contact. Topics studied may include Egyptian and Mesopotamian mythology, Hinduism, Buddhism, Confucianism, Daoism, and the Abrahamic tradition. All readings in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 190 Lit of Asia & Africa II credit: 3 Hours.

Comparative study of major works from Africa, the Middle East, South and East Asia, from the early modern to the contemporary period, emphasizing literary, cultural, philosophical, and religious traditions and cross-cultural contact. Topics studied may include Hinduism, Buddhism, Confucianism, Daoism, Islam, colonialism and globalization. All readings in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors students or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

CWL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. Approved for both letter and S/U grading. May be repeated.

CWL 201 Comparative Lit Studies credit: 3 Hours.

Introduction to various methods in comparative literary study, including genres, thematics, literary relations, literary movements, and interdisciplinary approaches. Prerequisite: One semester of college literature or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 202 Literature and Ideas credit: 3 Hours.

Analysis of several important world-views in Western civilization (such as classical, Romantic, modern, and so forth), studied comparatively and in relation to selected figures in Western literature. Prerequisite: CWL 241 and CWL 242; or one year of college literature; or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 205 Islam & West Through Lit credit: 3 Hours.

Organized around major cultural/historical/religious topics presented in literature through Western and Islamic eyes, beginning with the Crusades and proceeding into the present. This course will examine stereotypes, fantasies, identifications and political opportunism promoted by the encounter between the West and the Islamic World. Prerequisite: CWL 241 and CWL 242 or one year of college literature.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 206 Classical Allusions in Cinema credit: 3 Hours.

Same as CLCV 206. See CLCV 206.

CWL 207 Indian Cinema in Context credit: 3 Hours.

Introduction to Indian mainstream (mainly Bollywood) cinema and its evolution through the last seven decades. Topics to be explored include, but not limited to, the relation between Indian society/culture and its cinematic representations, cinema's resistance to dominant nationalist and patriarchal ideologies, its interactions with the postcolonial nation-state of India, how globalization has changed the industry. All films will be screened with subtitles. No knowledge of Hindi or any other Indian language is required. Same as MACS 207.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as ASST 208, REL 208 and SAME 208. See REL 208.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 209 Jewish American Literature credit: 3 Hours.

Same as JS 209 and ENGL 222. See JS 209.

CWL 210 Intro to Mod African Lit credit: 3 Hours.

Same as AFST 210 and ENGL 211. See AFST 210.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 211 War & Peace in Israeli Lit credit: 3 Hours.

War has been a constant shadow over the lives of Israelis. We will examine the history of attitudes to war and peace in Israel as presented through poetry, film and short stories, and explores the plurality of voices and experiences in Israel. Same as JS 211 and SAME 211.

CWL 215 Madness, Myth, and Murder credit: 3 Hours.

Same as SCAN 215. See SCAN 215.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 216 Legends of King Arthur credit: 3 Hours.

Same as ENGL 216 and MDVL 216. See ENGL 216.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 218 Survey of Ukrainian Literature credit: 3 Hours.

Same as UKR 218. See UKR 218.

CWL 220 Origins of Western Literature credit: 3 Hours.

Same as CLCV 220. See CLCV 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 221 Jewish Storytelling credit: 3 Hours.

Same as ENGL 223, JS 220, REL 220, and YDSH 220. See YDSH 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 223 The Qur'an (Koran) credit: 3 Hours.

Same as REL 223, SAME 223. See REL 223.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 224 German Literature in Trans credit: 3 Hours.

Same as GER 200. See GER 200.

CWL 225 Constr Afr and Carib Identity credit: 3 Hours.

Same as AFST 209, FR 240, and LAST 240. See FR 240.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

CWL 226 Humanist Persp of Afro-Am Exp credit: 3 Hours.

Same as AFRO 224. See AFRO 224.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

CWL 227 Golden Age of Russian Lit credit: 3 Hours.

Same as RUSS 220. See RUSS 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

Same as ITAL 240 and MDVL 240. See ITAL 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 241 Early Masterpieces of Western Culture credit: 3 Hours.

Comparative study of major works of literature, philosophy and culture in the Western tradition from the ancient world to the Renaissance, from Homer and the Bible to Shakespeare and Cervantes. Emphasis on the works as representative of their historical and cultural period, as well as how these works create the cultural world we live in today. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CWL 242 Modern Masterpieces of Western Culture credit: 3 Hours.

Comparative study of major works of literature, philosophy and culture in the Western tradition from the Enlightenment to today, from Descartes and Voltaire to Dickinson and Calvino. Emphasis on the works as representative of their historical and cultural period, as well as how these works create the cultural world we live in today.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 245 Survey of Polish Literature credit: 3 Hours.

Same as POL 245. See POL 245.

CWL 249 Russian Lit and Revolution credit: 3 Hours.

Same as RUSS 225. See RUSS 225.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 250 Grimms' Fairy Tales - ACP credit: 3 Hours.

Same as ENGL 267 and GER 250. See GER 250.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CWL 251 Viking Mythology credit: 3 Hours.

Same as MDVL 251, REL 251, and SCAN 251. See SCAN 251.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CWL 252 Viking Sagas in Translation credit: 3 Hours.

Same as MDVL 252 and SCAN 252. See SCAN 252.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 253 Medieval Lit and Culture credit: 3 Hours.

Same as ENGL 202 and MDVL 201. See ENGL 202.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 254 Grimm's Fairy Tales in Context credit: 3 Hours.

Same as ENGL 266 and GER 251. See GER 251.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 255 Renaissance Lit and Culture credit: 3 Hours.

Same as ENGL 204. See ENGL 204.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 257 Enlightenment Lit and Culture credit: 3 Hours.

Same as ENGL 206. See ENGL 206.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 259 Afro-American Literature I credit: 3 Hours.

Same as AFRO 259 and ENGL 259. See ENGL 259.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

CWL 260 Afro-American Literature II credit: 3 Hours.

Same as AFRO 260 and ENGL 260. See ENGL 260.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

CWL 262 Sex & Gender in Antiquity credit: 3 Hours.

Same as CLCV 240 and GWS 240. See CLCV 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 263 The Heroic Tradition credit: 3 Hours.

Same as CLCV 221. See CLCV 221.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 264 The Tragic Spirit credit: 3 Hours.

Same as CLCV 222 and THEA 210. See CLCV 222.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 265 Modern Drama I credit: 3 Hours.

Same as ENGL 243. See ENGL 243.

CWL 266 Modern Drama II credit: 3 Hours.

Same as ENGL 244. See ENGL 244.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 267 The Short Story credit: 3 Hours.

Same as ENGL 245. See ENGL 245.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 269 Brit, Amer & Contin Fiction credit: 3 Hours.

Same as ENGL 248. See ENGL 248.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 271 The Holocaust in Context - ACP credit: 3 Hours.

Same as ENGL 268 and GER 260. See GER 260.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CWL 272 Sexuality and Literature credit: 3 Hours.

Same as GER 270 and GWS 270. See GER 270.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 273 The Holocaust in Context credit: 3 Hours.

Same as ENGL 269 and GER 261. See GER 261.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 275 Masterpieces of East Asian Lit credit: 3 Hours.

Same as EALC 275. See EALC 275.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 276 Asian Film Genres credit: 3 Hours.

Same as EALC 276 and ENGL 276. See ENGL 276.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 277 Slavic Literature Survey credit: 3 Hours.

Same as SLAV 277. See SLAV 277.

CWL 282 Arctic Narratives credit: 3 Hours.

Same as EURO 240, SCAN 240. See SCAN 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 283 Jewish Sacred Literature credit: 3 Hours.

Same as ENGL 283 and REL 283. See REL 283.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 284 Modern Jewish Literature credit: 3 Hours.

Same as ENGL 284 and REL 284. See ENGL 284.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 307 Classical Chinese Lit credit: 3 Hours.

Same as EALC 307. See EALC 307.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 308 Chinese Popular Lit credit: 3 Hours.

Same as EALC 308. See EALC 308.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 311 Japan Lit in Translation I credit: 3 Hours.

Same as EALC 305. See EALC 305.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 312 Japan Lit in Translation II credit: 3 Hours.

Same as EALC 306. See EALC 306.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

CWL 317 Introduction to Francophone Literature credit: 3 Hours.

Same as FR 319. See FR 319.

CWL 320 Lit Responses to the Holocaust credit: 3 Hours.

Same as ENGL 359, JS 320, REL 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CWL 321 Russian Writers credit: 3 Hours.

Same as RUSS 320. See RUSS 320.

CWL 322 The Comic Imagination credit: 3 Hours.

Same as CLCV 323 and THEA 323. See CLCV 323.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CWL 323 Tolstoy credit: 3 Hours.

Same as ENGL 323 and RUSS 323. See RUSS 323.

CWL 324 Dostoevsky credit: 3 Hours.

Same as ENGL 322 and RUSS 322. See RUSS 322.

CWL 325 Chekhov credit: 3 Hours.

Same as RUSS 325 and THEA 362. See RUSS 325.

CWL 328 Special Topics German Studies credit: 3 Hours.

Same as GER 396. See GER 396.

CWL 335 Nabokov credit: 3 Hours.

Same as RUSS 335. See RUSS 335.

CWL 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Love and Sex have been literary themes from the bible, through the modern ages and into the present day in Hebrew Literature. This course will examine the treatments of these themes in different historical periods, paying attention to external influences and literary forms such as poems, stories, films and novels. This course will consider treatments of the erotic, devotional, affectionate, romantic and sexual; including heterosexual and homosexual representations, as well as love of God and Israel. Same as JS 341, REL 340 and SAME 341. Prerequisite: Completion of Advanced Composition requirement or a prior college-level literature course is recommended.

CWL 350 South Asian Goddesses credit: 3 Hours.

Same as REL 350 and SAME 350. See REL 350.

CWL 376 Children and Youth Literature credit: 3 Hours.

Same as EURO 376, GWS 376, and SCAN 376. See SCAN 376.

CWL 387 French & Comparative Cinema I credit: 3 Hours.

Same as FR 387, HUM 387, and MACS 382. See FR 387.

CWL 389 French & Comparative Cinema II credit: 3 Hours.

Same as FR 389, HUM 389, and MACS 383. See FR 389.

CWL 395 Special Topics Comp Lit I credit: 3 Hours.

Presentation and discussion of subjects relating literature to other disciplines; topic varies. May be repeated to a maximum of 6 hours.

CWL 400 African Diasporic Lit Americas credit: 3 or 4 Hours.

Same as AFRO 400. See AFRO 400.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

CWL 410 Modern African Fiction credit: 3 or 4 Hours.

Same as AFST 410, ENGL 470, and FR 410. See AFST 410.

CWL 411 The Chinese Novel credit: 3 or 4 Hours.

Same as EALC 411. See EALC 411.

CWL 412 Mod Chinese Lit in Translation credit: 3 or 4 Hours.

Same as EALC 412. See EALC 412.

CWL 413 Dante credit: 3 or 4 Hours.

Same as ITAL 413 and MDVL 413. See ITAL 413.

CWL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.

Same as ITAL 414 and MDVL 414. See ITAL 414.

CWL 415 Mod Japan Lit in Translation credit: 2 to 4 Hours.

Same as EALC 415. See EALC 415.

CWL 416 Premodern Chinese Drama credit: 3 or 4 Hours.

Same as EALC 413 and THEA 488. See EALC 413.

CWL 417 Topics in Medieval Brit Lit credit: 3 or 4 Hours.

Same as ENGL 412 and MDVL 410. See ENGL 412.

CWL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.

Same as ITAL 420 and MDVL 420. See ITAL 420.

CWL 421 Jewish Life-Writing credit: 3 or 4 Hours.

Same as HIST 436, REL 420, SLAV 420, and YDSH 420. See YDSH 420.

CWL 428 Japan at War and Peace credit: 3 or 4 Hours.

Same as EALC 428. See EALC 428.

CWL 430 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, ENGL 486, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

CWL 434 Studies in Francophonie credit: 3 or 4 Hours.

Same as FR 479. See FR 479.

CWL 436 Problems of Polish Literature credit: 3 or 4 Hours.

Same as POL 446. See POL 446.

CWL 440 Russian Culture Studies credit: 3 or 4 Hours.

Same as RUSS 460. See RUSS 460.

CWL 441 Themes in Narrative credit: 3 or 4 Hours.

Analysis of literary themes and types in narratives of Western and non-Western literature (e.g., the hero, east and west, dream visions), emphasizing comparative perspectives. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.

CWL 444 Problems in Romanticism credit: 3 or 4 Hours.

Same as RUSS 444. See RUSS 444.

CWL 445 Problems in Realism credit: 3 or 4 Hours.

Same as RUSS 445. See RUSS 445.

CWL 450 Topics in Bodies and Genders credit: 3 Hours.

How do gender, sexuality, and the body emerge through cultural representations and across artistic forms? How do literature, film, and the visual arts construct gender identities in various times and places? Topics and regions vary by semester and instructor. All readings in English. Same as GWS 450. 3 undergraduate hours. 3 graduate hours. May be repeated up to 6 hours maximum. Prerequisite: Consent of instructor.

CWL 451 International Film Genres and Auteurs credit: 3 or 4 Hours.
Advanced, in-depth study of either (a) cinematic genres, or (b) major film directors. Genres may include musicals, horror films, Westerns, melodrama, comedies, film noir. Auteurs will include major figures of world cinema whose influence over the medium is widespread, such as Hitchcock, Woody Allen, Vertov, Bergman. No foreign language knowledge required. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent semesters to a maximum of 6 undergraduate hours or 8 graduate hours if topics vary. Prerequisite: One cinema course or consent of instructor.

CWL 453 Slavic Cultural Studies credit: 3 or 4 Hours.
Same as SLAV 452. See SLAV 452.

CWL 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.
Seminar covering advanced topics in Israeli literature and culture. Same as JS 454 and SAME 454. 3 undergraduate hours. 4 graduate hours. May be repeated up to 6 undergraduate hours or 8 graduate hours in separate terms if topics vary. Prerequisite: One year of college literature or consent of instructor.

CWL 457 Russian Modernism credit: 3 or 4 Hours.
Same as RUSS 424. See RUSS 424.

CWL 460 Ecological Criticism credit: 3 or 4 Hours.
Same as ESE 462 and REL 462. See REL 462.

CWL 461 Lit Genres and Forms credit: 3 or 4 Hours.
Structure and development of literary genres and forms in historical perspective (for instance, drama, parody and the grotesque, poetry, fables and fabulists, and modern fiction); essential international components and significant national variations of such genres and forms. Emphasis changes from term to term. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.

CWL 463 Modern Scandinavian Drama credit: 3 or 4 Hours.
Same as SCAN 463 and THEA 483. See SCAN 463.

CWL 465 Topics in Drama credit: 3 or 4 Hours.
Same as ENGL 465. See ENGL 465.

CWL 466 Russia and the Other credit: 3 or 4 Hours.
Same as RUSS 461. See RUSS 461.

CWL 470 Imagining the Welfare State credit: 3 or 4 Hours.
Same as EURO 470 and SCAN 470. See SCAN 470.

CWL 471 International Lit Relations credit: 3 or 4 Hours.
Study of specific relations between authors of different countries; influences of certain works, concepts, or tastes on another work, author, or country; and literary interaction between Eastern and Western cultures. Emphasis changes from term to term. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.

CWL 472 Kierkegaard and the Self credit: 3 or 4 Hours.
Same as PHIL 472, REL 472, and SCAN 472. See SCAN 472.

CWL 477 Post-Communist Fiction credit: 3 or 4 Hours.
Same as SLAV 477 and REES 477. See SLAV 477.

CWL 478 Classical Chinese Thought credit: 3 or 4 Hours.
Same as EALC 476 and HIST 425. See EALC 476.

CWL 481 Topics in Arabic Literature & Culture credit: 3 or 4 Hours.
Studies in Arabic literature and culture of various genres, periods, and regions. Graduate students are encouraged to read the texts in the original language. 3 undergraduate hours. 4 graduate hours. May be repeated in the same semester to a maximum of 6 undergraduate hours or 8 graduate hours if topics vary; May be repeated in separate semesters to a maximum of 12 undergraduate hours or 16 graduate hours if topics vary. Prerequisite: One year of college literature or consent of instructor.

CWL 490 Topics in Classical Literature credit: 3 or 4 Hours.
Same as CLCV 490. See CLCV 490.

CWL 493 Senior Thesis and Honors credit: 3 to 6 Hours.
Independent research guided by tutor(s), leading to the writing of a comparative thesis. Intended primarily for candidates for honors in comparative literature, but open to other seniors. 3 to 6 undergraduate hours. No graduate credit. May be repeated to a maximum of 12 hours.

CWL 496 Special Topics in Comp Lit II credit: 3 to 4 Hours.
Selected literary topics of international significance in relation to other cultural expressions. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate or 12 graduate hours. Prerequisite: Consent of instructor.

Comparative Literature Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: comlit@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum required major and supporting course work equate to 48 hours with at least 15 hours of Comparative Literature courses in the Comparative Literature concentration and 21 hours of Comparative Literature courses in the World Literature concentration.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for distinction, a student must have at least a 3.25 cumulative grade-point average and a 3.75 grade-point average in departmental courses, complete a senior thesis (CWL 493), and receive the approval of the departmental honors committee. The departmental honors committee will determine the level of distinction to be awarded.

Code	Title	Hours
Comparative Literature Courses (minimum of 15 hours required):		
CWL 201	Comparative Lit Studies	15
CWL 202	Literature and Ideas	

The remaining hours should be selected from different types of courses (e.g., CWL 114, CWL 189, CWL 190, CWL 208, CWL 241, CWL 242, CWL 441, CWL 461, CWL 471).

One Literature in the Original Language (minimum of 15 hours required): 15

Ancient or modern (including Far Eastern and African) 12 hours of which are at the 200-level or above, studied in depth and in its historical development. (Normally this is the primary literature of the student's educational background.)

Second Literature in the Original Language (minimum of 9 hours required):¹ 9

200-level or above courses in a second literature in the original language. With the assistance of the adviser, these courses should be carefully chosen so as to correlate meaningfully with the student's primary literature. A student may center his or her interest on a cultural period such as medieval, Renaissance, neo-classical and enlightenment, or modern (nineteenth and twentieth centuries), or on genres, relations, or critical theory.²

Single National Literature (minimum of 9 hours required) 9 or several national literatures including comparative literature; or in other humanistic fields, such as history, philosophy, speech, art, music, psychology, sociology, theatre, anthropology, and Asian studies. Because some of the courses in these subjects are more suitable than others to balance a student's individual major in comparative literature, the student must follow the guidelines set by his or her adviser.

Total Hours 48

¹ *Literature in the Original Language is defined by what is currently offered by the University (i.e. mostly English, French, German and Spanish). Literatures generally taught in translation (including, but not limited to, Bengali, Chinese, Hebrew, Japanese, Polish, Russian, and Yiddish) may be chosen in consultation with the Undergraduate Advisor.*

² *If one of the literatures studied is English, a student who continues in a graduate program in comparative literature will be required to acquire a reading knowledge of a second foreign language (i.e., one foreign language for the B.A., two foreign languages for the M.A., three foreign languages for the Ph.D.).*

World Literature Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: comlit@illinois.edu

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours 300 or 400-level courses in the major must be taken on this campus. A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum required major and supporting course work equate to 48 hours with at least 15 hours of Comparative Literature courses in the Comparative Literature concentration and 21 hours of Comparative Literature courses in the World Literature concentration.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for distinction, a student must have at least a 3.25 cumulative grade-point average and a 3.75 grade-point average in departmental courses, complete a senior thesis (CWL 493), and receive the approval of the departmental honors committee. The departmental honors committee will determine the level of distinction to be awarded.

Code	Title	Hours
Core sequence in Comparative Literature Courses (minimum of 18 hours required):		18
CWL 201	Comparative Lit Studies	
CWL 202	Literature and Ideas	
The remaining hours should be selected from four of the following 100-or 200-level courses: CWL 114, CWL 151, CWL 189, CWL 190, CWL 208, CWL 241, CWL 242.		
One of the following upper-level methodology courses		3
CWL 395	Special Topics Comp Lit I	
CWL 441	Themes in Narrative	
CWL 461	Lit Genres and Forms	
CWL 471	International Lit Relations	
CWL 496	Special Topics in Comp Lit II	
Area/Literature Concentrations: Courses must be chosen in consultation with the student's faculty advisor and selected from the approved list of courses housed in the department advising office. All courses chosen must be at the 200 level and above.		18
Two courses in the literatures of Europe and the Americas		
Two courses in the literatures of Asia and Africa		
Two courses chosen from the two literature groups above		
Area/Culture Concentrations:		9
3 courses, also at the 200 to 400-level, chosen in consultation with the student's faculty advisor, in other disciplines related to the student's area of concentration (e.g., anthropology, area studies, art history, cinema studies, history, music history, philosophy, religious studies, women's studies). Language courses beyond the fifth semester of study may also be used to satisfy this requirement.		
Total Hours		48

East Asian Languages and Cultures

Robert Tierney, Head of Department

2090 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 244-1432

<http://www.ealc.illinois.edu>

The Department of East Asian Languages and Cultures offers two concentrations within the East Asian Languages and Cultures major. The goal of the East Asian Languages and Cultures Concentration is that the student gain an introductory knowledge of the civilizations of East Asia, a firm competence in an East Asian language, a solid familiarity with

East Asian cultures through multiple disciplines, and a more advanced knowledge of the region including research and writing in a seminar or senior project. This concentration is useful for the student seeking a broad liberal arts education and preparation for graduate or professional study involving East Asia.

The Concentration Preparatory to the Teaching of East Asian Languages is to prepare its graduates for certification for teaching East Asian Languages (currently Mandarin Chinese or Japanese) in the public schools in Illinois.

For the Degree Bachelor of Arts in Liberal Arts and Sciences

E-mail: ealc@illinois.edu

- Concentration in East Asian Languages and Cultures (p. 393)
- Concentration Preparatory for the Teaching of East Asian Languages (p. 393)

Minor in East Asian Languages and Cultures

E-mail: ealc@illinois.edu

Web address for department: <http://www.ealc.illinois.edu>

Code	Title	Hours
Select one of the following:		5
CHIN 204	Intermediate Chinese II	
JAPN 204	Intermediate Japanese II	
KOR 204	Intermediate Korean II	
Non-language courses as follows:		15
EALC 120	East Asian Civilizations	
12 additional hours of East Asia-related courses (at least 6 of these hours must be at the 300 or 400 level)		
Total Hours		20

Note: Completion of CHIN 204, JAPN 204, or KOR 204 satisfies the LAS foreign language requirement.

ASST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ASST>)

Asian Studies Courses

ASST 104 Asian Mythology credit: 3 Hours.

Same as REL 104. See REL104.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

ASST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ASST 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as CWL 208, REL 208 and SAME 208. See REL 208.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ASST 218 S Asian Cultural Landscapes credit: 3 Hours.

Same as LA 218. See LA 218.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ASST 286 Southeast Asian Civilizations credit: 3 Hours.

Same as ANTH 286 and HIST 225. See ANTH 286.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

ASST 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, EURO 325, INFO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

ASST 346 Gov & Pol of South Asia credit: 3 Hours.

Same as PS 346. See PS 346.

ASST 347 Gov & Pol of Middle East credit: 3 Hours.

Same as PS 347. See PS 347.

ASST 390 Individual Study credit: 2 to 4 Hours.

Directed readings in the languages and literatures of South Asia, Southeast Asia, or the Near East. The area selected depends on the student's interest. Prerequisite: Consent of instructor.

ASST 391 Honors Tutorial credit: 2 to 4 Hours.

Tutorial in the civilizations of South Asia, Southeast Asia, or the Near East. The geographical area or nation and discipline depend on student interests. All students submit a substantial paper. May be repeated to a maximum of 6 hours. Prerequisite: Completion of two honors activities, work in Asian studies, and consent of instructor.

ASST 398 Colloquium in Asian Studies credit: 3 Hours.

Prerequisite: Junior standing.

ASST 402 Transnational Islam, Europe-US credit: 3 or 4 Hours.

Same as ANTH 402 and REL 409. See ANTH 402.

ASST 465 Oceania's Peoples and Cultures credit: 3 or 4 Hours.

Same as ANTH 465. See ANTH 465.

ASST 486 Peoples of Mainland SE Asia credit: 3 or 4 Hours.

Same as ANTH 486. See ANTH 486.

CHIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHIN>)

Chinese Courses

CHIN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CHIN 201 Elementary Chinese I credit: 5 Hours.

Introduction to Mandarin Chinese, including basic skills in speaking, reading, and writing. Not open to students with a background in Chinese language.

CHIN 202 Elementary Chinese II credit: 5 Hours.

Continuation of CHIN 201. Prerequisite: CHIN 201.

CHIN 203 Intermediate Chinese I credit: 5 Hours.

First term of second year of the Chinese language, including drill for more advanced conversational fluency; introduction to a greater variety of styles and levels of discourse and usage; and increasing study of the written language and more formal grammar. Prerequisite: CHIN 202 or equivalent.

CHIN 204 Intermediate Chinese II credit: 5 Hours.

Continuation of CHIN 203. Concentration on ability to engage in fluent discourse, on comprehensive grammatical knowledge, and on ability to read ordinary simple text in Chinese. Prerequisite: CHIN 203 or equivalent.

CHIN 221 Elementary Spoken Mandarin I credit: 4 Hours.

For non-majors who want to develop a basic competence in spoken Mandarin Chinese. Emphasizes the development of pronunciation, vocabulary and grammar skills with a concurrent emphasis on mastery of Pinyin phonetic orthography. Credit is not given for both this course and CHIN 201 or CHIN 202.

CHIN 222 Elementary Spoken Mandarin II credit: 4 Hours.

Continuation of CHIN 221. Emphasizes development of pronunciation, vocabulary and grammar skills, with a concurrent emphasis on mastery of Pinyin phonetic orthography. Credit is not given for both this course and CHIN 201 or CHIN 202. Prerequisite: CHIN 221.

CHIN 241 Chinese Reading and Writing credit: 4 Hours.

Students with a basic background in spoken Mandarin will help develop their ability to read and write Chinese characters. This course fulfills the language requirement for those programs with a two-term sequence. Successful completion of CHIN 241 and CHIN 242 fulfills the Liberal Arts and Science foreign language requirement. Credit is not given for both this course and CHIN 201 or CHIN 202. Prerequisite: CHIN 222, or speaking proficiency as determined by placement test.

CHIN 242 Chinese Reading and Writing credit: 4 Hours.

Continuation of CHIN 241. This course fulfills the foreign language requirement for those programs with a three- or four-term requirement. Credit is not given for both this course and CHIN 203 or CHIN 204. Prerequisite: CHIN 241, or proficiency as determined by placement test.

CHIN 305 Advanced Chinese I credit: 5 Hours.

An advanced-level course that emphasizes rapid reading, vocabulary acquisition, and newspaper reading. Prerequisite: CHIN 204 or CHIN 242.

CHIN 306 Advanced Chinese II credit: 5 Hours.

Continuation of CHIN 305. This course fulfills the language requirement for the undergraduate major in Chinese. Prerequisite: CHIN 305.

CHIN 407 Intro to Classical Chinese credit: 3 or 4 Hours.

Introduction to the classical literary language, style, and structural patterns as reflected in the Confucian classics and other literary, philosophical, and historical texts. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 202 or equivalent.

CHIN 408 Readings in Literary Chinese credit: 3 or 4 Hours.

Readings in texts selected from the Confucian classics and other literary, philosophical, and historical texts. Attention is given to linguistic patterns and philosophical concepts and to problems of translation. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 407 or equivalent.

CHIN 409 Social Science Rdgs Chinese credit: 3 or 4 Hours.

Reading and translation of selected Chinese texts in the social sciences with emphasis on specialized terminology and prose style. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours, or 12 graduate hours. Prerequisite: Three years of modern Chinese.

CHIN 440 Fourth-Year Chinese I credit: 3 or 4 Hours.

The focus of this course is on reading and discussing modern and pre-modern Chinese literary selections in Chinese. Students continue to develop dictionary, literary and writing skills begun at the advanced (305-306) levels. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 306 or equivalent.

CHIN 441 Fourth-Year Chinese II credit: 3 or 4 Hours.

Continuation of CHIN 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 440 or equivalent.

CHIN 477 Chin Orth & Grm for Lng Tchg credit: 3 Hours.

Chinese orthography and grammar for language teaching. Teaching Mandarin Chinese in an English speaking environment. Covers the Chinese writing and sound systems, vocabulary, grammar, dialects and review available teaching materials. Course meets for the first six weeks of the semester only. 3 undergraduate hours. No graduate credit. Prerequisite: CHIN 441 or equivalent.

CHIN 490 Readings in Chinese Lit credit: 3 or 4 Hours.

Guided readings in Chinese literature in the vernacular with regular individual conferences and a paper. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Reading knowledge of Chinese and consent of instructor.

CHIN 499 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in Chinese language, literature, and civilization and in other academic areas appropriate to the student's course of study. 0 to 18 undergraduate hours. 0 graduate hours. May be repeated to a maximum of 32 hours per academic year. Prerequisite: Junior standing and a GPA of 2.5.

EALC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EALC>)

E. Asian Languages Cultures Courses**EALC 114 Introduction to East Asian Art credit: 4 Hours.**

Same as ARTH 114. See ARTH 114.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West

EALC 120 East Asian Civilizations credit: 3 Hours.

Same as HIST 120. See HIST 120.

This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Non-West

EALC 122 History East Asian Religions credit: 3 Hours.

Introduction to East Asian religious traditions; emphasizes the ideas of Confucianism, Taoism, and Buddhism in China and their historical interactions. Same as REL 122.

This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Non-West

EALC 130 The Chinese Language credit: 3 Hours.

An introduction to the scientific study of the Chinese language. We will explore where the Chinese language came from, its similarities to and differences from Japanese and Korean, and how the Chinese character writing system was invented, plus what it is like now. We will explore differences among Chinese dialects (e.g., Cantonese, Mandarin, Taiwanese and Shanghai) and learn where in China these are spoken, and also explore how the Chinese language operates in the brain. Finally, we will investigate how children in China learn to speak, read, and write, how adults learn to speak Chinese as a foreign language, and how Chinese can be used by different social groups in different settings in order to influence social power and distance. Approved for Letter and S/U grading. This course does not fulfill the campus foreign language requirement.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

EALC 132 Zen credit: 3 Hours.

Same as REL 132. See REL 132.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

EALC 220 Traditional China credit: 3 Hours.

Same as HIST 220. See HIST 220.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 221 Modern China credit: 3 Hours.

Same as HIST 221. See HIST 221.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

EALC 222 Chinese Thought Confucius to Mao credit: 3 Hours.

Examination of China's principal philosophical, religious, and political schools of thought - such as Confucianism, Taoism, Zen Buddhism, and Maoism - as ways of understanding one of the world's major civilizations; the period of the classical philosophers, the glory years of empire, and the troubled era of Western contact receive approximately equal attention.

Same as HIST 222 and REL 224.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 226 Premodern Japanese History credit: 3 Hours.

Same as HIST 226. See HIST 226.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 227 Modern Japanese History credit: 3 Hours.

Same as HIST 227. See HIST 227.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 240 Chinese Civilization credit: 3 Hours.

Introduction to the historical development of Chinese civilization.

Emphasis will be on broad themes and the connections among cultural values, social institutions, political structures, and contacts with outsiders. Visual and literary evidence will be stressed.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

EALC 250 Intro to Japanese Culture credit: 3 Hours.

Topical introduction to Japanese cultural and aesthetic life with attention to cultural and aesthetic patterns as they are reflected in literature, language, and the arts.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

EALC 275 Masterpieces of East Asian Lit credit: 3 Hours.

Study of major works in the literary traditions of China and Japan, including haiku, noh, Tale of Genji, kabuki, Tang poetry, Ming theater, and the colloquial tale. Same as CWL 275. No knowledge of Chinese or Japanese language required.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

EALC 276 Asian Film Genres credit: 3 Hours.

Same as CWL 276 and ENGL 276. See ENGL 276.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

EALC 285 Intro to Korea Through Film credit: 3 Hours.

Course uses film, literary, and ethnographic works to explore the impact of Post-Colonial (1945-present) socioeconomic and cultural transformation on the personal and collective South Korean experience.

Same as ANTH 285.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

EALC 287 Introduction to Buddhism credit: 3 Hours.

Same as REL 287. See REL 287.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 288 Contemporary East Asia credit: 3 Hours.

Introduction to aspects of daily life in East Asia in relation to local and extra-local political and economic structures and transformations. Same as ANTH 287.

EALC 305 Japan Lit in Translation I credit: 3 Hours.

Survey of Japanese literature from earliest times to 1600; readings in prose, poetry, and drama in English translation. Same as CWL 311.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

EALC 306 Japan Lit in Translation II credit: 3 Hours.

Survey of Japanese literature from 1600 to recent times; readings in prose, poetry, and drama in English translation; and lectures and papers. Same as CWL 312.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

EALC 307 Classical Chinese Lit credit: 3 Hours.

Surveys Chinese literary works from the classical tradition (history, philosophy, poetry, literary criticism) with attention to intellectual and artistic values. Same as CWL 307. No knowledge of Chinese is required. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 308 Chinese Popular Lit credit: 3 Hours.

Surveys Chinese popular literary works written in the vernacular language (short story, novel, and drama), with attention to cultural and artistic values. Same as CWL 308. No knowledge of Chinese is required. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 333 Language in Japanese Society credit: 3 Hours.

Examines aspects of language use in contemporary Japanese society, including cross-cultural communication, social/regional variations, and problems surrounding linguistic/ethnic minorities in Japanese society. Prerequisite: Completion of JAPN 202 or equivalent.

EALC 343 Gov & Pol of China credit: 3 Hours.

Same as PS 343. See PS 343.

EALC 361 Women in East Asia credit: 3 Hours.

Interdisciplinary inquiry into the cultural and social patterns that have shaped women's lives in China, Japan, and Korea. Same as GWS 361. This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

EALC 365 Contemporary Korean Society credit: 3 Hours.

Introduces contemporary Korean society: the twentieth century struggle of Korea for an individual identity; the Korean road to modernization and its significance for the United States and the developing world. Same as SOC 365.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

EALC 367 History of Korea credit: 3 Hours.

Historical examination of the Korean experience, from the earliest times to the present day: basic political, social, economic patterns; examination of the cultural and intellectual tradition; Korea's historical role in Asia; the Korean colonial experience; Korea in the modern world. Same as HIST 325.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

EALC 390 Individual Study credit: 2 to 4 Hours.

Directed readings in the languages and literatures of East Asia. The area selected depends on the student's interest. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

EALC 391 Honors Tutorial credit: 2 to 4 Hours.

Tutorial in the civilizations of East Asia. The country and discipline depend on student interests. All students submit a substantial paper. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

EALC 398 Colloquium in EALC credit: 3 Hours.

See online schedule for current topics. May be repeated in the same or separate terms to a maximum of 12 hours if topics vary. Prerequisite: Junior standing.

EALC 402 Ways of Seeing in Edo Japan credit: 3 or 4 Hours.

Same as ARTH 402. See ARTH 402.

EALC 403 Word and Image in Chinese Art credit: 3 or 4 Hours.

Same as ARTH 403. See ARTH 403.

EALC 411 The Chinese Novel credit: 3 or 4 Hours.

Reading and analysis of representative pieces of Chinese fiction from the fourth century B.C. to 1900 with emphasis on the development of Chinese fiction, its place in the literary tradition, and its role in society. Same as CWL 411. 3 undergraduate hours. 4 graduate hours. No knowledge of Chinese is required.

EALC 412 Mod Chinese Lit in Translation credit: 3 or 4 Hours.

Reading and analysis of representative selections from Chinese literature since the May 4 Movement (early 20th century), with special attention to the relationship between literature and ideology in twentieth-century China. Same as CWL 412. 3 undergraduate hours. 4 graduate hours. No knowledge of Chinese is required.

EALC 413 Premodern Chinese Drama credit: 3 or 4 Hours.

Survey of Chinese drama from the 12th century through the early 20th century. Students will read major works of Chinese drama in English translation, as well as works on stagecraft, performance styles, the social functions of drama and the social role of actors. Videotaped contemporary performances of traditional drama will be viewed. Same as CWL 416 and THEA 488. 3 undergraduate hours. 4 graduate hours.

EALC 415 Mod Japan Lit in Translation credit: 2 to 4 Hours.

Critical study of selected 20th century writers with an emphasis on cultural background, world view, human relationships, aesthetic theories, Japanese and Western traditions, and universal literary issues. Same as CWL 415. 3 undergraduate hours. 2 or 4 graduate hours. Requires no knowledge of Japanese; readings and films. Prerequisite: Junior standing or consent of instructor.

EALC 420 China Under the Qing Dynasty credit: 2 to 4 Hours.

Same as HIST 420. See HIST 420.

EALC 421 Soc-Econ Hist Modern China credit: 2 to 4 Hours.

Same as HIST 422. See HIST 422.

EALC 425 Chinese Poetry and Translation credit: 3 Hours.

A critical introduction to major Chinese poetic genres and an in depth examination of various translation strategies used in the translation of Chinese poetry. The poetry component acquaints students with essential aspects of Chinese language and poetry and thus enables them to evaluate the translated texts from the perspectives of both an insider and outsider. The translation component entails both the evaluation of existing translations and practice by the students. Same as TRST 430. 3 undergraduate hours. 3 graduate hours.

EALC 426 Early Modern Japan credit: 3 or 4 Hours.

Same as HIST 426. See HIST 426.

EALC 427 Twentieth-Century Japan credit: 3 or 4 Hours.

Same as HIST 427. See HIST 427.

EALC 428 Japan at War and Peace credit: 3 or 4 Hours.

Examination of the changing ways the Japanese have imagined war and peace in the twentieth century as documented in novels, memoirs, essays, plays, films, journalism, and other works. Same as CWL 428. 3 undergraduate hours. 3 or 4 graduate hours. Graduate students taking this course for 4 hours credit will be expected to write the same papers as undergraduates. In addition, graduate students will be expected to produce a term paper that will be due at the time of the final exam. Prerequisite: Junior standing or consent of instructor.

EALC 430 Intro to East Asian Ling credit: 3 or 4 Hours.

Same as LING 430. See LING 430.

EALC 466 Japanese Cinema credit: 3 or 4 Hours.

Same as MACS 466. See MACS 466.

EALC 469 The Ethnography of Korea credit: 3 or 4 Hours.

Survey of the English-language anthropological study and representation of Korea, situating this literature topically, historically, theoretically, and methodologically. Same as ANTH 489. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 or ANTH 230, or EALC 285 or EALC 365 or EALC 367, or consent of instructor.

EALC 475 Discourse&Grammar in EA Langs credit: 3 or 4 Hours.

Examines how the regularities in language use that we think of as 'grammar' emerge from communicative needs in discourse. Focuses on analysis of grammatical phenomena in East Asian languages. Requires advanced knowledge of Chinese, Japanese, or Korean. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 430; junior standing or consent of instructor.

EALC 476 Classical Chinese Thought credit: 3 or 4 Hours.

Inquiry into the major schools of Chinese thought in the Classical Period through the Han (206 B.C. - A.D. 220): Confucianism, Taoism and Legalism. Topics such as the concept of history, military thought and logic will be covered. Readings are in English. Same as CWL 478 and HIST 425. 3 undergraduate hours. 4 graduate hours. Prerequisite: One 200 or 300-level course on Chinese culture or consent of instructor.

EALC 484 Buddhist Meditation credit: 3 Hours.

Same as REL 484. See REL 484.

EALC 488 History of Chinese Buddhism credit: 3 or 4 Hours.

Survey of the history of Chinese Buddhism since its introduction; analysis of Buddhological trends and styles; and the sociocultural milieu of Chinese Buddhism and its place in the total history of ideas and lifestyles. Same as REL 488. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: REL 287 or consent of instructor.

EALC 490 Individual Study credit: 2 to 12 Hours.

Supervised individualized study of a topic not covered by regular course offerings. The topic must be approved by the instructor. 3 to 12 undergraduate hours. 2 to 12 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

EALC 495 Topics in Asian Religions credit: 3 or 4 Hours.

Same as REL 495. See REL 495.

JAPN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JAPN>)

Japanese Courses

JAPN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

JAPN 201 Elementary Japanese I credit: 5 Hours.

Introduction to Japanese, spoken language skills and the reading and writing of hirigana, katakana, and kanji.

JAPN 202 Elementary Japanese II credit: 5 Hours.

Continuation of JAPN 201. Prerequisite: JAPN 201.

JAPN 203 Intermediate Japanese I credit: 5 Hours.

Prerequisite: JAPN 202 or equivalent.

JAPN 204 Intermediate Japanese II credit: 5 Hours.

Continuation of JAPN 203. Prerequisite: JAPN 203 or equivalent.

JAPN 305 Advanced Japanese I credit: 5 Hours.

Readings in graded Japanese texts with oral practice designed to help students acquire the sophisticated vocabulary and grammatical structures of written Japanese. Prerequisite: JAPN 204 or placement test for students who have Japanese background or who have previously taken a course(s) in Japanese.

JAPN 306 Advanced Japanese II credit: 5 Hours.

Continuation of JAPN 305. Prerequisite: JAPN 305 or placement test.

JAPN 407 Intro to Classical Japanese credit: 3 Hours.

Introduction to the grammar, morphology, vocabulary, and style of classical Japanese language as found in premodern Japanese literary and historical writings. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of modern Japanese language or equivalent.

JAPN 408 Readings in Classical Japanese credit: 3 Hours.

Readings in texts in classical Japanese selected from historical and literary sources of the premodern period. Attention is given to grammatical, morphological, and stylistic features and to problems in translation. Introduction to reading of classical syllabaries and manuscript texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: JAPN 407 or equivalent.

JAPN 409 Social Science Rdgs Japanese credit: 3 or 4 Hours.

Readings in Japanese social science materials, including articles from newspapers, periodicals, and learned journals. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: JAPN 306 or equivalent.

JAPN 440 Fourth Year Japanese I credit: 3 or 4 Hours.

Further developments of skills in sophisticated Japanese language use, including readings in authentic materials in a wide variety of writing styles, writing for formal occasions, and speaking appropriately according to the situation while using precise vocabulary in correct level of speech. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 306 or equivalent.

JAPN 441 Fourth Year Japanese II credit: 3 or 4 Hours.

Continuation of JAPN 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 440 or equivalent.

JAPN 460 Japanese as a 2nd Language I credit: 3 or 4 Hours.

Introduction to basic theory of Japanese pedagogy; teaching methods, and theory and practice of teaching Japanese grammar. 3 undergraduate hours. 4 graduate hours.

JAPN 461 Japanese as a 2nd Language II credit: 3 or 4 Hours.

Application of pedalinguistics of Japanese; theory and method of instructional exercise development for teaching Japanese in practice teaching of Japanese in the classroom. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 460 or equivalent.

JAPN 490 Readings in Japanese Lit credit: 3 or 4 Hours.

Guided readings in Japanese literature in the vernacular with regular individual conferences and a paper. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Reading knowledge of Japanese and consent of instructor.

JAPN 499 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in the Japanese language, literature, and civilization, and in other academic areas appropriate to the student's course of study. No graduate credit. Approved for letter and S/U grading. Prerequisite: Junior standing and a GPA of 3.00.

KOR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KOR>)

Korean Courses

KOR 201 Elementary Korean I credit: 5 Hours.

First semester of Korean for students without any background of the Korean language, starting from the Korean alphabet (Hangul) and learning basic grammar, vocabulary, and commonly used expressions, to achieve beginning level of speaking, listening, reading, writing, and basic grammar skills in Korean. Credit is not given for KOR 201 if credit for KOR 221 has been earned.

KOR 202 Elementary Korean II credit: 5 Hours.

Continuation of KOR 201, and second semester of first year Korean. Students learn basic grammar, vocabulary, and commonly used expressions by practicing conversations and reading conversation based texts, to achieve beginning-intermediate levels of speaking, listening, reading, and writing in the Korean language. Credit is not given for KOR 202 if credit in KOR 222 has been earned. Prerequisite: KOR 201 or as determined by placement test and instructor. Students must have taken KOR 201 at this University. Otherwise, they must take the placement test given in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 203 Intermediate Korean I credit: 5 Hours.

Continuation of KOR 202 and first semester of the second year Korean. Students practice conversations, study grammar based on conversational materials with variety of styles and levels of discourse and usage, and learn about Korean culture, to achieve intermediate-level fluency. Credit is not given for KOR 203 if credit for KOR 222 has been earned; determination is based on the placement test. Prerequisite: KOR 202 or as determined by a placement exam and an instructor. Students must have taken KOR 202 at this University. Otherwise, they should take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 204 Intermediate Korean II credit: 5 Hours.

Continuation of KOR 203 and second semester of the second year Korean. Students practice conversations and study grammar based on conversational materials with variety of styles and levels of discourse and usage, to achieve intermediate-level fluency in speaking, listening, reading and writing in the Korean language. Credit is not given for KOR 204 if credit for KOR 241 has been earned. Prerequisite: KOR 203 or as determined by a placement exam and an instructor. Students must have taken KOR 203 at this University. Otherwise, they should take the placement exam in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 221 Korean Reading and Writing I credit: 4 Hours.

First semester of spoken and written Korean for students with background in spoken Korean. Starting from the Korean alphabet (Hangul) students learn basic grammar, vocabulary, and commonly used expressions, to achieve the beginning level proficiency in reading and writing as well as in speaking. Credit is not given for KOR 221 if credit for KOR 202 has been earned. Prerequisite: Ability to speak and understand spoken Korean as determined by a placement test and an instructor. Students with prior knowledge of Korean must take the placement test in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 222 Korean Reading and Writing II credit: 4 Hours.

Continuation of KOR 221 and second semester of spoken and written Korean for the students with background in Korean. Students learn basic grammar, vocabulary, and commonly used expressions, to achieve the beginning-intermediate level proficiency in reading and writing as well as in speaking of Korean. Credit is not given for KOR 222 if credit for KOR 202 has been earned; determination is based on the placement test. Prerequisite: KOR 221 or as determined by a placement test and an instructor. Students must have taken KOR 221 at this University. Otherwise, those with prior knowledge of Korean must take placement test in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 241 Korean Reading and Writing III credit: 4 Hours.

Continuation of KOR 222 and first semester of the second year of spoken and written Korean. Students learn grammar and vocabulary to achieve intermediate-level speaking, listening, reading and writing in Korean. Credit is not given for KOR 241 if credit for KOR 204 has been earned; determination is based on the placement exam. Prerequisite: KOR 222 or as determined by a placement exam and an instructor. Students must have taken KOR 222 at this University. Otherwise, those with prior knowledge of Korean must take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 242 Korean Reading and Writing IV credit: 4 Hours.

Continuation of KOR 241 and second semester of the second year of spoken and written Korean. Students are exposed to theme-related passages and dialogues, practicing speaking, listening, reading, and writing, in order to achieve advanced-intermediate level proficiency in Korean. Credit is not given for KOR 242 if credit for KOR 306 has been earned. Prerequisite: KOR 241 or as determined by a placement exam and an instructor. Students must have taken KOR 241 at this University. Otherwise, those with prior knowledge of Korean must take the placement test in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 305 Advanced Korean I credit: 5 Hours.

Continuation of KOR 204 and first semester of third year Korean. Concentrates on enhancing the level of fluency in speaking, listening, reading and writing of Korean. Students learn more advanced-level vocabulary and expressions and read more authentic texts in Korean. Credit is not given for KOR 305 if credit for KOR 241 has been earned; determination is based on placement test. Prerequisite: KOR 204 or as determined by a placement exam and an instructor. Students must have taken KOR 204 at this University. Otherwise, they should take the placement test in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 306 Advanced Korean II credit: 5 Hours.

Continuation of KOR 305 and second semester of third year Korean. Concentrates on enhancing the level of fluency in speaking, listening, reading and writing of Korean. Students will learn about more advanced-level vocabulary and everyday expressions and read texts in Korean where Korean culture is introduced and discussed. Credit is not given for KOR 306 if credit for KOR 242 has been earned. Prerequisite: KOR 305 or as determined by a placement test and an instructor. Students must have taken KOR 305 at this University. Otherwise, they should take the placement text in January. Sign up for the exam in the office of the EALC Department (244-2725).

KOR 440 Fourth Year Korean I credit: 3 or 4 Hours.

Develop the ability to engage in fluent discourse, to understand authentic texts through the acquisition of advanced-level vocabulary and expressions, and to refine and improve their writing in Korean. Students are expected to engage in class discussions on various topics of Korean culture and society. 3 undergraduate hours. 4 graduate hours. Prerequisite: KOR 306 or KOR 242 or as determined by a placement test and an instructor. Students must have taken KOR 306 or KOR 242 at this University. Otherwise, those with prior knowledge of Korean should take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 441 Fourth Year Korean II credit: 3 or 4 Hours.

Allows advanced students to further develop their reading comprehension of authentic texts through the acquisition of advanced-level vocabulary and expressions, and to discuss and write on various topics and issues related to contemporary Korea. 3 undergraduate hours. 4 graduate hours. Prerequisite: KOR 440 or as determined by a placement test and an instructor. Students must have taken KOR 440 at this University. Otherwise, those with prior knowledge of Korean should take the placement test in January. Sign up for the test in the office of the EALC Office (244-2725).

Concentration Preparatory for the Teaching of East Asian Languages

This concentration prepares its graduates for teaching an East Asian Language (currently Mandarin Chinese or Japanese) in the public schools in Illinois.

In order to remain in good standing in this program and be recommended for certification, candidates are required to maintain University of Illinois, cumulative, content area and professional education grade point averages of 2.5 (A=4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade point averages.

Minimum required course work normally equates to 89 hours.

General education: Consult the Curriculum Preparatory to the Teaching of Foreign Languages (p. 410).

Minimum hours required for graduation: A minimum of 120 hours of credit is required for graduation.

Departmental distinction: To be eligible for departmental distinction, a student must have a minimum grade point average of 3.25 overall, a 3.5 average in the major and complete an approved project or series of projects. Consult the Japanese or Chinese teacher education advisor for details.

Foreign study: Future teachers of Mandarin or Japanese are strongly encouraged to engage in one or more semesters of study abroad in China or Japan. Some of the curricular requirements may be met through the Year-in-Japan Program at Konan University or other approved programs or at an exchange program in China.

Code	Title	Hours
	Students must complete the Professional education course sequence and one teaching area of specialization sequence.	
	Professional education courses. See the Curricula Preparatory to Teaching Foreign Languages (p. 410)	29

Teaching Area of Specialization: Japanese

Code	Title	Hours
JAPN 201 & JAPN 202	Elementary Japanese I and Elementary Japanese II	10
JAPN 203 & JAPN 204	Intermediate Japanese I and Intermediate Japanese II	10
JAPN 305 & JAPN 306	Advanced Japanese I and Advanced Japanese II	10
JAPN 440 & JAPN 441	Fourth Year Japanese I and Fourth Year Japanese II	6
EALC 120	East Asian Civilizations	3
EALC 250	Intro to Japanese Culture	3
	Two courses in Japanese history	6
	Two courses in Japanese literature	6
JAPN 460	Japanese as a 2nd Language I	3
	One Japanese elective: Must be at the 300- or 400-level	3

Teaching Area of Specialization: Mandarin Chinese

Code	Title	Hours
CHIN 201 & CHIN 202	Elementary Chinese I and Elementary Chinese II	10
CHIN 203 & CHIN 204	Intermediate Chinese I and Intermediate Chinese II	10
CHIN 305 & CHIN 306	Advanced Chinese I and Advanced Chinese II	10
CHIN 440 & CHIN 441	Fourth-Year Chinese I and Fourth-Year Chinese II	6
EALC 120	East Asian Civilizations	3
EALC 275	Masterpieces of East Asian Lit	3
	Two courses in Chinese history	6
	Two courses in Chinese literature	6
CHIN 477	Chin Orth & Grm for Lng Tchg	3
	One Chinese Studies elective: Must be at the 300- or 400-level	3

The total of hours for Teaching Area of Specialization may be reduced by as much as 20 hours through prerequisite credit for work equivalent to Japanese or Chinese 201 through 204 taken in secondary school or by demonstrated proficiency by examination.

Concentration in East Asian Languages and Cultures

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 33-57 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours.

Code	Title	Hours
	One year of a single East Asian Language beyond the intermediate level (i.e., beyond CHIN 204 or CHIN 242; JAPN 204; KOR 204 or KOR 241). ¹	10-30
	Disciplinary and period courses: ²	12
EALC 120	East Asian Civilizations	
	One course on East Asia dealing substantially with the period before 1800	
	One course in East Asian history	
	One course in East Asian literature	
	Advanced courses:	12
	Four non-language courses at the 300- or 400-level.	
EALC 398	Colloquium in EALC (or an approved senior project.) ³	3

¹ Students testing out of the advanced language requirement (306-level) must take two additional non-language courses from East-Asian-related offerings.

² No course may be counted more than once toward these requirements and at least two courses must be at the 200-level or above.

³ Students selecting the senior project option must submit to the Director of Undergraduate Study a proposal outlining the project to be undertaken, the course in which the project is to be completed and an agreement signed by the faculty member supervising the project.

Economics

Martin Perry

101 David Kinley Hall, 1407 W. Gregory, Urbana

PH: (217) 333-2682

<http://www.economics.illinois.edu/>

Economics is a social science that studies the problems caused by scarcity and how individuals, institutions, and societies may deal with these problems. Economics shares common interests with business-oriented disciplines such as finance and business administration. Economists frequently require quantitative skills, such as calculus and statistics, to derive economic principles that are useful in forming policies designed to solve economic problems.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: econug@illinois.edu

Minimum required major and supporting course work normally equates to 55-56 hours including a minimum of 30 hours of economics courses excluding ECON 199, ECON 220, ECON 398, and ECON 399.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: A student must have a grade point average of at least 3.25 overall and at least 3.5 in economics; complete a research project (e.g., complete ECON 399); and be recommended by the faculty research adviser.

Code	Title	Hours
Economics Courses including:		30
ECON 102	Microeconomic Principles	
ECON 103	Macroeconomic Principles	
ECON 198	Economics at Illinois	
ECON 202	Economic Statistics I	
ECON 203	Economic Statistics II	
ECON 302	Inter Microeconomic Theory	
ECON 303	Inter Macroeconomic Theory	
11 additional hours of economics at the 300- or 400-level ¹		
Mathematics:		7-8
MATH 220	Calculus	
	or MATH 221	Calculus I
MATH 231	Calculus II	
Additional mathematics courses are recommended		
Supporting course work. 18 hours of courses outside economics but related to the student's major interest in economics (see www.economics.illinois.edu/programs/undergrad (http://www.economics.illinois.edu/programs/undergrad) for details).		18

¹ Excluding ECON 398 and ECON 399.

For further information, please visit the Economics undergraduate program page (<http://www.economics.illinois.edu/undergrad/info>).

ECON Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ECON>)

Courses

ECON 101 Introduction to Economics credit: 4 Hours.

General survey of the operation of the economic system; emphasizes the determination of the level of national income, the pricing and allocation of products, and factors of production under existing conditions in the United States. This is an honors course limited to students currently enrolled in the Chancellor's Scholar Program. Credit is not given for ECON 101 if credit has been earned in both ECON 102 and ECON 103. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ECON 102 Microeconomic Principles credit: 3 Hours.

Introduction to the functions of individual decision-makers, both consumers and producers, within the larger economic system. Primary emphasis on the nature and functions of product markets, the theory of the firm under varying conditions of competition and monopoly, and the role of government in prompting efficiency in the economy. Credit is not given for ECON 102 and ACE 100.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ECON 103 Macroeconomic Principles credit: 3 Hours.

Introduction to the theory of determination of total or aggregate income, employment, output, price levels, and the role of money in the economy. Primary emphasis on monetary and fiscal policy, inflation, unemployment, economic growth, and international economics. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ECON 198 Economics at Illinois credit: 1 Hour.

An introductory course intended to help students explore the various fields of economics. Presents brief introductions to various faculty members within the Department of Economics at Illinois and an overview of their respective fields. Enrollment limited to undergraduate Economics majors only. Approved for S/U grading only.

ECON 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

ECON 202 Economic Statistics I credit: 3 Hours.

Introduction of basic concepts in statistics including the presentation of data, descriptive statistics, probability theory, discrete and continuous distributions, sampling distributions, estimation, and hypothesis testing. The approach of the class includes both learning the concepts behind basic statistics and also how to apply these concepts in "real-life" situations. Utilizes a practical project format. To complete the Business Statistics sequence, students must also complete ECON 203. Credit is not given for ECON 202 if credit for a college-level introductory statistics course such as PSYC 235, SOC 280, or STAT 100 has been earned. Prerequisite: Credit or registration in one of MATH 220, MATH 221, MATH 234.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

ECON 203 Economic Statistics II credit: 3 Hours.

Continuation of ECON 202. Builds upon point and interval estimation as well as hypothesis testing skills first introduced in ECON 202. Utilizes a practical project format to extend the student skill set to include simple and multiple linear regression and time series techniques. Prerequisite: ECON 202; one of MATH 220, MATH 221, MATH 234.

ECON 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ENV 210, NRES 210, and UP 210. See ACE 210. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ECON 220 Intl Economic Principles credit: 3 Hours.

Principles-level course in international economics for non-majors. The first half of course, international trade, covers such topics as comparative advantage, protectionism (tariff and nontariff), impact on income distribution, and industrial policies. The second half, international finance, covers topics such as balance of payments, exchange-rate determination, currency crises, dollarization, and macroeconomic policy in an open economy. Issues relating to globalization will be covered in both halves. Prerequisite: ECON 101; or ECON 102 (or ACE 100) and ECON 103. Credit in ECON 220 is not applicable toward graduation in the Economics Major.

ECON 302 Inter Microeconomic Theory credit: 3 Hours.

Microeconomic analysis including value and distribution theory; analysis of the pricing of the factors of production integrated in a micro-general equilibrium context which builds towards explaining the resource allocation process. Prerequisite: ECON 102 or equivalent. MATH 220, MATH 221, MATH 234 or equivalent.

ECON 303 Inter Macroeconomic Theory credit: 3 Hours.

The modern theory of the determination of the level and rate of growth of income, employment, output, and the price level; discusses alternate fiscal and monetary policies to facilitate full employment and economic growth. Prerequisite: ECON 102, ECON 103. Recommended: MATH 125; one of MATH 220, MATH 221, MATH 234.

ECON 397 Senior Research I credit: 2 to 4 Hours.

Research and readings course for students majoring in economics; may be taken by students in the college honors program in partial fulfillment of the honors requirements. Prerequisite: Cumulative grade-point average of 3.0 or honors in the junior year, or consent of instructor; senior standing.

ECON 398 Senior Research II credit: 2 to 4 Hours.

Research and readings course for students majoring in economics; may be taken by students in the college honors program in partial fulfillment of the honors requirements. Prerequisite: Cumulative grade-point average of 3.0 or honors in the junior year; senior standing.

ECON 399 Undergraduate Open Seminar credit: 0 to 9 Hours.

Independent study course covering topics not treated by regular course offerings. This class does not satisfy departmental graduation requirements. Approved for both letter and S/U grading. May be repeated. Prerequisite: Junior or senior standing. ECON 101 or equivalent is recommended. ECON 102 or equivalent is recommended.

ECON 411 Public Sector Economics credit: 2 to 4 Hours.

Economic analysis of government tax and expenditure policies; topics include public good and externality theory, public choice theory, income distribution, cost-benefit analysis, principles of taxation, tax incidence, economic effects and optimal structures of major taxes, and taxation in developing economies. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ECON 414 Urban Economics credit: 3 or 4 Hours.

Analyzes the urban economy. Topics include: economic reasons for the existence of cities; the theory of urban spatial structure; the effects of taxation on housing decisions; the economics of freeway congestion; economics analysis of local public goods and services; economic analysis of rent control, slum policies and land-use controls. Same as FIN 414. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302.

ECON 420 International Economics credit: 2 to 4 Hours.

Introduction to the theory of international trade and finance with selected application to current problems of trade policy, balance of payments adjustment, the international monetary system, and globalization issues. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent, or consent of instructor; ECON 303 is recommended.

ECON 440 Economics of Labor Markets credit: 2 to 4 Hours.

Studies the microeconomic determinants of labor demand and supply, economic effects of unions, and macroeconomic labor market problems. Same as LER 440. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ECON 450 Development Economics credit: 2 to 4 Hours.

Analyzes the economic problems associated with newly developing nations; emphasizes their economic structures, their factor scarcities, and their programs for development. Not open for graduate credit to graduate candidates in economics. 3 undergraduate hours. 2 or 4 graduate hours. Graduate credit is not given for both ECON 450 and ECON 550 or ECON 551. Prerequisite: ECON 102 and ECON 103 or equivalent. ECON 302 strongly recommended.

ECON 451 Program Evaluation in Developing Economies credit: 3 or 4 Hours.

Advanced economics course on microeconomic issues in developing countries with particular attention to empirical analyses and methodologies to address fundamental theoretical and policy relevant questions. Focus is on topics within health and education, although papers may cover other topics. An original empirical research paper is required, applying ideas and concepts covered in class. Class alternates between lectures (discussing new ideas or concepts and assigned readings) and lab (applying concepts to actual data using Stata). 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 203 and ECON 302 or equivalents; for undergraduate students only: Completion of campus Composition I general education requirement. Junior Standing Required. Priority registration provided to Economics Majors. This course satisfies the General Education Criteria for: Advanced Composition

ECON 452 The Latin American Economies credit: 2 to 4 Hours.

Focuses on the economic history of the region, the recent industrialization process and its impact, the role of the state and foreign capital, the impact of the recent privatization processes, inflation and stabilization policies, and issues surrounding the distribution of income. Same as ACE 452. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 102 or ECON 103. ECON 302 or ECON 303 strongly recommended.

ECON 462 Macroeconomic Policy credit: 2 or 3 Hours.

Analyzes current macroeconomic policy issues, problems, and techniques; discusses various policy techniques including monetary, fiscal, incomes, and exchange rate policies, and their effectiveness for treating inflation, unemployment, productivity, resource and exchange rate problems. May emphasize current issues in developed economies or in emerging market economies. 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: ECON 303 or equivalent.

ECON 465 Mathematical Economics credit: 2 to 4 Hours.

Introduction to game theory with applications to economics; emphasizes the analysis of static and dynamic games with or without complete information. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of MATH 125, MATH 225, MATH 415; MATH 241 or equivalent; ECON 302.

ECON 469 Economics of Risk credit: 3 or 4 Hours.

Exploration of economic decisions under uncertainty. Includes expected utility theory and non-expected utility theory; applications to individual decision problems in investment and insurance; general equilibrium in markets under uncertainty, including problems generated by asymmetric information; measurement of risk; the value of information obtained before a decision. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or equivalent; one of MATH 220 or MATH 221 or equivalent.

ECON 471 Intro to Applied Econometrics credit: 2 to 4 Hours.

Introduction to specification, estimation, prediction and evaluation of econometric models, emphasizing the interplay between statistical theory and economic applications. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 203 or equivalent; ECON 302 or ECON 303.

ECON 480 Industrial Comp and Monopoly credit: 2 to 4 Hours.

Analyzes the ways firms and markets are organized, how they interact, outcomes of various types of firm behavior and performance of markets, and causes and types of market failure. Particular emphasis on the contribution of game theory as the equilibrium concept in oligopoly settings. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302.

ECON 481 Govt Reg of Economic Activity credit: 2 to 4 Hours.

Analysis of economic bases, policies, and consequences of government regulation of economic activity. Reasons for government intervention in market behavior, methods of government intervention, and outcomes are studied. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ECON 482 Health Economics credit: 3 or 4 Hours.

Economic analysis of the health care industry to explain the demand for and supply of medical care. Includes analysis of behavior of consumers, producers, and insurers; and public policies to regulate the industry and to provide services for the poor and elderly. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 is recommended.

ECON 483 Econ of Innovation and Tech credit: 2 to 4 Hours.

Examines the economic factors shaping innovation and technical change since the industrial revolution with emphasis on the economic relationship between science and technology and the role of government in technical change. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 102 or equivalent; ECON 302 or consent of instructor.

ECON 484 Law and Economics credit: 2 to 4 Hours.

Applications of economic theory to problems and issues in both civil and criminal law and the effect of legal rules on the allocation of resources; includes property rights, liability and negligence assignment, the use of administrative and common law to mitigate market failure, and the logic of private versus public law enforcement. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ECON 490 Topics in Economics credit: 3 or 4 Hours.

Treatment of special topics in economics. 3 undergraduate hours. 4 graduate hours. May be repeated in the same term to a maximum of 6 undergraduate hours or 8 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate hours or 8 graduate hours. Prerequisite: ECON 302 or consent of instructor.

English

Vicki Mahaffey, Department Head
208 English Building, 608 South Wright, Urbana
PH: (217) 333-2391
<http://www.english.illinois.edu>

English majors at the University of Illinois take 12 courses (36 hours) from the Department of English in the study of literature, text, and culture. These courses help students develop sophisticated interpretation and composition skills through studying a wide range of cultural materials, historical periods, and literatures.

The Department of English sponsors two concentrations.

The English Concentration (p. 408) is organized to provide instruction in literature in English, literary theory and criticism, the English language, English education, film, cultural studies, and closely related fields. Students who major in English have many choices in planning a field of study, but the basic program is designed to accommodate students who seek to broaden their familiarity with our literature, to intensify

their language skills for personal and professional reasons, and to learn more about literature's relationship to the other arts, history, philosophy, psychology, and the modern languages.

The English Teaching Concentration (p. 408) leads to certification to teach in Secondary School. Coursework in this concentration is largely similar to the English Concentration and based on the same core goals as the English Concentration. Students working toward earning a teaching certificate are guided toward additional coursework focused on language and composition.

The department also offers a major in Creative Writing (p. 406) and two undergraduate minors- English (p. 410) and Creative Writing (p. 409).

For the Degree of Bachelor of Arts in Liberal Arts and Sciences Major in Sciences and Letters Curriculum

Students must select one concentration.

- English Concentration (p. 408)
- English Teaching Concentration (p. 408)

The Department of English also offers a major in Creative Writing (p. 406).

Minor in Creative Writing (p. 409)

Minor in English (p. 410)

BTW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BTW>)

Business and Technical Writing Courses

BTW 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

BTW 220 Desktop Publishing and Design credit: 2 Hours.
Design and preparation of documents using desktop publishing technology. Students will learn and apply principles governing page design, style sheets, document layout, effective graphics, managing the design process, and usability testing. Students will create a portfolio of design projects.

BTW 250 Principles Bus Comm credit: 3 Hours.
Teaches students to apply the principles of successful professional communication to workplace writing tasks. Students will also practice editing and supervising the writing of others. Assignments replicate typical business cases and situations, including a report that requires students to compile and interpret research. Credit is not given for both BTW 250 and either BTW 261 or BTW 263. Prerequisite: Junior standing and completion of campus Composition I requirement. This course satisfies the General Education Criteria for: Advanced Composition

BTW 261 Principles Tech Comm credit: 3 Hours.
Teaches students to apply the principles of successful professional writing to a range of realistic cases in technical communication. Emphasizes flexible problem-solving skills and a clear style for communicating technical information to a range of readers. Assignments will include correspondence, instructions, proposals, and a technical report or similar project. Credit is not given for both BTW 261 and BTW 250 or BTW 263. Prerequisite: Junior standing and completion of campus Composition I requirement. This course satisfies the General Education Criteria for: Advanced Composition

BTW 263 Writing in the Disciplines credit: 3 Hours.
Teaches students to apply principles of professional communication to the writing tasks typical of specific disciplines or professions. Assignments will vary, depending on the focus of the course, but will include a substantial report or project. Credit is not given for both BTW 263 and either BTW 250 or BTW 261. Prerequisite: Junior standing and completion of campus Composition I requirement. This course satisfies the General Education Criteria for: Advanced Composition

BTW 271 Persuasive Writing credit: 3 Hours.
Students will study principles of persuasion as applied to writing and designing written communications for business and the professions. Included are ads, direct-mail campaigns, argumentative essays, proposals, and other types of writing designed to move readers to action. Prerequisite: Sophomore standing and completion of Composition I requirement.

BTW 272 Report Writing credit: 3 Hours.
Personal direction in a report writing project which can be integrated with research in another course; study of report-writing principles and practices. Classes meet for the first month after which the student and the instructor arrange a conference schedule. Small group meetings are arranged for presentation of proposals, progress reports, and summary reports. Prerequisite: Completion of campus rhetoric requirement and sophomore standing.

BTW 290 Individual Study credit: 0 to 3 Hours.
Independent research with a chosen tutor leading to the writing of a formal report or preparation of some other type of major presentation of information. Enroll in BTW office, 294 English Building. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

BTW 402 Descriptive English Grammar credit: 3 or 4 Hours.
Same as ENGL 402. See ENGL 402.

BTW 490 Special Topics Prof Writing credit: 3 or 4 Hours.
Study of the forms, situations, and social practices that define writing in particular disciplines or professions. Each class will focus on a specific topic such as science writing, writing in the environmental movement, legal writing, writing in the social sciences, public policy in the popular media, and so on. Assignments will vary with the topic. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing.

CW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CW>)

Creative Writing Courses

CW 100 Intro to Creative Writing credit: 3 Hours.

Acquaint students with the technical choices a writer makes in creating a story or a poem. Mondays are given to lectures on specific elements of poetry and fiction. Wednesdays are dedicated to readings by faculty and visiting writers. Fridays allow students the opportunity to work in small group discussion sections applying the week's techniques and skills to a close reading of stories and poems.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CW 104 Introductory Narrative Writing credit: 3 Hours.

Practice in the writing of narrative prose, with primary emphasis on short fiction. Prerequisite: Completion of campus Composition I general education requirement.

CW 106 Introductory Poetry Writing credit: 3 Hours.

Practice in the writing of poetry; experimentation with a number of fixed forms and free verse, but emphasis mainly on the student's freedom to develop a personal style. Prerequisite: Completion of campus Composition I general education requirement.

CW 200 Reading for Writers credit: 3 Hours.

Emphasizes the craft of short stories and poems through the study of formal elements central to the production of creative writing (e.g., plot, character, setting, point of view in short fiction and rhythm, meter, line break, imagery, simile, metaphor, formal patterns in poetry). Prerequisite: CW 104 or CW 106. For majors only.

CW 202 Topics in Creative Writing credit: 3 Hours.

Independent writing projects and examination of literature as the cultural basis of the student's specialized fields. May be repeated as topics vary.

CW 204 Intermediate Narrative Writing credit: 3 Hours.

Practice in the writing of fiction, with emphasis on the short story. Prerequisite: CW 104 or equivalent.

CW 206 Intermediate Poetry Writing credit: 3 Hours.

Builds upon the workshop format of CW 106, with an emphasis on prosody and poetic technique. Students will deepen their sense of craft by putting into practice their study and understanding of a variety of poetic forms (e.g., syllabic poetry, dramatic monologue, sonnet, bound/free verse) and technical concerns (e.g., voice, tone, line, line break, image). The workshop component of the course typically includes 8-12 completed poems and their revisions. Prerequisite: CW 106.

CW 208 Creative Nonfiction Writing credit: 3 Hours.

Types of nonfiction prose, including the personal essay, memoir, literary journalism, and historical writing. Prerequisite: RHET 233 or CW 243, or equivalent, or consent of instructor.

CW 243 Inter Expository Writing credit: 3 Hours.

Practice in expository types, with emphasis on style and critical analysis. Restricted to Creative Writing majors. Credit is not given for CW 243 and either RHET 243 or RHET 233. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

CW 404 Advanced Narrative Writing credit: 3 or 4 Hours.

Continued practice in the writing of fiction, with emphasis on the longer story. 3 undergraduate hours. 4 graduate hours. May be repeated for a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 204 or equivalent.

CW 406 Advanced Poetry Writing credit: 3 or 4 Hours.

Practice of the writing of poetry aided by intensive study of examples. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 206 or equivalent.

CW 455 Creative Writing Tutorial credit: 3 or 4 Hours.

Personal direction in a writing project: fiction (novel or short stories), poetry or creative nonfiction. Frequency of conference to be determined by the type of project. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 208, CW 404 or CW 406, and consent of the Director of Creative Writing.

CW 460 Intro to Literary Editing credit: 3 Hours.

Practicum in which students learn all the stages of developing and editing a literary publication. Students will solicit, read, and select poems and stories for an online supplement to the Ninth Letter literary journal. At the end of the semester, the supplement will be published on the Ninth Letter website (www.ninthletter.com). Students will gain experience in professional communications, copyediting, and marketing. 3 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 6 hours. Prerequisite: CW 104 or CW 106.

CW 463 Adv Topics in Creative Writing credit: 3 or 4 Hours.

Advanced topics course in Creative Writing. Students study selected topic through a workshop model, pursuing advanced development in one or more approaches to writing in a specialized field or genre. 3 undergraduate hours. 4 graduate hours. May be repeated, if topics vary. Prerequisite: Junior standing required.

ENGL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENGL>)

English Courses

ENGL 101 Intro to Poetry credit: 3 Hours.

Close reading and analysis of poetry and other literary texts. Introduction to argumentative strategies for writing about poetry. Addresses prosody, poetic language (diction, metaphor, image, tone), and major verse forms (the sonnet, elegy, ode, ballad, dramatic monologue, free verse). Students also study poems from a range of literary periods and movements to learn how formal qualities change and develop over time and are relevant to everyday life.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 102 Intro to Drama credit: 3 Hours.

Explores such topics as the history of dramatic form, the major dramatic genres, the dramatic traditions of various cultures, and key terms used in the analysis of dramatic works. Reading plays from the ancient Greeks to the contemporary theatre, students will be taught skills in close reading and literary interpretation. Students will consider the importance of performance, considering how meanings might be represented through visual and aural means.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 103 Intro to Fiction credit: 3 Hours.

An introduction to the study of literature and literary history at the university level. Explores such topics as: the historical role and place of fictional narratives, the idea of genre, relationships between context and meaning in fictional works. Student will develop a critical vocabulary for interpreting and analyzing narrative strategies. Credit is not given for both ENGL 103 and ENGL 109.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 104 Intro to Film credit: 3 Hours.

Thoughtful viewing of diverse films (in required weekly screenings), along with ample discussion and critical reading and writing, to gain understanding of cinematic expression and of film's capacity to entertain and to exert artistic and social influence. Same as MACS 104.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 106 Literature and Experience credit: 3 Hours.

Understanding of the relationship between literature and human experience through the study of significant, recurrent themes. May be repeated one time if topics vary.

ENGL 109 Intro to Fiction-ACP credit: 3 Hours.

Introduction to critical analysis of prose fiction. Explores a wide range of short and long fiction across historical periods; examines narrative strategies such as plot, character, and point of view. Special emphasis placed on good literary critical writing. Course is similar to ENGL 103 except for the additional writing component. Credit is not given for both ENGL 109 and ENGL 103. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts

ENGL 110 Intro Lit Study for Non-Majors credit: 3 Hours.

Introduction to literary genres and literary interpretation, with an emphasis on close reading. For non-majors only.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 112 Literature of Global Culture credit: 3 Hours.

Through literature and films, studies the impact of historical change on individuals and on cultures, the breakdown of borders, the building of new hierarchies of domination and exploitation, the contact and collision between the local and the global, and the transnational and problematic processes of cultural globalization. Same as CWL 112.

ENGL 114 Bible as Literature credit: 3 Hours.

Same as CWL 111 and REL 101. See REL 101.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 115 Intro to British Literature credit: 3 Hours.

Acquaints students with the rich diversity of British prose, poetry, and drama. As a basic introduction to English literature, the course explores a series of literary texts, often thematically related, which appeal to modern readers and at the same time provide interesting insights into the cultural attitudes and values of the periods which produced them.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 116 Intro to American Literature credit: 3 Hours.

Explores a sampling of literature written by American authors, including some combination of essays, narratives, drama, fiction, and poems from various periods in American literary history. Texts for reading and discussion will include literature representing a variety of gender and ethnic perspectives.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 117 Shakespeare on Film credit: 3 Hours.

Explores the ongoing reinterpretation and appropriation of Shakespeare plays in twentieth- and twenty-first century film. Expect to read around five plays and analyze two productions of each play, and to consider how Shakespeare can be transformed to meet different cultural and contextual demands of the screen. Lecture and discussion. Same as MACS 117.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 119 Literature of Fantasy credit: 3 Hours.

Introduction to the rich traditions of fantasy writing in world literature. While the commercial category of fantasy post-Tolkien will often be the focal point, individual instructors may choose to focus on alternate definitions of the genre: literatures of the fantastic, the uncanny, and the weird; fantasy before the Enlightenment and the advent of realism; fantasy for young adult or child readers; and so on. Same as CWL 119.

ENGL 120 Science Fiction credit: 3 Hours.

Introduction to the study of science fiction, the genre that has both contributed to scientific knowledge and attempted to make sense of the changes that have taken place in the world since the Enlightenment, the onset of industrialization, and the acceleration of technology. Texts are taken from a variety of literary and pop culture sources: pulps and magazines, novels and films, comics and TV shows.

ENGL 121 Introduction to Comics credit: 3 Hours.

Introduction to graphic narratives—comic books, comic strips, graphic novels, manga, webcomics, and so on—from a diverse panoply of cultural, formal, and historical traditions.

ENGL 122 Swords, Sorcery & Sex: The Middle Ages in Popular Culture credit: 3 Hours.

Explores the use of medievalism in contemporary popular culture. Instructors may draw from film, television, music, fiction, graphic novels, gaming, and other sources, and they approach the material from a variety of cultural, historical, and aesthetic traditions. The goal of the course will be to understand how the medieval periods of world cultures have been reinvented in modern times, and how modernity has been constructed in relation and in opposition to the medieval imaginary. Same as MDVL 122. This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 150 Black Literature in America credit: 3 Hours.

Same as AFRO 105. See AFRO 105.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated one time. Prerequisite: Consent of honors advisor.

ENGL 198 Freshman Honors Seminar credit: 4 Hours.

Introduction to the study of literature, with emphasis on individual work in fundamental problems of literary analysis; works studied are usually a combination either of short poems and short stories or of novels and plays. May be repeated one time if topics vary. Prerequisite: James Scholar standing or other designation as a superior student.

ENGL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Topics course that varies each semester and by section. The topics offered each semester will be listed in the Class Schedule. Approved for letter and S/U grading. May be repeated.

ENGL 200 Intro to the Study of Lit credit: 3 Hours.

Introduction to the study of literature, with an emphasis on interpretive theories and methods as well as the formal distinctions between the major literary genres. For majors only.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 202 Medieval Lit and Culture credit: 3 Hours.

Introduction to the diverse literatures and cultures of the global Middle Ages (Approx. 500-1500 CE). Students will read works by medieval authors in Modern English translation, with particular attention to placing works in their historical and material contexts. Same as CWL 253 and MDVL 201. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 204 Renaissance Lit and Culture credit: 3 Hours.

Readings in English and continental literary masterpieces with attention to significant cultural influences. Same as CWL 255. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 206 Enlightenment Lit and Culture credit: 3 Hours.

Study in Anglophone and global texts from the period 1600 to 1800, with attention to cultural and historical contexts. Same as CWL 257. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 207 Romantic Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual arts, and social criticism of the British Romantic period, with attention to broader cultural issues. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 208 Victorian Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual arts, and social criticism of the British Victorian period, with attention to broader cultural issues. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 209 British Lit to 1800 credit: 3 Hours.

Historical and critical study of selected works of British literature to 1800 in chronological sequence. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 210 British Lit 1800 to Present credit: 3 Hours.

Historical and critical study of selected works of British literature after 1800 in chronological sequence. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 211 Intro to Mod African Lit credit: 3 Hours.

Same as AFST 210 and CWL 210. See AFST 210.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ENGL 213 Modernist Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual and performing arts, social criticism, and popular sciences of the Anglo-American Modern period (1880-1920), with attention to broad cultural issues. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 216 Legends of King Arthur credit: 3 Hours.

Arthurian myth and legend is one of the most enduring literary traditions of Western Europe, and the characters of Arthur, Merlin, Guinevere, Lancelot, Gawain and Mordred were as popular in the Middle Ages as they are today. Originating in early medieval Wales, the legends traveled through England to France and Germany and throughout the modern world. Students will study the development of the Arthurian tradition in chronicles, poetry, romances, lais, and fabliaux, comparing variations across cultural and historical boundaries. Same as CWL 216 and MDVL 216. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 218 Introduction to Shakespeare credit: 3 Hours.

Representative readings of Shakespeare's drama and poetry in the context of his age, with emphasis on major plays; selections vary from section to section. Does not fulfill Shakespeare requirement for the English major. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 220 Literature and Science credit: 3 Hours.

Explores the mutual influences of science and literature in some key literary and non-literary texts. Covers scientific texts, literary works, and cultural theory to explore how and why scientific knowledge is intimately linked to literature.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 222 Jewish American Literature credit: 3 Hours.

Same as CWL 209 and JS 209. See JS 209.

ENGL 223 Jewish Storytelling credit: 3 Hours.

Same as CWL 221, JS 220, REL 220, and YDSH 220. See YDSH 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 224 Latina/o Popular Culture credit: 3 Hours.

Same as LLS 240 and SPAN 240. See LLS 240.

ENGL 225 Intro to Latina/o Literature credit: 3 Hours.

Same as LLS 242 and SPAN 242. See LLS 242.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

ENGL 241 Beginnings of Modern Poetry credit: 3 Hours.

An inquiry into some of the more complex and innovative poetry written in English. Students will read poets such as Frost, Robinson, Sandburg, Lindsay, Hardy, Hopkins, Housman, Yeats, Lawrence, the Imagists, and the early Pound and Eliot. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

ENGL 242 Poetry Since 1940 credit: 3 Hours.

An exploration of English-language poetry written since World War II.

Students study some or all of the following major poetic movements of the period: the Beats, the New York School, the Black Mountain poets, the Confessional school, the Deep Image poets, the British "movement" and post-"Movement" poets, the Black Arts movement, Feminist poets, Post-colonial poetry, Language poets, and the current multifarious poetry scene. Prerequisite: Completion of the Composition I requirement.

ENGL 243 Modern Drama I credit: 3 Hours.

Ibsen to O'Neill. Same as CWL 265. Prerequisite: Completion of the Composition I requirement.

ENGL 244 Modern Drama II credit: 3 Hours.

Pirandello to the present. Same as CWL 266. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 245 The Short Story credit: 3 Hours.

Historical and critical study of the short story (American and European) from the early nineteenth century to the present. Same as CWL 267.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 247 The British Novel credit: 3 Hours.

A study of some of the more noteworthy and influential writers of the last two hundred and fifty years. The course traces the development of the novel as a genre that both celebrated and critiqued Britain and British nationalism. Examines how the novel has been important culturally over time. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 248 Brit, Amer & Contin Fiction credit: 3 Hours.

Examination of important thematic and structural relationships - influences, parallels, and variations - among selected major works of the nineteenth and twentieth centuries; readings chosen from works of Bronte, Hardy, Lawrence, Woolf, James, Faulkner, Bellow, Oates, Dostoevsky, Tolstoy, Stendhal, Flaubert, Camus, Kafka, Mann, Hesse, Moravia, and Pavese. All works read in English. Same as CWL 269.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 250 The American Novel to 1914 credit: 3 Hours.

Critical study of selected American novels from the late eighteenth century to 1914. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 251 The American Novel Since 1914 credit: 3 Hours.

Critical study of selected American novels from 1914 to the present.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 253 Topics in Lit and New Media credit: 3 Hours.

Introduction to the role technological invention has played in history of print media and how literary aesthetics are changing with the advent of new media, such as software, video games, and graphic novels. We will consider material formats, genres, and modes of production along with the cultural, political, and societal implications of different forms and formats. May be repeated in separate terms up to 6 hours.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 255 Survey of American Lit I credit: 3 Hours.

American literature and its cultural backgrounds to 1870. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 256 Survey of American Lit II credit: 3 Hours.

American literature and its cultural backgrounds after 1870. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 259 Afro-American Literature I credit: 3 Hours.

Historical and critical study of Afro-American literature in its social and cultural context from the beginning to 1915. Same as AFRO 259 and CWL 259. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

ENGL 260 Afro-American Literature II credit: 3 Hours.

Historical and critical study of Afro-American literature in its social and cultural context since 1915. Same as AFRO 260 and CWL 260. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

ENGL 261 Topics in Lit and Culture credit: 3 Hours.

Introductory study of variety of topics in literature and culture, including those that bridge traditional historical periods, focus on themes or movements, and cross disciplinary boundaries. May be repeated up to 6 hours in same or separate terms if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 265 Intro to American Indian Lit credit: 3 Hours.

Same as AIS 265. See AIS 265.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 266 Grimm's Fairy Tales in Context credit: 3 Hours.

Same as CWL 254 and GER 251. See GER 251.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 267 Grimms' Fairy Tales - ACP credit: 3 Hours.

Same as CWL 250 and GER 250. See GER 250.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

ENGL 268 The Holocaust in Context - ACP credit: 3 Hours.

Same as CWL 271 and GER 260. See GER 260.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

ENGL 269 The Holocaust in Context credit: 3 Hours.

Same as CWL 273 and GER 261. See GER 261.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 270 American Film Genres credit: 3 Hours.

Introduction to the study of the dominant genres or types U.S. cinema. Examines the elements that constitute genres (such as visual and narrative patterns), the formation and reshaping of genres by filmmakers and the entertainment industry, the social and cultural factors that influence the genre cycles and subgenres, and the landmark works of each genre. The course treats several genres in historical perspective or focus on a single genre. May be repeated in separate terms up to 6 hours if topics vary.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 272 Minority Images in Amer Film credit: 3 Hours.

Addresses how a range of films made in the United States have represented diverse ethnicities and cultures in relation to each other and to dominant American media conventions and social ideas. A comparative, case study approach examines racial and gender stereotyping, historical and economic factors, and reactions of various audiences to the films. Same as AFRO 272. Prerequisite: Fulfillment of the Composition I English requirement; sophomore standing or above.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 273 American Cinema Since 1950 credit: 3 Hours.

Explores key issues in American cinema from 1950 to the present, structured around central problems of film studies (such as authorship, genre, narratology, film style, gender analysis, and the spectacle of violence), contextualizing them within moments of major transition in the American film industry. Viewing and discussion of a major film each week. Same as MACS 273. Prerequisite: Completion of the Composition I requirement.

ENGL 274 Literature and Society credit: 3 Hours.

Major literary works presented within the context of social issues of their time. May be repeated with the permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 275 Am Indian and Indigenous Film credit: 3 Hours.

Same as AIS 275 and MACS 275. See AIS 275.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 276 Asian Film Genres credit: 3 Hours.

Studies a variable selection of popular film genres produced and circulated in Asia (e.g., martial arts, horror, musicals, anime, melodramas, science fiction, monster movies, comedy) that have an impact across the region, with emphasis on East and Southeast Asia, and beyond.

Takes a historical and transnational comparative approach to analyzing shifting narrative and visual and other cinematic realizations of each genre across different contexts, including Western reception and cross-cultural adaptations. Same as CWL 276 and EALC 276.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ENGL 280 Women Writers credit: 3 Hours.

Study of British and American women authors. Same as GWS 280. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 281 Women in the Lit Imagination credit: 3 Hours.

Study of the way various writers, both male and female, have portrayed woman's image, social role, and psychologies in British, American, or Anglophone literature. Same as GWS 281. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 283 Jewish Sacred Literature credit: 3 Hours.

Same as CWL 283 and REL 283. See REL 283.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 284 Modern Jewish Literature credit: 3 Hours.

Surveys imaginative literature by Jewish authors from the Enlightenment to the present, including fiction, poetry, drama, and autobiography written in English or translated from other languages. Same as CWL 284 and REL 284. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 285 Postcolonial Lit in English credit: 3 Hours.

Examination of selected postcolonial literature, theory, and film as texts that "write back" to dominant European representations of power, identity, gender and the Other. Postcolonial writers, critics and filmmakers studied may include Franz Fanon, Edward Said, Aime Cesaire, Ousmane Sembene, Chinua Achebe, Michelle Cliff, Mahesweta Devi, Buchi Emecheta, Derek Walcott and Marlene Nourbese-Philip. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

ENGL 286 Asian American Literature credit: 3 Hours.

Introduction to Asian American literary studies and culture through the reading of major works of literature selected from but not limited to the following American ethnic subgroups: Chinese, Filipino, Japanese, Korean, Indian, Pakistani, and Vietnamese. Same as AAS 286.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

ENGL 290 Individual Study credit: 0 to 3 Hours.

Study of selected topics. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Students may register in more than one section per term. Prerequisite: Consent of instructor.

ENGL 293 The Anthropocene credit: 3 Hours.

Focuses on the current historical period of humans' relative dominance over major Earth systems. Introduces students to debates surrounding the scientific basis for the Anthropocene, followed by a survey of its major historical periodizations, from the so-called "Paleo-Anthropocene" of human agriculture, to industrialization, to the post-1950 "Great Acceleration" in economic development and resource consumption whose consequences we now face in crisis phenomena such as climate change, water scarcity, resource wars, and environmental refugeism. Same as ESE 293.

ENGL 300 Writing About Lit Text&Culture credit: 3 Hours.

Writing-intensive, variable topic course designed to improve English majors' ability to write clear, well-organized, analytically sound and persuasively argued essays relevant to literary studies. Introduces students to some strategies of literary criticism and research through examination of critical texts appropriate to course topic. For majors only. Prerequisite: Completion of the Composition I requirement; one year of college literature or consent of instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

ENGL 301 Critical Approaches to Lit&Text credit: 3 Hours.

Introduction to influential critical methods and to the multiple frameworks for interpretation as illustrated by the intensive analysis of selected texts. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

ENGL 310 Introduction to the Study of the English Language credit: 3 Hours.

Topics in the study of the English language, with emphasis on one or more of the following: the social, political, historical, technological, legal, and economic aspects of language use. Credit is not given for both ENGL 401 and ENGL 310.

ENGL 311 History of the English Language credit: 3 Hours.

Language variation and change from the earliest forms of English to the present day, with emphasis on the rise of Standard English and the social, geographic, and cultural aspects of linguistic change in English. Credit is not given for both ENGL 403 and ENGL 311.

ENGL 322 Dostoevsky credit: 3 Hours.

Same as CWL 324 and RUSS 322. See RUSS 322.

ENGL 323 Tolstoy credit: 3 Hours.

Same as CWL 323 and RUSS 323. See RUSS 323.

ENGL 325 Topics in LGBT Lit & Film credit: 3 Hours.

Explores topics on representations of non-heteronormative sexuality in canonical and recovered historical texts and in contemporary literature, on literature by LGBT authors, and on theories of sexuality that pertain to systems of textual and cultural meaning. May be repeated in separate terms to a maximum of 6 hours.

ENGL 330 Slavery and Identity credit: 3 Hours.

Explores slavery in the Americas through its representation in literature over time. Using a variety of disciplinary approaches, we will look at the enslaved, the enslavers, and the middle merchants who facilitated the slave trade, and will examine the experience of slavery and the economic, political, religious, and scientific justifications used to maintain it. We will also examine the African cultural traditions from which the slaves emerged and the aspects of it that lent to creation of the new U.S. culture.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

ENGL 333 Memoir & Autobiography credit: 3 Hours.

Same as GWS 333. See GWS 333.

ENGL 359 Lit Responses to the Holocaust credit: 3 Hours.

Same as CWL 320, JS 320, REL 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 360 Environmental Writing credit: 3 Hours.

Same as ESE 360. See ESE 360.

This course satisfies the General Education Criteria for:

Advanced Composition

ENGL 373 Special Topics in Film Studies credit: 3 Hours.

Extended investigation of major subjects and issues in cinema and other media; topics vary and typically include studies of author/directors, genres, historical movements, critical approaches, and themes. Same as MACS 373. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: One college-level course in film studies or literature.

ENGL 374 World Cinema in English credit: 3 Hours.

Course systematically addresses cinema movements and films of different periods, genres, themes and styles produced in one or two Anglophone countries other than the U.S. (e.g., Great Britain, Ireland, Australia, New Zealand, Canada, South Africa, and regions with Anglophone film movements or strands like South Asia and the Caribbean). Topics could include cinema in relation to relevant distinctive national and cultural histories, local audiences and production circumstances, and the challenges of international distribution in light of Hollywood's global dominance. Meets for 110 minutes twice a week, with some class time devoted to film screenings (not always on same day) and some longer feature films scheduled in required out-of-class screenings announced well in advance. May be repeated to a maximum of 6 credit hours in separate terms if topics vary.

ENGL 378 Fairy Tales & Gender Formation credit: 3 Hours.

Same as GWS 378. See GWS 378.

ENGL 380 Topics in Writing Studies credit: 3 Hours.

Advanced-level work in the field of Writing Studies. Building upon a traditional disciplinary understanding of writing as rhetoric, this course invites students to call upon sociological, anthropological, and/or ideological approaches to the study of writing in order to understand the myriad ways that writing makes meaning(s). See Class Schedule for topics. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Completion of the Composition I requirement.

ENGL 390 Advanced Individual Study credit: 3 Hours.

Advanced study of selected topics. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: Consent of instructor.

ENGL 391 Honors Individual Study credit: 3 Hours.

Study of selected topics. Restricted to English and English education majors with a 3.33 average who are working towards the degree with distinction in English or in English education. May be repeated to a maximum of 6 hours. Prerequisite: Enroll in undergraduate advising office.

ENGL 396 Honors Seminar I credit: 3 Hours.

Themes, movements, and forms in British, American, and Anglophone literature. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 397 Honors Seminar II credit: 3 Hours.

Periods in British, American, and Anglophone literature. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 398 Honors Seminar III credit: 3 Hours.

Major British, American, and Anglophone authors. Each seminar considers one or two major authors. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 402 Descriptive English Grammar credit: 3 or 4 Hours.

An introduction to English linguistics with emphasis on the phonetic, syntactic, and semantic structures of English; language variation, standardization, and change; language legislation and linguistic rights; English as a world language; and the study of language in American schools. Same as BTW 402. 3 undergraduate hours. 4 graduate hours.

ENGL 404 Engl Grammar for ESL Teachers credit: 3 or 4 Hours.

Same as EIL 422. See EIL 422.

ENGL 407 Introduction to Old English credit: 3 or 4 Hours.

Introduction to the form of English spoken and written prior to about AD 1100. Exploring concepts of cultural, historical, and linguistic change, students will learn to read Old English texts in the original. Readings include examples from the prose tradition (e.g., Bede's story of the poet Caedmon and the Anglo-Saxon Chronicle) as well as poetic texts (e.g., *The Dream of the Rood* and *The Wanderer*). Same as MDVL 407. 3 undergraduate hours. 4 graduate hours.

ENGL 411 Chaucer credit: 3 or 4 Hours.

A selection of Chaucer's major works read in Middle English. Instructors will usually emphasize either the *Canterbury Tales* or *Troilus and Criseyde* and the dream visions, but alternate combinations of texts are possible. Students will also be introduced to Chaucer's fourteenth-century context. Same as MDVL 411. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 412 Topics in Medieval Brit Lit credit: 3 or 4 Hours.

Advanced topics course exploring the literatures of medieval Britain, especially Old and/or Middle English but with some attention to Celtic, French, Latin, and Norse texts in translation. Same as CWL 417 and MDVL 410. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 416 Topics in Brit Drama to 1660 credit: 3 or 4 Hours.

Advanced topics course devoted to dramatic practice in the medieval and/or early modern British Isles. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary; Graduate students may repeat if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 418 Shakespeare credit: 3 or 4 Hours.

Survey of the plays and poems of William Shakespeare. Reading assignments will reflect the generic diversity and historical breadth of Shakespeare's work. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 421 Later Renaiss Poetry & Prose credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 423 Milton credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 426 Early 18th Century Literature credit: 3 or 4 Hours.

British Literature between 1600—the restoration of Charles II to the throne—and 1740. Focus on the plays, poems, and fiction by male and female authors with particular attention to issues of gender relations, colonialism and imperial expansion, and class tensions. Writers covered may include Aphra Behn, Alexander Pope, Eliza Haywood, Jonathan Swift, John Dryden, the Earl of Rochester, Daniel Defoe, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 427 Later 18th Century Literature credit: 3 or 4 Hours.

Focused study of texts produced in Great Britain and its empire between roughly 1740 and 1790. Writers may include Laurence Sterne, Mary Leapor, Thomas Warton, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 428 British Drama 1660-1800 credit: 3 or 4 Hours.

Focused study of the major male and female playwrights who wrote between 1660 (the reopening of the theaters after the Interregnum) and roughly 1800. Particular attention will be devoted to the social, cultural, political, and economic contexts of theatrical performance, and to the major issues dealt with on the London stage: sexual morality, the role of women in a patrilineal society, and the problems of empire, trade, and colonialism. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 429 18th Century Fiction credit: 3 or 4 Hours.

Focused study of British and Anglophone fiction in the eighteenth century. Authors may include Defoe, Swift, Haywood, Fielding, Richardson, Sterne, Burney, Walpole, Radcliffe, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 431 Topics in British Romantic Lit credit: 3 or 4 Hours.

Focused study of British literature between roughly 1785 and 1832. Authors may include Wollstonecraft, Wordsworth, Coleridge, Keats, Byron, Austen and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 434 Victorian Poetry & Prose credit: 3 or 4 Hours.

Study of such major poets as Tennyson, Browning, Arnold, and Hardy; and of prose writers including Carlyle, Mill, Arnold, Pater, and Huxley. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 435 19th C British Fiction credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 441 British Lit 1900-1930 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 442 British Lit Since 1930 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 449 American Lit 1820-1865 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 450 American Lit 1865-1914 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 451 American Lit 1914-1945 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 452 American Lit 1945-Present credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 455 Major Authors credit: 3 or 4 Hours.

Intensive study of the work of one or two major authors. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 458 Latina/o Performance credit: 3 or 4 Hours.

Same as LLS 458. See LLS 458.

ENGL 459 Topics in American Indian Lit credit: 3 or 4 Hours.

Same as AIS 459. See AIS 459.

ENGL 460 Lit of American Minorities credit: 3 or 4 Hours.

Advanced topics seminar exploring literary expressions of minority experience in America. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours. Graduate students may repeat as topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 461 Topics in Literature credit: 3 or 4 Hours.

Advanced seminar on any of a variety of literary topics. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 462 Topics in Modern Fiction credit: 3 or 4 Hours.

Advanced seminar devoted to topics in British, American, and Anglophone fiction from approximately 1800 to the present day. Continental fiction in English translation may occasionally be considered. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 465 Topics in Drama credit: 3 or 4 Hours.

Seminar covering advanced topics (such as genre, performance context, period, or theme) in drama studies. Same as CWL 465. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 470 Modern African Fiction credit: 3 or 4 Hours.

Same as AFST 410, CWL 410, and FR 410. See AFST 410.

ENGL 475 Lit and Other Disciplines credit: 3 or 4 Hours.

Advanced topics seminar exploring the intersection of literary study and other scholarly disciplines. The disciplines students study vary each term, but past courses have examined connections between literature and psychology, forensic science, environmental studies, and the law. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 476 Topics in Lit & Environment credit: 3 or 4 Hours.

From the developing field of "ecocriticism" to new historical examinations of canonical writers such as Thomson, Thoreau, or the "nature poets", to the new field of Science Studies, this advanced seminar examines a range of specialized topics related to literature and the environment. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 477 Advanced Environmental Writing credit: 3 Hours.

Introduces students to the challenges of "turning data into narrative." With a focus on students' professional development as writers, this course emphasizes the research and rhetorical skills required to communicate current scientific research in earth and environmental science through non-fiction narrative forms—the investigative essay, long-form journalism, personal memoir, and op-ed—aimed at a general audience. Same as ESE 477. 3 undergraduate hours. No graduate credit.

ENGL 481 Comp Theory and Practice credit: 3 or 4 Hours.

Study of the history and theory of written composition. This course explores basic rhetorical principles, various theoretical perspectives in the field of composition/rhetoric, and helps students form practical approaches to the guidance of, response to, and structuring of student writing. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 482 Writing Technologies credit: 3 or 4 Hours.

Examines the relationship of computer technology to the larger field of writing studies. Topics include a historical overview of computers and other writing technologies; current instructional practices and their relation to various writing theories; research on word processing, computer-mediated communication, and hypermedia; and the computer as a research tool. Same as IS 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing and consent of instructor. Students must have a basic knowledge of word processing.

ENGL 485 Literature for the High School credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 486 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

ENGL 498 Environmental Writing for Publication credit: 3 Hours.

Same as ESE 498. See ESE 498.

RHET Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RHET>)

Rhetoric and Composition Courses**RHET 100 Rhetoric Tutorial credit: 1 Hour.**

Tutoring in writing skills to be scheduled by individual tutors. Open only to students placed in and registered for RHET 101 or RHET 102. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: Concurrent registration in RHET 101 or RHET 102.

RHET 101 Principles of Writing credit: 3 Hours.

Instruction in structuring academic, argumentative essays, including how to develop thesis statements and use evidence across different types of writing. This course is the first semester of a two-semester sequence (RHET 101 - RHET 102) that fulfills the campus Composition I general education requirement. Credit is not given for both RHET 101 and RHET 105. Prerequisite: Concurrent registration in RHET 100; placement in RHET 101.

This course satisfies the General Education Criteria for: Composition I

RHET 102 Principles of Research credit: 3 Hours.

Continued instruction in structuring academic, argumentative essays; concentrating on the use of primary and secondary sources as evidence in research-based arguments. Second semester of a two-semester sequence (RHET 101/100 - RHET 102/100) that fulfills the campus Composition I general education requirement. Credit is not given for both RHET 102 and RHET 105. Prerequisite: RHET 101; concurrent registration in RHET 100.

This course satisfies the General Education Criteria for: Composition I

RHET 105 Writing and Research credit: 4 Hours.

Introduction in research-based writing and the construction of academic, argumentative essays that use primary and secondary sources as evidence. This course fulfills the Campus Composition I general education requirement. Credit is not given for both RHET 105 and any of these other Comp I courses: RHET 101, RHET 102, CMN 111 or CMN 112. This course satisfies the General Education Criteria for: Composition I

RHET 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RHET 233 Adv Rhetoric & Composition credit: 3 Hours.

Instruction in developing research-based arguments of moderate complexity within a special topics format. Introduction to the use of multimodal or other non-print resources as evidence in written arguments. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for: Advanced Composition

Creative Writing

Vicki Mahaffey

208 English Building, 608 South Wright, Urbana
PH: (217) 333-2391

<http://www.english.illinois.edu>

The Creative Writing major, administered by the Department of English, combines small workshops (poetry, fiction, nonfiction) and a variety of literature courses. The result is a strong but flexible program of study that develops students' analytical and creative skills and prepares them for work of graduate study in any number of fields.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences**Major in Sciences and Letters Curriculum**

E-mail: english@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required core and supporting course work normally equates to 36 hours. Twelve hours of 300- and 400-level courses in the major must be taken on this campus, of which at least three hours must be Creative Writing Courses (CW 404 or CW 406). All Creative Writing courses must be taken in sequence (CW 104 before CW 204, etc.).

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Literature Foundational Coursework		
CW 100	Intro to Creative Writing	3
CW 200	Reading for Writers	3
Expository Writing (Advanced Composition)		
CW 243	Inter Expository Writing ¹	3
Creative Writing Coursework		

Students complete 12 hours of creative writing coursework, including at least one of the following 3-course (9-hour) sequences:

CW 106 & CW 206 & CW 406	Introductory Poetry Writing and Intermediate Poetry Writing and Advanced Poetry Writing	12
--------------------------	---	----

or

CW 104 & CW 204 & CW 404	Introductory Narrative Writing and Intermediate Narrative Writing and Advanced Narrative Writing	12
--------------------------	--	----

The remaining three hours of writing coursework can be satisfied by a fourth CW workshop outside of the mandatory sequence or any of the following writing courses: ENGL 401, 402, 403, and 481; BTW 250, 261, and 271; CMN 310, 423, and 432; JOUR 475; and THEA 211

ENGL 418 or ENGL 218	Shakespeare Introduction to Shakespeare	3
----------------------	---	---

Literature Coursework:

6 hours of English or American literature coursework chosen from approved list.	6
---	---

Supporting coursework

History and Culture Coursework: Choose one of the following pairs:	6
--	---

CWL 241 & CWL 242	Early Masterpieces of Western Culture and Modern Masterpieces of Western Culture	
-------------------	--	--

HIST 141 & HIST 142	Western Civ to 1660 and Western Civ Since 1660	
---------------------	--	--

HIST 171 & HIST 172	US Hist to 1877 and US Hist Since 1877	
---------------------	--	--

HIST 255 & HIST 256	British Isles to 1688 and Britain and World Since 1688	
---------------------	--	--

Total Hours	36
-------------	----

¹ Credit is not given for both RHET 233 and CW 243. Students who have taken RHET 233 prior to declaring the CW major must take CW 208 instead of CW 243 to complete this requirement. Students who take CW 208 for their Expository Writing requirement cannot count CW 208 toward the required 12 hours of Creative Writing coursework.

CW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CW/>)

Courses

CW 100 Intro to Creative Writing credit: 3 Hours.

Acquaint students with the technical choices a writer makes in creating a story or a poem. Mondays are given to lectures on specific elements of poetry and fiction. Wednesdays are dedicated to readings by faculty and visiting writers. Fridays allow students the opportunity to work in small group discussion sections applying the week's techniques and skills to a close reading of stories and poems.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

CW 104 Introductory Narrative Writing credit: 3 Hours.

Practice in the writing of narrative prose, with primary emphasis on short fiction. Prerequisite: Completion of campus Composition I general education requirement.

CW 106 Introductory Poetry Writing credit: 3 Hours.

Practice in the writing of poetry; experimentation with a number of fixed forms and free verse, but emphasis mainly on the student's freedom to develop a personal style. Prerequisite: Completion of campus Composition I general education requirement.

CW 200 Reading for Writers credit: 3 Hours.

Emphasizes the craft of short stories and poems through the study of formal elements central to the production of creative writing (e.g., plot, character, setting, point of view in short fiction and rhythm, meter, line break, imagery, simile, metaphor, formal patterns in poetry). Prerequisite: CW 104 or CW 106. For majors only.

CW 202 Topics in Creative Writing credit: 3 Hours.

Independent writing projects and examination of literature as the cultural basis of the student's specialized fields. May be repeated as topics vary.

CW 204 Intermediate Narrative Writing credit: 3 Hours.

Practice in the writing of fiction, with emphasis on the short story. Prerequisite: CW 104 or equivalent.

CW 206 Intermediate Poetry Writing credit: 3 Hours.

Builds upon the workshop format of CW 106, with an emphasis on prosody and poetic technique. Students will deepen their sense of craft by putting into practice their study and understanding of a variety of poetic forms (e.g., syllabic poetry, dramatic monologue, sonnet, bound/free verse) and technical concerns (e.g., voice, tone, line, line break, image). The workshop component of the course typically includes 8-12 completed poems and their revisions. Prerequisite: CW 106.

CW 208 Creative Nonfiction Writing credit: 3 Hours.

Types of nonfiction prose, including the personal essay, memoir, literary journalism, and historical writing. Prerequisite: RHET 233 or CW 243, or equivalent, or consent of instructor.

CW 243 Inter Expository Writing credit: 3 Hours.

Practice in expository types, with emphasis on style and critical analysis. Restricted to Creative Writing majors. Credit is not given for CW 243 and either RHET 243 or RHET 233. Prerequisite: Completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for: Advanced Composition

CW 404 Advanced Narrative Writing credit: 3 or 4 Hours.

Continued practice in the writing of fiction, with emphasis on the longer story. 3 undergraduate hours. 4 graduate hours. May be repeated for a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 204 or equivalent.

CW 406 Advanced Poetry Writing credit: 3 or 4 Hours.

Practice of the writing of poetry aided by intensive study of examples. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 206 or equivalent.

CW 455 Creative Writing Tutorial credit: 3 or 4 Hours.

Personal direction in a writing project: fiction (novel or short stories), poetry or creative nonfiction. Frequency of conference to be determined by the type of project. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 208, CW 404 or CW 406, and consent of the Director of Creative Writing.

CW 460 Intro to Literary Editing credit: 3 Hours.

Practicum in which students learn all the stages of developing and editing a literary publication. Students will solicit, read, and select poems and stories for an online supplement to the Ninth Letter literary journal. At the end of the semester, the supplement will be published on the Ninth Letter website (www.ninthletter.com). Students will gain experience in professional communications, copyediting, and marketing. 3 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 6 hours. Prerequisite: CW 104 or CW 106.

CW 463 Adv Topics in Creative Writing credit: 3 or 4 Hours.

Advanced topics course in Creative Writing. Students study selected topic through a workshop model, pursuing advanced development in one or more approaches to writing in a specialized field or genre. 3 undergraduate hours. 4 graduate hours. May be repeated, if topics vary. Prerequisite: Junior standing required.

English Concentration

E-mail: englishadvising@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting course work equates to 42 hours including a minimum of 36 hours of English Department courses. Students must complete at least 15 hours of coursework at the 300-level or above (ENGL 300, ENGL 301, and 9 more hours). Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Departmental Distinction: Students interested in graduating with distinction or high distinction are encouraged to consult the departmental honors adviser. In addition, students interested in the departmental honors program should contact the English department advising office.

Topical Streams: Course descriptions are tagged to indicate the topical streams each course is a part of. These streams are not part of any requirement; the streams exist to help student guide themselves through the major. To learn more about topical streams you may be interested in studying, visit www.english.illinois.edu/undergraduate/streams.html (<http://www.english.illinois.edu/undergraduate/streams.html>).

Code	Title	Hours
Introduction to the Study of Literature, Text, and Culture		
ENGL 200	Intro to the Study of Lit (prerequisite for other English courses; can be taken at the same time as a course that satisfies the Composition I requirement) ¹	3
ENGL 209	British Lit to 1800	3
ENGL 255	Survey of American Lit I	3
Textual Analysis in Action		
ENGL 301	Critical Approaches to Lit&Text	3
ENGL 300	Writing About Lit Text&Culture (fulfills the university's Advanced Composition requirement)	3

Period Courses (American, British, transatlantic, anglophone, etc.)²

At least two courses focused on literature, text, and/or culture in two or more of the following categories:

Medieval (before 1550)

Shakespeare

Early modern (1550-1660 other than Shakespeare)

The long eighteenth century (1600-1800)

One course focused on literature, text and/or culture in the category 1800-1900 **3**

Additional Coursework^{2,3}

At least four courses chosen from those controlled by or crosslisted with the Department of English (Business and Technical Writing, Creative Writing, and English). **12**

One course must focus on race/ethnicity/indigeneity/post-coloniality/sexuality. This course can be used to fulfill part of the Textual Analysis, Period Courses, or Additional Coursework requirements.²

Supporting Coursework--History and Culture Coursework: Choose one of the following pairs: **6**

CWL 241 & CWL 242 Early Masterpieces of Western Culture and Modern Masterpieces of Western Culture

HIST 141 & HIST 142 Western Civ to 1660 and Western Civ Since 1660

HIST 171 & HIST 172 US Hist to 1877 and US Hist Since 1877

HIST 255 & HIST 256 British Isles to 1688 and Britain and World Since 1688

Total Hours **42**

¹ Students are encouraged to take ENGL 209 and ENGL 255 as early as possible after completing ENGL 200.

² Chosen from the list maintained in the Department of English.

³ Student may count 1 Independent Study course (ENGL 290, ENGL 390 or BTW 290) toward the additional coursework requirement.

⁴ Students must complete at least 15 hours of coursework at the 300-level or above (ENGL 300, ENGL 301, and 9 more hours.)

English Teaching Concentration

<http://english.illinois.edu>

E-mail: englishadvising@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required concentration and supporting course work normally equates to 81 hours: 42 hours in the English concentration and 39 hours of courses from the Teaching Education Minor in Secondary School Teaching.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

General education: Students must complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

This concentration fulfills state certification requirements to teach high school (grades 9-12) English Language Arts through the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching. See the College of Education section for requirements of the minor (39 hours) (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters, with some students requiring 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental Distinction: Students interested in graduating with distinction or high distinction are encouraged to consult the departmental honors adviser.

Topical Streams: Course descriptions are tagged to indicate the topical streams each course is a part of. These streams are not part of any requirement; the streams exist to help student guide themselves through the concentration. To learn more about topical streams you may be interested in studying, visit www.english.illinois.edu/undergraduate/streams.html (<http://www.english.illinois.edu/undergraduate/streams.html>).

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
Introduction to the Study of Literature, Text, and Culture		
ENGL 200	Intro to the Study of Lit (prerequisite for other English courses; can be taken at the same time as a course that satisfies the Composition I requirement) ¹	3
ENGL 209	British Lit to 1800	3
ENGL 255	Survey of American Lit I	3
ENGL 301	Critical Approaches to Lit&Text	3
At least one course from one of the following periods: ENGL Medieval; ENGL Early Modern; ENGL long eighteenth century; ENGL Shakespeare; ENGL 1800-1900; R.E.P.C.I.S. (race/ethnicity/indigeneity/post-coloniality/sexuality)		
Additional required coursework		
Teacher Education Minor in Secondary School Teaching (p. 139)		39
ENGL 300	Writing About Lit Text&Culture (fulfills the university's Advanced Composition requirement)	3
Period Courses (American, British, transatlantic, Anglophone, etc.)²		
Shakespeare		3
A course focused on literature, text, and /or culture in one of the following categories:		3

Medieval (before 1550)		
Early modern (1550-1660 other than Shakespeare)		
The long eighteenth century (1600-1800)		
One course focused on literature, text, and/or culture in the category 1800-1900		3
Language and Composition Courses		
ENGL 402	Descriptive English Grammar	3
ENGL 481	Comp Theory and Practice	3
Select one of the following:		3
ENGL 310	Introduction to the Study of the English Language	
ENGL 311	History of the English Language	
ENGL 380	Topics in Writing Studies	
ENGL 482	Writing Technologies	
BTW 490	Special Topics Prof Writing	
Additional English Coursework^{2,3}		
One course offered by the Department of English (Business and Technical Writing, Creative Writing, or English).		3
One course must focus on race/ethnicity/indigeneity/post-coloniality/sexuality. This course can be used to fulfill part of the Textual Analysis, Period Courses, or Additional Coursework requirements. ²		
Supporting Coursework		
History and Culture Coursework: Choose one of the following pairs:		6
CWL 241 & CWL 242	Early Masterpieces of Western Culture and Modern Masterpieces of Western Culture	
HIST 141 & HIST 142	Western Civ to 1660 and Western Civ Since 1660	
HIST 171 & HIST 172	US Hist to 1877 and US Hist Since 1877	
HIST 255 & HIST 256	British Isles to 1688 and Britain and World Since 1688	
Total Hours		81

¹ Students are encouraged to take ENGL 209 and ENGL 255 as early as possible after completing ENGL 200.

² Chosen from the list maintained in the Department of English.

³ Student may count 1 Independent Study course (ENGL 290, ENGL 390 or BTW 290) toward the additional English coursework requirement.

Creative Writing Minor

The Creative Writing minor, administered by the Department of English's Creative Writing Program, is designed to augment majors from all over campus with a program of small workshops (poetry or fiction) and a variety of other writing, literature, and film courses. The result should be the development of a range of analytical and creative skills that will enrich the undergraduate experience and help prepare students for work in any number of fields.

Code	Title	Hours
CW 100	Intro to Creative Writing	3
Creative Writing Coursework		9
Students complete 9 hours of creative writing coursework by choosing one of the following 3-course (9-hour) sequences:		

CW 106	Introductory Poetry Writing	
CW 206	Intermediate Poetry Writing	
CW 406	Advanced Poetry Writing	
OR		
CW 104	Introductory Narrative Writing	
CW 204	Intermediate Narrative Writing	
CW 404	Advanced Narrative Writing	
Approved Electives		6
Students complete 6 hours of coursework in any of the following areas (a minimum of 3 hours must be at the advanced 300 /400 level):		
Any ENGL or CW course		
CMN 310	The Rhetorical Tradition	
CMN 423	Rhetorical Criticism	
JOUR 475	Magazine Writing	
THEA 211	Introduction to Playwriting	
IS 409	Storytelling	
Total Hours		18

Minor in English

E-mail: englishadvising@illinois.edu

Web address for department: www.english.illinois.edu (<http://www.english.illinois.edu>)

Code	Title	Hours
ENGL 200	Intro to the Study of Lit	3
ENGL 301	Critical Approaches to Lit&Text	3
One 200-level course in British literature before 1800		3
One 200-level course in British or American literature after 1800		3
Two additional 300- or 400-level courses in English		6
One English or Creative Writing course selected in consultation with an English Department advisor		3
Total Hours		21

Foreign Language Teaching Curricula Preparatory to Teach Foreign Languages

The College of Liberal Arts and Sciences offers curricula for the preparation of teachers of French (p. 415), German (p. 444), Latin (p. 373), and Spanish (p. 575) and concentrations in East Asian Languages and Cultures for the teaching of Japanese and Mandarin Chinese (p. 393).

Illinois law and Council on Teacher Education policy require that all candidates for admission to a teacher preparation program pass the Illinois Certification Testing System test of Basic Skills prior to admission. Illinois law and Council on Teacher Education policy require that all candidates for certification in Modern Languages pass an oral proficiency test in their content major language prior to student teaching.

A student must have at least 2.5 (A+ = 4.0) cumulative and University of Illinois grade point averages to remain in the teaching option. A student must also maintain at least a 2.5 grade point average in all attempts at

content area and pedagogy courses taken at the University of Illinois in order to remain in the teaching option.

E-mail: flte@illinois.edu

Prerequisite to application to the Teaching Option

GPA or 2.5 in all content courses in the intended majors of French, German, Latin, Spanish, and East Asian Languages and Cultures (Chinese and Japanese); completion of or concurrent enrollment in FLTE 471 and three courses at the 200-level or higher in the intended language. Completion of Basic Skills Test.

General Education Requirements: Students in the Foreign Language Teaching Curricula of French, German, Latin, Spanish and in the East Asian Languages and Cultures Concentration Preparatory for the Teaching of East Asian Languages will be expected to complete the Campus General Education (<https://courses.illinois.edu>) requirements (including the campus general education language requirement) as well as the following specific programmatic requirements:

- Communication: RHET 105 or 108 and CMN 101 or a speech performance elective, and one course approved by the university as satisfying the Composition II requirement. Alternatively, students may complete CMN 111 and 112 and one course satisfying the Composition II requirement. NOTE: Some departments specify particular courses within their major to satisfy the Composition II requirement.
- American History: One course (LAS Historical and Philosophical Perspectives Category)
- American Government: One course (LAS Social Sciences Category)
- Literature and the Arts: One course chosen from the LAS Literature and the Arts Category that is outside the student's major area.
- A course in health and physical development is recommended.

Code	Title	Hours
FLTE 471	Introduction to Second Language Teaching	4
FLTE 475	Learning to Teach World Language	4
FLTE 478	Secondary World Language Teaching ¹	4
EPS 201	Foundations of Education	3
EPSY 201	Educational Psychology	3
SPED 405	Gen Educator's Role in SPED	3
EDPR 442	Educational Practice in Secondary Education	8
Total Hours		29

¹ In the fall semester, students enroll for 3 hours with instruction occurring in the first 10 weeks. In the spring semester, students enroll for 1 hour with instruction occurring in the first 4 weeks.

French and Italian

Robert Rushing

2090 Foreign Languages Building, 707 South Mathews Avenue, Urbana
PH: (217) 333-2020

<http://www.frit.illinois.edu>

french-italian@illinois.edu

The Department offers three majors: French, Italian and Teaching of French; two minors: French and Italian; and a 5-year BA/MA in French or Italian and European Union Studies.

The **BALAS in French** allows students to specialize in one of the following concentrations:

The French Studies concentration focuses on courses in language, literature, culture, film, and linguistics.

The Commercial French Studies concentration combines a focus on French language and culture with appropriate courses in business.

The **BALAS in Italian** allows students to study Italian language, literature, film, linguistics, and cultural studies.

The **B.A. in the Teaching of French** prepares students to teach French.

Study Abroad opportunities enhance the undergraduate education in French and Italian.

The **minors in French and Italian** offer a unique opportunity for students to enhance their education with the study of French or Italian language and culture.

5 Year BALAS/MA in French and European Union Studies allows students to receive two degrees, a BALAS in French and an MA in European Union Studies.

5 Year BALAS/MA in Italian and European Union Studies allows students to receive two degrees, a BALAS in Italian and an MA in European Union Studies.

French

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Select a concentration in consultation with your adviser.

- French Studies Concentration (p. 416)
- French Commercial Studies Concentration (p. 416)

For the Degree of Bachelor of Arts in the Teaching of French

- Curriculum Preparatory to the Teaching of French (p. 415)

Italian

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

- Italian (p. 417)

5 Year BALAS /MA in French or Italian and European Union Studies

The Department of French and Italian with the European Union Center offers a 5-year BALAS/MA degree program in French or Italian and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS-granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the stand-alone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; the BALAS and MA degrees will be

conferred separately and independently. More detailed information may be obtained from department and EUC offices.

Minor in French (p. 417)

Minor in Italian (p. 417)

FR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FR>)

French Courses

FR 101 Elementary French I credit: 4 Hours.

Four-skill course leading toward elementary proficiency in oral expression, listening comprehension, reading, writing, and cultural understanding. Online language laboratory and internet assignments required.

FR 102 Elementary French II credit: 4 Hours.

Continuation of FR 101. Introduces cultural and supplementary enrichment materials; requires online laboratory sessions as in FR 101. Prerequisite: FR 101 or one year of high school French.

FR 103 Intermediate French I credit: 4 Hours.

Continuation of FR 102. Introduces students to a full range of structures to complete their initial study of the grammatical system; emphasizes the development of all four skills and cultural understanding through readings and audiovisual enrichment materials. Online language laboratory and internet assignments required. Students planning to major or minor in French should take FR 133 in lieu of FR 103. Prerequisite: FR 102 or equivalent, or a placement score showing high school achievement equivalent to FR 102.

FR 104 Intermediate French II credit: 4 Hours.

Continuation of FR 103. Comprehensive grammar review with emphasis on oral expression and the continued development of reading and written skills. Completion satisfies graduation requirement in the College of Liberal Arts and Sciences. Students planning to take advanced French courses should take FR 134 in lieu of FR 104. Prerequisite: FR 103 or equivalent, or a placement score showing high school achievement equivalent to FR 103.

FR 133 Accel Intermediate French I credit: 4 Hours.

Similar to FR 103, but accelerated for those interested in pursuing French in advanced courses; includes comprehensive grammar review and readings in literature and culture. Prerequisite: FR 102, or two semesters of college French, or a placement score showing high school achievement equivalent to FR 102. Normally for students with a "B" average in French or with consent of instructor.

FR 134 Accel Intermed French II credit: 4 Hours.

Continuation of FR 133. Comprehensive grammar review and readings in French literature and culture preparatory for continued work at the advanced level; emphasizes all four skills and culture. Prerequisite: FR 133, or FR 103 with department approval, or three semesters of college French, or a placement score showing high school achievement equivalent to FR 103.

FR 156 Exploring Paris credit: 3 Hours.

Examines the role of Paris in French culture through literature, art, and film. We will consider the city of Paris from its earliest beginnings to the modern era, as a physical, social, and symbolic reality. Through literature, art, and film we will explore the ways in which Paris is at the center of French political and intellectual life. Additionally, close attention will be paid to historical and political developments and their representation. All readings are in English and the course is conducted in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

FR 179 Migration & Fr Nat ID credit: 3 Hours.

Studies books and films that emphasize cultural difference and the complexities of the post-colonial world, focusing on the impact of migration and cultural interaction on contemporary France. Stresses themes of immigration and exile, tensions between relations of domination and exploitation and between colonizing and colonized peoples, and the cultural pluralities of community and nation.

FR 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

FR 195 French Intellectual Tradition credit: 3 Hours.

Close reading and in-depth discussion of texts by major French intellectuals from the sixteenth to the mid-twentieth century. Aims to explore the centrality of epistemology (How can we know? Can we know that which we know is true? How can we reason in the face of evil?) in selected texts that will be discussed within their historical contexts, investigating why these issues were raised then and how their contemporaries might have responded to them, as well as their relationship to issues still debated in the twenty-first century. Taught in English.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

FR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. May be repeated.

FR 205 Oral French credit: 2 Hours.

Developing oral facility and aural comprehension, focusing on everyday events. Prerequisite: FR 104 or FR 134 or equivalent.

FR 207 Writing and Grammar Workshop credit: 3 Hours.

Practice-intensive grammar review and vocabulary-building, with an emphasis on strategies to improve accuracy of, and expressivity in, speaking and writing in French. Grammar textbook supplemented with readings and materials from French and Francophone culture (articles, social media, literary works, films). Prerequisite: Four years of high school French or equivalent, or FR 134 or, with departmental approval, FR 104.

FR 208 Critical Writing and Reading credit: 3 Hours.

Intensive practice of writing and reading skills in French, emphasizing vocabulary and critical concepts important to analyzing literary and cultural texts. Prerequisite: FR 207 or equivalent must be taken prior to this course.

FR 211 Introduction to Literary Studies credit: 3 Hours.

Introduction to concepts of modernity and questions of representation, through French texts from the nineteenth through the twenty-first centuries. Analysis of diverse literary forms (poems, plays, narratives), and use of resources for literary, historical and cultural research. Strengthening of reading, writing and speaking skills in French through research projects, writing assignments and revisions, and oral presentations. Prerequisite: FR 207 or equivalent.

FR 212 Introduction to Cultural Analysis: French Identities credit: 3 Hours.

Introduction to concepts of and debates on French national identity. Materials are drawn from a multiplicity of media and from many spheres of modern life in France: political, artistic, the everyday, etc. Identification of major resources for the study of culture and analysis of diverse cultural texts. Strengthening of reading, writing and speaking skills in French through a wide range of exercises and projects. Prerequisite: FR 207.

FR 213 French Phonetics credit: 2 Hours.

Practical introduction to French phonetics, stressing pronunciation. Prerequisite: FR 104 or FR 134 or equivalent.

FR 240 Constr Afr and Carib Identity credit: 3 Hours.

Introduces students to cultural pluralism by comparing and contrasting African and Caribbean identities, as they are represented in literature and film. Taught in English. Same as AFST 209, CWL 225, and LAST 240. Credit is not given towards the major or minor in French. This course satisfies the General Education Criteria for: Cultural Studies - Non-West

FR 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in French language, literature, civilization, and in other academic areas appropriate to the student's course of study. Approved for both letter and S/U grading. May be repeated in the same term to a maximum of 18 hours; may be repeated in separate terms to a maximum of 36 hours; may be repeated in a summer session to a maximum of 8 hours. Maximum of 34 hours per academic year. Prerequisite: FR 209 and two of the following: FR 205, or 207; 2.75 overall average; 3.0 average in French courses.

FR 301 Medieval and Early Modern Literature credit: 3 Hours.

Overview of French literature from the Middle Ages to the Revolution in its historical context. Taught in French. Credit is not given for FR 209 and FR 301. Prerequisite: FR 211 and FR 212.

FR 309 Poetry credit: 3 Hours.

The study of major movements and figures in French poetry. Traditions and innovations. Poetic genres. Introduction to versification and metrics. Close readings of individual poems. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 311 Narrative Literature credit: 3 Hours.

Reading and interpretation of selected French novels and short narratives from all periods. History and analysis of narrative literature as a genre. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 312 Theater and Performance credit: 3 Hours.

Reading and interpretation of plays and other performative genres, with attention to historical development and critical analysis. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 314 Advanced Grammar in Context credit: 3 Hours.

Advanced practical study of present-day French, with an emphasis on grammar, free composition and a consideration of various cultural contexts of language use. Credit is not given for FR 314 and FR 414. Prerequisite: FR 207.

FR 319 Introduction to Francophone Literature credit: 3 Hours.

Examination of selected major novels from the French-speaking world outside France along thematic and formal lines; literary responses to colonialism, political independence and departmentalization in a variety of former (and current) French territories; study of critical approaches to narrative and related issues of individual and communal identity and culture. Same as CWL 317. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 322 Movements and Perspectives credit: 3 Hours.

Focused study and discussion of a major literary movement or critical perspective. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 323 Major Literary Figures credit: 3 Hours.

Presents the works of one or several major figures of French or francophone literary traditions in their cultural contexts. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 324 Literature and the Other Arts credit: 3 Hours.

Explores relationships between French literature and such fields as art, architecture, and music. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 335 French Cultural History to 1789 credit: 3 Hours.

Survey of French cultural history from the Middle Ages to the French Revolution. Taught in French. Credit is not given for FR 335 and FR 435. Prerequisite: FR 211 and FR 212.

FR 336 French Cultural History 1789-1968 credit: 3 Hours.

Survey of French cultural history from the French Revolution to 1968. Taught in French. Credit is not given for FR 336 and FR 436. Prerequisite: FR 211 and FR 212.

FR 337 Contemporary France credit: 3 Hours.

Overview of major cultural, social, and political issues and debates in late 20th- and 21st-century France. Topics may include: political life; definitions of the French Republic; the government and social policies; evolving views on sexuality, gender and the family; France and the European Union; professional life and labor laws; immigration; the cultural identity of France; new media. Some readings in English. Class discussion and written work in French. Prerequisite: FR 207, FR 211, FR 212.

FR 385 Politics of the European Union credit: 3 Hours.

Same as EURO 385, GER 385, and PS 385. See PS 385.

FR 387 French & Comparative Cinema I credit: 3 Hours.

The art, techniques, sociology, politics of French cinema in the context of French culture, world history, and general film development from 1895 to approximately 1950. Selected trends studied through films from several countries with stress on major French filmmakers including Lumiere, Melies, Gance, Clair, Vigo, Renoir, Carne, Cocteau, Prevert, Clouzot. Knowledge of French not required. Same as CWL 387, HUM 387, and MACS 382. Credit is not given for both FR 387 and FR 488.

FR 389 French & Comparative Cinema II credit: 3 Hours.

The art, techniques, sociology, politics of French cinema in the context of French culture, world history, and general film development from approximately 1950 to the present. Selected trends studied through films from several countries with stress on major French filmmakers such as Clouzot, Bresson, Chabrol, Resnais, Godard, Truffaut, Varda, Marker, Rohmer, Beineix, Kassovitz, and Assayas. Knowledge of French not required. Same as CWL 389, HUM 389, and MACS 383. Credit is not given for both FR 389 and FR 489. Prerequisite: One college-level Media or Media and Cinema Studies course or consent of instructor.

FR 390 Indiv Study Major Tutorial credit: 1 to 12 Hours.

Tutorial taken by students during two of their last four terms of undergraduate study. Students read the works on a departmental reading list with the guidance of a tutor. Approved for letter and S/U grading. May be repeated to a maximum of 12 hours. Prerequisite: FR 205, FR 207, FR 209, and FR 210, or equivalent; a declared major in French; junior standing.

FR 410 Modern African Fiction credit: 3 or 4 Hours.

Same as AFST 410, CWL 410, and ENGL 470. See AFST 410.

FR 413 French Phonetics and Phonology credit: 3 Hours.

Introduction to theoretical aspects of French phonetics and phonology, research methods, and pronunciation exercises on speaking styles in French. 3 undergraduate hours. 3 graduate hours. Prerequisite: FR 213 or equivalent.

FR 416 Structure of French Language credit: 3 Hours.

General survey of the linguistic structure of modern standard French, including phonology, morphology, and syntax; emphasis on the differences between its spoken and written forms. Same as LING 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: FR 413 or equivalent training in phonetics.

FR 417 History of the French Language credit: 3 or 4 Hours.

Introduction to the historical development of the French language, from its Latin origins to the present. Analysis of texts from a variety of genres across the written history of the language, and an examination of the social role of the language in the definition of France. Same as MDVL 417. 3 undergraduate hours. 4 graduate hours. Prerequisite: FR 314.

FR 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Introduction to political, judicial, linguistic, and cultural issues concerning indigenous and migrant/immigrant languages in the countries of the European Union. Focuses on political and judicial issues, such as legal aspects of bilingual education and minority language use, as well as linguistic and cultural aspects, such as assimilation, language-mixing, and language change. Taught in English. Same as GER 418, ITAL 418, LING 418, PS 418, SLAV 418, and SPAN 418. 3 undergraduate hours. 4 graduate hours.

FR 419 Techniques in Translation I credit: 2 or 3 Hours.

Practical course in the techniques of translating technical, commercial, scientific, and literary texts from English into French and vice versa. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 314 or consent of instructor.

FR 421 Techniques in Translation II credit: 2 or 3 Hours.

Continuation of FR 419. Practical exercises in translating from French to English and vice versa in a variety of texts, along with an introduction to theoretical aspects of translation. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 419 or consent of instructor.

FR 443 Studies in French credit: 3 to 4 Hours.

See Schedule for current topics. 3 undergraduate hours. 3 to 4 graduate hours. May be repeated in the same or separate terms to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: Junior standing.

FR 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, GER 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

FR 462 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as ITAL 435, LING 462, PORT 435, RMLG 435, and SPAN 435. See SPAN 435.

FR 479 Studies in Francophonie credit: 3 or 4 Hours.

Study of various topics in French language, literature, and culture outside of France. Regions may include francophone Africa, the Americas, Europe, and the Middle East. Same as CWL 434. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 12 undergraduate hours or 16 graduate hours if topics vary.

FR 481 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as GER 489, ITAL 489, LING 489, PORT 489, and SPAN 489. See LING 489.

FR 485 Commercial & Econ French I credit: 2 or 3 Hours.

Studies French business practices: company structures, selling and buying techniques, banking, import/export and other commercial negotiations, employment, formalities, and conventions of letter-writing; involves both theory and practice. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 314 or equivalent, or consent of instructor.

FR 486 Commercial & Econ French II credit: 2 or 3 Hours.

Emphasizes business correspondence and simulation of business practices in the areas introduced in FR 485; also focuses on geographic and economic topics pertaining to France within the European community and Europe in general. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 485 or equivalent, or consent of instructor.

FR 492 Senior Thesis credit: 2 Hours.

For candidates for honors in French and for other seniors. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing.

FR 498 Senior Seminar credit: 3 Hours.

Studies in authors, genres, themes, and movements in French literature; conducted entirely in French. 3 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Senior standing.

ITAL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ITAL>)

Italian Courses

ITAL 101 Elementary Italian I credit: 4 Hours.

For students who have no credit in Italian.

ITAL 102 Elementary Italian II credit: 4 Hours.

Continuation of ITAL 101. Prerequisite: ITAL 101 or one year of high school Italian.

ITAL 103 Intermediate Italian I credit: 4 Hours.

Rapid reading, review of grammar, composition, and conversation. Prerequisite: ITAL 102 or two years of high school Italian.

ITAL 104 Intermediate Italian II credit: 4 Hours.

Continuation of ITAL 103. Prerequisite: ITAL 103 or three years of high school Italian.

ITAL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time to a maximum of 6 hours. Prerequisite: Consent of departmental honors adviser in Italian.

ITAL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 5 hours.

ITAL 200 Italian Studies in a Mediterranean Context credit: 3 Hours.

Introduces students to the study of Italy and Italian culture, emphasizing Italy's central position in Mediterranean networks of cultural, economic and linguistic exchange. Prerequisite: ITAL 104 or consent of instructor.

ITAL 210 Practical Review Italian credit: 3 Hours.

Reviews major challenges in Italian grammar, with particular emphasis on the verb system (major tenses and moods, morphology, and aspect) and areas of contrast with English. Prerequisite: Credit or concurrent enrollment in ITAL 104 or equivalent.

ITAL 220 Contemporary Italian, Oral and Written credit: 3 Hours.

Training in oral-aural skill and in writing.

ITAL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

The development of Medieval Italian civilization in a literary context from the Sicilian School of love poetry to the early Renaissance in Florence; lectures and readings are in English. Same as CWL 240 and MDVL 240. This course satisfies the General Education Criteria for: Humanities - Lit Arts

ITAL 270 Introduction to Italian Cinema credit: 3 Hours.

Introduction to major films, movements and directors in the Italian tradition, paying particular attention to questions of national identity, gender and political and social history. Knowledge of Italian not required. This course satisfies the General Education Criteria for: Humanities - Lit Arts

ITAL 310 Advanced Grammar credit: 3 Hours.

Study of the structure of modern Italian in both its phonological and syntactic aspects for the student who already has a functional command of the language, with an emphasis on developing ability to analyze and interpret grammatical structures. Prerequisite: ITAL 210 or consent of instructor.

ITAL 380 Ital Business & Profess credit: 3 Hours.

Builds preexisting language skills through the study of Italian business practices: financial systems, transactions, banking, import/export and commercial correspondence. Prerequisite: ITAL 210 or equivalent.

ITAL 390 Spec Topics Italian Studies credit: 2 to 4 Hours.

Selected substantive readings for independent study on a given special topic of Italian literature, culture, language, or linguistics. May be repeated. Prerequisite: ITAL 104 and consent of instructor.

ITAL 406 Italian Culture and Globalization credit: 3 or 4 Hours.

Introduction to factors that have shaped present-day Italy, with particular attention to globalization; basic concepts contributing to understanding its present social and cultural development in a European and global context; taught in Italian. 3 undergraduate hours. 4 graduate hours. Prerequisite: ITAL 200 or ITAL 220, or consent of instructor.

ITAL 413 Dante credit: 3 or 4 Hours.

Interpretation of Dante's Divine Comedy with special attention to its position in the medieval world; a knowledge of Italian not required. Same as CWL 413 and MDVL 413. 3 undergraduate hours. 4 graduate hours.

ITAL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.

Studies in Petrarch and Boccaccio; nonmajors in Italian may read the works in translation; lectures are in English. Same as CWL 414 and MDVL 414. 3 undergraduate hours. 4 graduate hours. Prerequisite: Fulfillment of campus rhetoric requirement.

ITAL 415 Europe and the Mediterranean credit: 3 or 4 Hours.

Same as EURO 415 and PS 415. See EURO 415.

ITAL 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, LING 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

ITAL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.

Reading of masterpieces of the 1400 and 1500s and a study of their predecessors and influence; nonconcentrators in Italian may read the works in translation; lectures are in English. Content rotates. Same as CWL 420 and MDVL 420. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours with consent of instructor. Prerequisite: Fulfillment of campus rhetoric requirement.

ITAL 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, LING 462, PORT 435, RMLG 435 and SPAN 435. See SPAN 435.

ITAL 440 Modern Italian Novel credit: 3 or 4 Hours.

An in-depth examination of a particular writer, genre, form or period in modern Italian literature (such as Italo Calvino, Italian detective fiction, or the contemporary Italian novel). See online schedule for specific topic. 3 undergraduate hours. 4 graduate hours. Prerequisite: ITAL 200 or consent of instructor.

ITAL 450 Italian Syntax & Phonology credit: 3 Hours.

Introduction to the essential syntactic and phonological structures of Modern Standard Italian in combination with appropriate discussion of corresponding linguistic concepts. 3 undergraduate hours. 3 graduate hours. Prerequisite: ITAL 310 or consent of instructor.

ITAL 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

ITAL 470 Topics in Italian Cinema credit: 3 or 4 Hours.

An in-depth examination of a particular director, genre or school from the Italian cinematic tradition (e.g., Fellini, Italian horror, or neorealism); topic will vary each semester. No knowledge of Italian is required. Same as MACS 470. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours.

ITAL 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, LING 489, PORT 489, and SPAN 489. See LING 489.

ITAL 490 Italian Critical Theory credit: 3 or 4 Hours.

An advanced introduction to the critical theory of major Italian thinkers and philosophers (e.g., Gramsci, Negri, Agamben, Esposito). 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: At least two 200-level courses in Italian, or consent of instructor.

ITAL 491 Honors Senior Thesis credit: 2 Hours.

For candidates for honors in Italian. No graduate credit. May be repeated.

Curriculum Preparatory to the Teaching of French

In order to remain in good standing in this program and be recommended for licensure, candidates are required to maintain UIUC, cumulative,

content area, and professional education grade-point averages of 2.5 (A=4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

E-mail: french-italian@illinois.edu

Web address for department: www.frit.illinois.edu (<http://www.frit.illinois.edu>)

Degree title: Bachelor of Arts in the Teaching of French

Minimum required course work normally equates to 37 hours of French courses and 29 hours of professional education courses. The required coursework could be 16 additional hours, respectively, if the student does not already have the equivalent of French 101-102-133-134. NOTE: FR 299 is strongly recommended.

General education: Consult the Curricula Preparatory to Teaching Foreign Languages (p. 410).

Minimum hours required for graduation: 120 hours.

Departmental distinction: A student must have a minimum 3.5 cumulative grade point average, including a 'Satisfactory' in the teaching practicum; complete two additional advanced-level courses in French or the teaching minor; complete FR 492, and provide two letters of recommendation as evidence of exceptional teaching potential. Consult the teacher education adviser for details.

Code	Title	Hours
FR 207	Writing and Grammar Workshop	3
FR 211	Introduction to Literary Studies	3
FR 212	Introduction to Cultural Analysis: French Identities	3

Language Courses

FR 205	Oral French	2
FR 213	French Phonetics	2
FR 314	Advanced Grammar in Context	3

Culture Courses

Choose two of the following:		6
FR 335	French Cultural History to 1789	
FR 336	French Cultural History 1789-1968	
FR 337	Contemporary France	

Literature Courses

Two courses at the 300- or 400-level in French and/or Francophone literature	6
--	---

Medieval and Early Modern Period course

Students must take one course focused on the medieval/early modern period. This course can be used to fulfill the Culture or Literature Courses requirement.

FR 301	Medieval and Early Modern Literature	
or FR 335	French Cultural History to 1789	

Electives

Three French courses at the 300- or 400-level in any of the following areas: Language and translation, business, cinema, culture, linguistics, literature, media.	9
---	---

Professional education courses. (See Foreign Languages-Curricula Preparatory to Teaching Foreign Languages.) (p. 410)	29
Total Hours	66

French Commercial Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Email: french-italian@illinois.edu

Minimum required major and supporting course work normally equates to 34 hours beyond the 100-level

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: A student must have at least a 3.45 LAS cumulative grade point average, complete a senior thesis FR 492, and complete two additional advanced-level courses in French or in supporting course work. Consult the honors adviser for details.

Code	Title	Hours
FR 205	Oral French	2
FR 207	Writing and Grammar Workshop	3
FR 211	Introduction to Literary Studies	3
FR 212	Introduction to Cultural Analysis: French Identities	3
FR 213	French Phonetics	2
FR 314	Advanced Grammar in Context	3
FR 419	Techniques in Translation I	3
FR 485	Commercial & Econ French I	3

Four courses at the 300- or 400- level (3 of 4 of the electives must be taken in French) in any of the following: French language and translation, business, cinema, culture, linguistics, literature, media.

Approved supporting course work in business administration, finance, and/or economics selected in consultation with the concentration adviser.

Total hours 49

French Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Email: french-italian@illinois.edu

Minimum required major course work normally equates to 37 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: A student must have at least a 3.45 LAS cumulative grade point average, complete a senior thesis FR 492, and complete two additional advanced-level courses in French or in supporting course work. Consult the honors adviser for details.

Code	Title	Hours
FR 207	Writing and Grammar Workshop	3
FR 211	Introduction to Literary Studies	3
FR 212	Introduction to Cultural Analysis: French Identities	3

Language Courses

FR 205	Oral French	2
FR 213	French Phonetics	2
FR 314	Advanced Grammar in Context	3

Culture Courses

Choose two of the following:		6
FR 335	French Cultural History to 1789	
FR 336	French Cultural History 1789-1968	
FR 337	Contemporary France	

Literature Courses

Two courses at the 300- or 400-level in French and/or Francophone literature		6
--	--	---

Medieval and Early Modern Period course

Students must take one course focused on the medieval/early modern period. Students may choose from FR 335 or FR 301. This course can be used to fulfill the Culture or Literature Courses requirement.

Electives

Three French courses at the 300- or 400-level in any of the following areas: language and translation, business, cinema, culture, linguistics, literature, media.		9
---	--	---

Total Hours 37

Italian

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: french-italian@illinois.edu

Minimum required major and supporting course work normally equates to 45-51 hours including at least 30 hours in Italian courses beyond 104.

Course work in Italian must include at least one course in each of the following areas: advanced language/linguistics (Choose from: ITAL 310, ITAL 380, ITAL 450), literature (Choose from: ITAL 200, ITAL 413, ITAL 414, ITAL 420, ITAL 440), and culture (Choose from: ITAL 240, ITAL 270, ITAL 406, ITAL 470, or ITAL 490).

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To be considered for departmental distinction, a student must maintain a 3.5 grade point average and fulfill special additional requirements. See the department's honors adviser.

Code	Title	Hours
Select 18 credits (max) from the following:		18
ITAL 200	Italian Studies in a Mediterranean Context	
ITAL 210	Practical Review Italian	
ITAL 220	Contemporary Italian, Oral and Written	
ITAL 240	Italy Middle Ages & Renaiss	
ITAL 270	Introduction to Italian Cinema	
ITAL 310	Advanced Grammar	
ITAL 380	Ital Business & Profess	
ITAL 390	Spec Topics Italian Studies	
ITAL 491	Honors Senior Thesis	
Select 12 credits (min) from the following:		12
ITAL 406	Italian Culture and Globalization	
ITAL 413	Dante	
ITAL 414	Petrarch & Boccaccio	
ITAL 420	Masterpieces Renaiss Lit	
ITAL 440	Modern Italian Novel	
ITAL 450	Italian Syntax & Phonology	
ITAL 470	Topics in Italian Cinema	
ITAL 490	Italian Critical Theory	

Supporting course work or a minor chosen in consultation with an adviser, in one related area (or a combination, with no fewer than 8 hours in each). Areas may include, for example, any other language and literature, history, political science, biology (premed), international law (prelaw), economics, finance, business administration, education, architecture, fine arts, journalism.¹

¹ A minor consists of 16-21 hours.

Minor in French

Code	Title	Hours
FR 207	Writing and Grammar Workshop	3
FR 211	Introduction to Literary Studies	3
FR 212	Introduction to Cultural Analysis: French Identities	3
FR 205	Oral French	2
or FR 213	French Phonetics	
Select one of the following:		3
FR 335	French Cultural History to 1789	
FR 336	French Cultural History 1789-1968	
FR 337	Contemporary France	
Two French courses at the 300- or 400-level in any of the following areas: language and translation, business, cinema, culture, linguistics, literature, media		6
Total Hours		20

Minor in Italian

E-mail: french-italian@illinois.edu

Code	Title	Hours
Minimum of 19 hours of course work in Italian language and literature beyond ITAL 103 including:		
ITAL 104	Intermediate Italian II	4
Minimum of 15 hours of electives at the 200- to 400-level. Choose from the following: ¹		
ITAL 200	Italian Studies in a Mediterranean Context	
ITAL 210	Practical Review Italian	
ITAL 220	Contemporary Italian, Oral and Written	
ITAL 240	Italy Middle Ages & Renaiss	
ITAL 270	Introduction to Italian Cinema	
ITAL 310	Advanced Grammar	
ITAL 380	Ital Business & Profess	
ITAL 390	Spec Topics Italian Studies	
ITAL 406	Italian Culture and Globalization	
ITAL 413	Dante	
ITAL 414	Petrarch & Boccaccio	
ITAL 420	Masterpieces Renaiss Lit	
ITAL 440	Modern Italian Novel	
ITAL 450	Italian Syntax & Phonology	
ITAL 470	Topics in Italian Cinema	
ITAL 490	Italian Critical Theory	

ITAL 491	Honors Senior Thesis
Total Hours	19

¹ At least 6 of the 15 hours must be taken from among the following advanced-level courses: ITAL 310, ITAL 380, ITAL 406, ITAL 413, ITAL 414, ITAL 420, ITAL 440, ITAL 450, ITAL 470, ITAL 490.

Gender and Women's Studies

Mimi Nguyen, Interim Chair
1205 W. Nevada Street, Urbana
PH: (217) 333-2990
<http://gws.illinois.edu>

The mission of the Department of Gender and Women's Studies (GWS) is to explore, analyze and challenge the ways in which gender shapes people's lives. Assumptions about gender difference saturate many aspects of social and political life and create different forms of inequality in the workforce, in education, in cultural production, in scientific research, as well as in resource allocation in both public and private institutions. Because gender assumptions manifest differently in various communities, in our courses we systematically incorporate analysis of how race, ethnicity, class, sexuality, and physical ability shape gender inequality.

We train students to identify where and how inequalities are produced and reproduced. We also give them the skills to figure out how to initiate change and work for justice. They go on to challenge gender inequalities in their personal lives, in their communities, and in their future careers.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: gws@illinois.edu
www.gws.illinois.edu (<http://www.gws.illinois.edu>)

Minimum required courses: 33 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for graduation with distinction, a student must have a cumulative grade-point average (GPA) of 3.5 and a 3.5 GPA within the major.

High distinction. To be eligible for graduation with high distinction, a student must have a cumulative grade point average (GPA) of 3.5, a GPA of 3.7 within the major, and complete a thesis or project in a 400-level GWS course that is approved by the department.

Advising: The Department of Gender and Women's Studies provides advising for students to help plan a coherent program of study.

Code	Title	Hours
Required Courses		
GWS 201	Race, Gender & Power	3
GWS 202	Sexualities	3
GWS 498	Senior Seminar	3
GWS 350	Feminist & Gender Theory	3
or GWS 370	Queer Theory	
Additional Coursework¹		
At least 15 additional hours of coursework offered by the Gender & Women's Studies Department, with no more than 3 hours at the 100 or 200 level. Required courses are offered by the Department of Gender & Women's Studies and are on an approved list maintained in the department office and with the GWS advisor.		15
Area Electives		
Two courses in Gender and Women's Studies. No more than one may be counted from the 100 or 200 level. For a list of approved courses contact the GWS department or the GWS advisor.		6
Of the 33 hours in the major, students must take at least one course focused on transnational or non-U.S. issues. For a list of approved courses contact the GWS department or the GWS advisor.		
Total Hours		33

¹ Topics courses (GWS 199, GWS 295, GWS 395, GWS 495) may count up to 3 hours toward the additional coursework with consent of the GWS advisor. GWS 390 or GWS 490 may count up to 3 hours toward additional coursework with consent of the GWS advisor.

- Minor in Gender and Women's Studies (p. 422)
- Minor in LGBT/Queer Studies (p. 423)

GWS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GWS>)

Courses

GWS 100 Intro Gender & Women's Studies credit: 3 Hours.

Interdisciplinary introduction to the study of gender, women, and sexuality. Addresses issues such as social experience, representation and popular culture, femininities and masculinities, family structure, education, employment, economics, literature and the arts, religion, history, and technology. Explores interrelationships of race, ethnicity, sexuality, gender, ability, and age from a transnational perspective. Same as HDF5 140 and SOC 130.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

GWS 103 Black Women in the Diaspora credit: 3 Hours.

Same as AFRO 103 and AFST 103. See AFRO 103. This course satisfies the General Education Criteria for: Cultural Studies - US Minority

GWS 150 Contemp Women's Issues credit: 3 Hours.

Explores the most recent debate and research related to contemporary issues which affect primarily women. Reviews issues related to sexual and domestic violence, gender socialization, feminization of poverty, women's health, sexual harassment, work and family, politics, and media influences from a multi-discipline and multi-cultural perspective.

GWS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

GWS 201 Race, Gender & Power credit: 3 Hours.

Presents multiple windows into perceptions and perspectives upon gender, sexuality, power, identity and culture, and their multiple intersections. The concept of race in its many manifestations is used to examine relationships of self to society, state institutions and cultures. By paying greater attention to race and power, nuanced understandings of the way the gender systems are maintained, controlled and formed will be examined. Topics may include: film, media, technology, culture, religion, identities, sexualities. Same as SOC 201.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

GWS 202 Sexualities credit: 3 Hours.

Surveys sexualities from multiple perspectives, standpoints, disciplines, and theories. How have different cultures, different people, and different viewpoints understood, shaped, and interpreted sex, sexualities and genders? Course places the concept of sexuality at its core to examine citizenship, education, reproduction, science, tourism, urban/rural space, and politics. Topics may include: gender, race, identities, power, transformation, reproduction. Same as SOC 202.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

GWS 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AIS 295, AFRO 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

GWS 218 Intro to Social Issues Theatre credit: 3 Hours.

Same as THEA 218. See THEA 218.

GWS 225 Women in Prehistory credit: 3 Hours.

Same as ANTH 225. See ANTH 225.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GWS 226 Black Women Contemp US Society credit: 3 Hours.

Same as AFRO 226 and SOC 223. See AFRO 226.

GWS 230 Latina/o Genders & Sexualities credit: 3 Hours.

Same as LLS 230. See LLS 230.

GWS 240 Sex & Gender in Antiquity credit: 3 Hours.

Same as CLCV 240 and CWL 262. See CLCV 240.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

GWS 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Same as HIST 245 and MDVL 245. See HIST 245.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

GWS 250 Gender and Representation credit: 3 Hours.

Focusing primarily on gender, race, sexuality, and their intersections, this introductory course analyzes the politics of representation drawn from popular culture, painting, television and film, literature, music, religion, and new media.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GWS 255 Queer Lives, Queer Politics credit: 3 Hours.

Investigates queer lives in relation to dominant ideas about "deviance" and "equal rights." Drawing on case studies, the course investigates questions related to nation, race, economy, bodies, drugs, health, identities, agency and action as they intersect with contemporary queer politics. Students will learn conceptual and qualitative methods to investigate issues related to queer lives. Same as SOC 255.

GWS 258 Sex in Nature and Culture credit: 3 Hours.

Same as ANTH 258. See ANTH 258.

GWS 261 Gender in a Transnational Perspective credit: 3 Hours.

Same as SOC 261. See SOC 261.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GWS 262 Women's Lives credit: 3 Hours.

Same as ANTH 262. See ANTH 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GWS 263 US History of Medicine credit: 3 Hours.

Same as HIST 263. See HIST 263.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

GWS 270 Sexuality and Literature credit: 3 Hours.

Same as GER 270 and CWL 272. See CWL 272.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

GWS 272 Women and Politics credit: 3 Hours.

Same as PS 272. See PS 272.

GWS 280 Women Writers credit: 3 Hours.

Same as ENGL 280. See ENGL 280.

GWS 281 Women in the Lit Imagination credit: 3 Hours.

Same as ENGL 281. See ENGL 281.

GWS 285 US Gender History to 1877 credit: 3 Hours.

Same as HIST 285. See HIST 285.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

GWS 286 US Gender History Since 1877 credit: 3 Hours.

Same as HIST 286. See HIST 286.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

GWS 287 African-American Women credit: 3 Hours.

Same as AFRO 287 and HIST 287. See HIST 287.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

GWS 295 Beginning Topics GWS credit: 3 Hours.

Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 hours; may be repeated in separate terms to a maximum of 12 hours.

GWS 305 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Same as AAS 300 and LLS 305. See AAS 300.

This course satisfies the General Education Criteria for:
Advanced Composition

GWS 315 War, Memory, and Cinema credit: 3 Hours.

Same as AAS 315. See AAS 315.

GWS 320 Gender & Latina/o Migration credit: 3 Hours.

Same as LLS 320 and SOC 321. See LLS 320.

GWS 325 Lesbian/Queer Media Cultures credit: 3 Hours.

Discusses how various LGBT/Q communities were consolidated or drawn together by print and invented in the very acts of writing, distributing, purchasing, and reading print artifacts. Students examine early homophile publications, the rise of presses dedicated to LGBT/Q literature, independent bookstores and distribution networks, as well as the contemporary world of zines, blogs, chatrooms, fanfiction, and online journals, to see the intersection of sexuality, community, identity, and the print sphere. Students will learn how to historicize the rise of various LGBT/Q subcultures through a long history of print and how to navigate and understand the gregarious contemporary world of online publishing and social networking. Prerequisite: Previous course in GWS recommended.

GWS 330 Bodies & Tech in Pop Culture credit: 3 Hours.

Examines gender, race, sexuality and nation as embodied in visions of science and technologies in popular culture. Topics include medicine, work, leisure, domesticity, games, films, fiction, geopolitics, and the body. Prerequisite: GWS 100 or GWS 250 or GWS 350 or consent of instructor.

GWS 333 Memoir & Autobiography credit: 3 Hours.

Explores the phenomenon of autobiography in the contemporary world. Students will read theories of autobiography, and ask questions about how writing about the self is gendered, and how representations of the self fare in the outside world. An important aspect of the course will be examinations of how changing media such as film, television talk shows and the Internet shape these representations. Students will be assigned to read and make a presentation on one of the supplementary texts of autobiographies chosen from authors in the First and Third worlds. Same as ENGL 333.

GWS 334 Brazilian Women's Lit Trans credit: 3 Hours.

Same as PORT 334. See PORT 334.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

GWS 335 Film, TV, and Gender credit: 3 Hours.

Examines the history and theory of film, television, and their interrelationship through one or more specific case studies. Topics may include: film and feminist movements; girl films; queer TV; gender, sport and TV. Focuses attention on gender and related issues such as race, ethnicity, sexuality, age, ability and disability, class, and nationality. Addresses issues of representation, narrative, genre, industry, audience, exhibition, media convergence, new and mobile media, and social space. Same as MACS 335.

GWS 337 Interrogating Masculinities credit: 3 Hours.

Explores the social construction of gender as it pertains to masculinities in conjunction with analyses of race, class, gender, ability, and sexuality. Masculinities, in its various forms, shapes and lives of both women and men and this course will examine the construction, reproduction, and impact of masculinities on the institutions of politics, education, work, religion, sports, family, media, and the military to name a few. Paying careful attention to the conjunctions between materiality and culture, this course will interrogate how masculinities shape individual lives, groups, nationalisms, organizations, and institutions and will analyze the ways in which power functions within local transnational contexts. Above all, this course offers a road map for forging new, progressive models of masculinity.

GWS 340 Gender, Relationships & Society credit: 3 Hours.

Same as HDFS 340 and SOC 322. See HDFS 340.

GWS 345 Digital & Gender Cultures credit: 3 Hours.

This interdisciplinary course uses the lens of gender critique and pairs it with social activism to provide students analytical tools to engage with, reshape, and create digital cultures. Examines recent research and public policies related to the gendered, raced, and classes dimensions of digital cultures and inequality; the broad range of labor issues embedded in the growing income disparity related to digital cultures; the various ways that digital inequality has been defined by public policy, sociologists, and activists, and real examples of collective activism and social change related to emerging technologies. Same as INFO 345, MACS 345, and SOC 345.

GWS 350 Feminist & Gender Theory credit: 3 Hours.

Interdisciplinary survey of feminist and gender theory. Traces developments in feminist theory and LGBT/Q approaches and explores contemporary debates.

GWS 355 Beauty and Culture credit: 3 Hours.

Examines beauty and culture, in particular how tropes, ideologies, and politics bolster the construction of beauty as an aesthetic value. Looks at the ways in which beauty is imagined, visualized, narrated, naturalized, reproduced, privileged, and contested through various venues such as art, performance, philosophy, media, history, and popular culture. Attention will be given to race, class, gender, sexuality, and the implications thereof.

GWS 356 Sex & Gender in Popular Media credit: 3 Hours.

Same as MACS 356. See MACS 356.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

GWS 360 Women and the Visual Arts credit: 3 Hours.

Same as ARTH 360. See ARTH 360.

GWS 361 Women in East Asia credit: 3 Hours.

Same as EALC 361. See EALC 361.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

GWS 363 Gender, Health & Pop Culture credit: 3 Hours.

Aspects of popular culture, including television, magazines, newspapers, social networking sites, and internet sources to name a few, are ways that health information is disseminated. Students will examine how we define health and understand disease as related to popular culture. Discusses how people resist or reinforce these messages about health, well being, fitness, and diet. Also discusses how understandings of race, sexuality and class affect the ways that we think about sickness, health and constructions of gender.

GWS 366 Feminist Disability Studies credit: 3 Hours.

Explores the complex relationship between gender and disability. Approaching disability as a social and political category rather than a strictly medical one, we will ask: how is the language of disability used to produce and police a variety of gender, sexual, and racial identities as non-normative? How might debates over medicine, technology, and the concept of "natural" pit gender and disability against one another? How have feminist, queer, and transgender scholarship and activism engaged disability? Prerequisite: One of the following: GWS 100, GWS 201, GWS 202.

GWS 370 Queer Theory credit: 3 Hours.

Traces the development of queer theory as a mode for understanding queer studies methodologies and the changing intellectual landscape of key issues in the field. As part of the course, students will review key concepts and theoretical schools of thought, navigating important debates guiding the field. Theories will engage questions of the social and cultural through topics including race, gender, nation, family, history, identity formation, sexology, the state, and capital. Same as SOC 320. Prerequisite: GWS 100, GWS 201, GWS 202, or consent of instructor.

GWS 376 Children and Youth Literature credit: 3 Hours.

Same as CWL 376, EURO 376, and SCAN 376. See SCAN 376.

GWS 378 Fairy Tales & Gender Formation credit: 3 Hours.

Discusses how femininity and gender formation are related through fairy tales. As children grow they are taught the difference between male and female roles. One of the main ways this instruction takes place is through the pleasurable media of fairy tales in books, poems, and more recently, films. Sleeping Beauty, Snow White, Beauty and the Beast, and the Little Mermaid, among others, will be examined to understand how sexual identity is constructed differently in different cultures, and how issues such as rape and incest are addressed within the narratives. The readings explore the ways that fairy tales work to express psychological reactions to maturation while conditioning both characters and readers to adopt specific social roles in adulthood. Same as ENGL 378.

GWS 380 Black Women Hist & Cultures credit: 3 Hours.

Interdisciplinary study of black women's multiple histories and varied cultures including black women from North America, Africa, and the Caribbean. Same as AFRO 380. Prerequisite: AFRO 100 or GWS 100 or GWS 250 or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

GWS 382 Black Women & Popular Culture credit: 3 Hours.

Explores how Black women have been are currently portrayed in popular media, such as television, internet, movies, and popular mediums such as magazines, popular fiction, newspapers, and other cultural phenomenon. Examines what these portrayals reveal about Black women's role in society and how black women as consumer and participants respond to these stereotypes, and create alternative oppositional images.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

GWS 383 Hist of Blk Women's Activism credit: 3 Hours.

Same as AFRO 383 and HIST 383. See AFRO 383.

GWS 385 Transnational Sexualities credit: 3 Hours.

Investigates the ways in which sexual identities change as national contexts change, as borders are imagined, valued, and crossed, and as definitions of race, gender, and religion shift. Interrogates how national and transnational identities (at home and abroad), modernities, histories, and colonial and global narratives are built on ideas of racialized sexualities, and as such, is particularly interested in the study of queer diaspora. Importantly, this course utilizes transnational feminist frameworks for re-thinking issues related to sexuality, immigration, nation-building, race and gender. Areas of inquiry include imperialism, immigration, war, tourism and globalization. Same as HIST 385. Prerequisite: GWS 100, GWS 201 or GWS 202 or consent of instructor.

GWS 387 History of Sexuality in U.S. credit: 3 Hours.

Explores a wide variety of sources to understand how notions of sexuality have emerged and been contested at key moments in U.S. history. Our guiding questions include: How have "official" or governing discourses of sexuality (in law, medicine, religions, science) been formulated? In turn, how have "ordinary" people understood and practiced their sexuality? How has the meaning of particular sexual practices changed over time? How have ideas about race, gender, and/or class been embedded within the discourse of sexuality at different moments in U.S. history? What methods of reading and interpretation are most useful for the historical study of sexuality? Also emphasizes skills such as critically analyzing primary sources within their historical context; interpreting different types of primary sources; locating, understanding, and evaluating scholarly secondary sources; and presenting historical arguments, based on both primary and secondary sources. Same as HIST 387.

GWS 390 Individual Study credit: 0 to 3 Hours.

Special topics not treated in regularly scheduled classes. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: One course in Gender and Women's Studies; consent of instructor.

GWS 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Same as LLS 392 and SOC 392. See LLS 392.

This course satisfies the General Education Criteria for:
Advanced Composition

GWS 395 Intermediate Topics GWS credit: 3 Hours.

Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 hours; may be repeated in separate terms to a maximum of 12 hours.

GWS 397 Sexuality in Modern Europe credit: 3 Hours.

Course Information: Same as HIST 397. See HIST 397.

GWS 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLBL 403, HIST 434, REL 403 and SAME 403. See REL 403.

GWS 409 Women's Health credit: 3 Hours.

Same as CHLH 409. See CHLH 409.

GWS 415 Africana Feminisms credit: 3 or 4 Hours.

Same as AFRO 415 and AFST 420. See AFRO 415.

GWS 417 Leading Post-Perform Dialog credit: 4 Hours.

Same as THEA 417. See THEA 417.

GWS 418 Devising Social Issues Theatre credit: 3 or 4 Hours.

Same as THEA 418. See THEA 418.

GWS 421 Sex Role Theory in Counseling credit: 4 Hours.

Same as EPSY 421. See EPSY 421.

GWS 424 Gender & Race in Contemp Arch credit: 3 Hours.

Same as ARCH 424. See ARCH 424.

GWS 432 Gender and Language credit: 3 or 4 Hours.

Same as CMN 432 and LING 432. See CMN 432.

GWS 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, AFRO 435, LLS 435, and MACS 432. See LLS 435.

GWS 442 Body, Culture & Society credit: 3 or 4 Hours.

Same as KIN 442. See KIN 442.

GWS 450 Topics in Bodies and Genders credit: 3 Hours.

Same as CWL 450. See CWL 450.

GWS 454 Social Work with Women credit: 3 or 4 Hours.

Same as SOCW 455. See SOCW 455.

GWS 459 Gender, Sex, & Postcoloniality credit: 3 or 4 Hours.

Explores the relationship of imperialism, sexuality, and race through the lens of postcolonial theory. Same as HIST 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: GWS 100 or GWS 250 and GWS 350 or GWS 370; or consent of instructor.

GWS 462 Hip Hop Feminism credit: 3 or 4 Hours.

Explores how hip hop has shaped the culture, aesthetics, experiences, and perspectives of an emergent generation of artists, scholars, and writers with several aims: 1) To challenge systemic social inequalities. 2) To articulate new visions of justice that depend on the power young people possess. To better understand how and why the relationship between hip hop and feminism is coherent, meaningful, and compelling, students will become familiar with artists working within and beyond various elements of hip hop (rap, graffiti, emceeing, dee-jaying, etc.), social critics concerned with documenting hip hop's cultural practices, and critical educator (broadly defined). 3 undergraduate hours. 4 graduate hours.

GWS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AAS 465, AFRO 465, and LLS 465. See LLS 465.

GWS 467 Locating Queer Culture credit: 3 Hours.

Our goal is to learn different methods for researching "queer culture," with a special focus on the local context. Explores two research methods in depth: history and ethnography. Students will produce their own original research based on genuine gaps in existing knowledge. Provides an opportunity to learn both received knowledge about queer culture, as well as that which we do not yet know. By the end of this course, the class will collectively produce new knowledge about queer culture using local stories. Same as HIST 468. 3 undergraduate hours. No graduate credit.

GWS 470 Transgender Studies credit: 3 or 4 Hours.

What are the issues and politics related to transgender and transsexual identities? Students will examine and critically evaluate historical and contemporary debates that contest normative male/female binaries and traditional categorizations of sexuality. The course moves beyond these initial inquiries into gender theory to consider the effects of institutional discourses produced through stage and civil society. Taught with particular attention given to questions of race, national formations, medical, and legal discourses. Areas of inquiry may include gender theory, transnational identities, gendered and racial performances, medical and psychological diagnoses, violence, the law, and the Prison Industrial Complex. Through these topics, students will be asked to consider important questions over political and legal representation, autonomy, the rights of citizenship, and the practice of everyday life. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200- or 300-level, or consent of instructor.

GWS 478 Sex, Power and Politics credit: 3 or 4 Hours.

Examines representations of the relationship between sex, power, and subjectivity and how they have shaped feminism. Explores critical approaches to feminist analyses of women's oppression and debates about sexuality, including issues such as consent, rape and prostitution. Same as PS 413. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200- and 300-level or consent of instructor.

GWS 485 The Politics of Fashion credit: 3 or 4 Hours.

Interdisciplinary and transnational study of the historical and cultural development of fashion. Examines the social and political tensions embodied in fashion, the fashion industry, and sartorial practices in relation to gender, race, nation, and sexuality. Same as AAS 485. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200 or 300 level, or consent of instructor.

GWS 490 Individual Study credit: 2 to 4 Hours.

Supervised reading and research in Gender and Women's Studies chosen by the student with instructor approval. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Two courses in Gender and Women's Studies at the 200-400 levels; or junior standing; or consent of instructor.

GWS 495 Advanced Topics GWS credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 undergraduate hours or 12 graduate hours; may be repeated in separate terms to a maximum of 12 undergraduate or 12 graduate hours.

GWS 498 Senior Seminar credit: 3 Hours.

Considers the relationship between theory and research in Women's Studies. Reviews and examines the key issues of feminist scholarship. Provides students with the methodological knowledge and opportunity to carry out a research project. 3 undergraduate hours. No graduate credit. Prerequisite: Senior standing and enrollment as a major in Gender and Women's Studies, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

Minor in Gender and Women's Studies

A minor in GWS provides complementary tools for many majors in the humanities, arts and sciences. The minor advocates actively reading, questioning, challenging, and understanding racialized, sexualized, and gendered bodies. The Department of Gender and Women's Studies must approve a student's minor course plan. Students must register their minor with the Gender and Women's Studies advisor.

E-mail: gws-email@illinois.edu

Code	Title	Hours
Select two of the following:		6
GWS 201	Race, Gender & Power	
GWS 202	Sexualities	
GWS 350	Feminist & Gender Theory	

Additional Coursework- At least 9 additional hours of coursework offered by the Gender and Women's Studies Department at the 300- or 400-level. Required courses consist of a selected list of courses offered by the Department of Gender & Women's Studies; they are on an approved list maintained in the department office and with the GWS advisor.¹

3 hours of area electives at any level. For a list of approved courses contact the GWS department office or the GWS advisor. 3

Total Hours 18

¹ *Topics courses (GWS 395, GWS 495) may count up to 3 hours toward additional coursework with consent of the GWS advisor. GWS 390 or GWS 490 may count up to 3 hours toward additional coursework with consent of the GWS advisor.*

At least 6 hours of advanced coursework must be distinct from credit earned for the student's major or another minor.

Minor in LGBT/Queer Studies

The LGBT/Queer Studies minor provides students the opportunity to explore how various political, social, and cultural definitions of sexual identities and their expression have been constructed and challenged in different places and points in time. Attention is given to queer politics, and interactions with nation, race, ethnicity, and gender. A minor in LGBT/Queer Studies provides complementary tools for many majors in the humanities, arts and sciences.

The Department of Gender and Women's Studies must approve a student's minor course plan. Students must register their minor with the Gender and Women's Studies advisor.

Code	Title	Hours
GWS 202	Sexualities	3
or GWS 255	Queer Lives, Queer Politics	
GWS 370	Queer Theory	3
Additional Coursework- Select three of the following: ¹		9
GWS 325	Lesbian/Queer Media Cultures	
GWS 385	Transnational Sexualities	
GWS 387	History of Sexuality in U.S.	
GWS 459	Gender, Sex, & Postcoloniality	
GWS 467	Locating Queer Culture	
GWS 470	Transgender Studies	
GWS 478	Sex, Power and Politics	

Area electives at any level. For a list of approved courses contact the GWS Department office or the GWS advisor. 3

Total Hours 18

¹ *Topics courses (GWS 395, GWS 495) may count up to 3 hours toward additional coursework with consent of the GWS advisor. GWS 390 or GWS 490 may count up to 3 hours toward additional coursework with consent of the GWS advisor.*

At least 6 hours of advanced coursework must be distinct from credit earned for the student's major or another minor.

9 Students may choose to major in Gender & Women's Studies and Minor in LGBT/Queer Studies, but classes may not count towards both.

Geography and Geographic Information Science

Shaowen Wang, Department Head

2042 Natural History Building

1301 W. Green Street

Urbana, IL 61801

PH: (217) 333-1880

<http://geog.illinois.edu>

The Department of Geography and Geographic Information Science offers four undergraduate concentrations.

General Geography (p. 429)

Geography majors integrate social science, physical science, and technology in their study of how humans use the Earth's surface. Majors in the General Geography concentration can sample courses from different subfields of geography without having to choose one specialty of the discipline. Upon completion, the students are prepared for diverse employment opportunities, or further studies in a geography graduate program.

Geographic Information Science (GIS) (p. 429)

The GIS concentration emphasizes the creation, use and analysis of digital geographic information to examine economic, environmental, physical and social phenomena. The GIS concentration provides students with in-depth training in contemporary software packages to prepare them for careers in the field. There is growing demand for professional knowledge of the earth's systems and the use of geographic information systems to enhance business, protect the environment and manage the massive amounts of spatial data now widely available on the internet. The U.S. Department of Labor has identified geospatial technologies as one of the fastest-growing domestic job sectors.

Human Geography (p. 430)

The Human Geography concentration allows students to specialize in the social science aspect of modern geography. The curriculum includes the systematic study of human social organization and its environmental consequences. Employment opportunities for human geographers include urban and regional planning, transportation, marketing, real estate, tourism, and international business.

Physical Geography (p. 431)

The Physical Geography concentration examines the earth sciences including patterns of climates, land-forms, vegetation, soils, and water. Graduates of our physical geography concentration will be equipped for careers in infrastructure development, land and water resources management, and surveying.

The department also offers a **minor in Geography & GIS** that exposes students to a comprehensive selection of courses embracing our three broad areas of study: human geography, physical/environmental geography, and geographic information science.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geography@illinois.edu

Students must complete the core requirements listed below, and select one concentration in consultation with our academic advisor. Email: ggis-advisor@illinois.edu.

- General Geography Concentration (p. 429)
- Geographic Information Science Concentration (p. 429)
- Human Geography Concentration (p. 430)
- Physical Geography Concentration (p. 431)

Code	Title	Hours
Geography and Geographic Information Core Requirements		
Select one of the following:		3-4
ATMS/GEOG 100	Introduction to Meteorology	
GEOG 103	Earth's Physical Systems	
GEOG 222	Big Rivers of the World	
Select one of the following:		3-4
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
Choose one of the following:		4
GEOG 371	Spatial Analysis	
GEOG 379	Intro to GIS Systems	
Select a Concentration (hours required depend on concentration chosen):		25-37
Total Hours		35-49

Minor in Geography and GIS

The minor in Geography and GIS will expose students to a comprehensive selection of courses embracing our three broad areas of study: human geography, physical/environmental geography, and geographic information science. Students select 6 hours at the 100 level, then 3 hours each from the human, physical/environmental, and geospatial sub-disciplines (as listed below), and then 3 additional hours from any of the three sub-disciplines for a total of 18 credits. At least 6 hours total must be at the 300 or 400 level.

Code	Title	Hours
Two courses selected from the following:		6
ATMS/GEOG 100	Introduction to Meteorology	
GEOG 101	Global Development&Environment	
GEOG 103	Earth's Physical Systems	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 221	Geographies of Global Conflict	
One course in human geography, selected from the following:		3
GEOG 204	Cities of the World	

GEOG 205	Business Location Decisions	
GEOG 224	Geog Patterns of Illinois	
GEOG 310	Political Geography	
GEOG 350	Sustainability and the City	
GEOG 356	Sustainable Development in South Asia	
GEOG 373	Geography Field Course	
GEOG 384	Population Geography	
GEOG 410	Green Development	
GEOG 438	Geography of Health Care	
GEOG 455	Geog of Sub-Saharan Africa	
GEOG 465	Transp and Sustainability	
GEOG 466	Environmental Policy	
GEOG 471	Recent Trends in Geog Thought	
GEOG 483	Urban Geography	
GEOG 484	Cities, Crime, and Space	
One course in physical/environmental geography, selected from the following:		3
GEOG 210	Social & Environmental Issues	
GEOG 215	Resource Conflicts	
GEOG 222	Big Rivers of the World	
ESE 320	Water Planet, Water Crisis	
GEOG 373	Geography Field Course	
GEOG 381	Environmental Perspectives	
NRES/GEOG 401	Watershed Hydrology	
GEOG 406	Fluvial Geomorphology	
GEOG 408	Humans and River Systems	
GEOG 412	Geospatial Tech & Society	
GEOG 459	Ecohydraulics	
GEOG 481	Intl Environ Cooperation	
GEOG 493	Democracy and Environment	
GEOG 496	Climate & Social Vulnerability	
One course in geographic information science, selected from the following:		3
GEOG 371	Spatial Analysis	
GEOG 379	Intro to GIS Systems	
GEOG 380	GIS II: Spatial Prob Solving	
GEOG 412	Geospatial Tech & Society	
GEOG 440	Business Applications of GIS	
PATH 439	Health Applications of GIS	
GEOG 460	Aerial Photo Analysis	
GEOG 468	Biological Modeling	
GEOG 473	Digital Cartography & Map Design	
GEOG 476	Applied GIS to Environ Studies	
GEOG 477	Introduction to Remote Sensing	
GEOG 478	Techniques of Remote Sensing	
GEOG 479	Advanced Topics in GIS	
GEOG 480	Principles of GIS	
One 200-400 level course selected from any of the above.		3
Total Hours		18

At least 6 hours total must be at the 300 or 400 level.

GEOG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GEOG>)

Courses

GEOG 100 Introduction to Meteorology credit: 3 Hours.

Same as ATMS 100. See ATMS 100.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

GEOG 101 Global Development&Environment credit: 3 Hours.

Introduces geographical perspectives on environment and development studies with case studies drawn from Africa, Asia, and Latin America.

Investigates the origins of the global South in relation to the global North, especially the historical and contemporary processes driving environmental, economic, and cultural change.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

GEOG 103 Earth's Physical Systems credit: 4 Hours.

A basic introduction to the environmental systems of the Earth's surface, including landforms, soils, and ecosystems and how these systems are affected by global change. Emphasizes the importance of human-Earth relations and a holistic view of environmental systems. Same as ESE 103.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

GEOG 104 Social and Cultural Geography credit: 4 Hours.

Introduces the basic concepts of social and cultural geography, and the application of these concepts to a variety of topics; mental maps, territoriality, cultural regions, cultural elements and their diffusion, population movement and migration, settlement patterns, environmental hazards, and spatial patterns of social problems.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GEOG 105 The Digital Earth credit: 3 Hours.

Geospatial technologies such as global positioning systems (GPS) and geographic information systems (GIS) are becoming increasingly important tools in research and policy arenas and in everyday life. This course will provide an introduction to these emerging technologies and to the principles of mapping science that underpin them. At the same time, the course will explore how these innovative technologies are changing the spaces and places around us, including how we interact with the environment and each other. Lab exercises provide hands-on experience in collecting and mapping geospatial information, interpreting digital imagery and the Earth's environments, and critically thinking about the social implications of the digital Earth.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GEOG 106 Geographies of Globalization credit: 3 Hours.

A survey of major world regions by systematically considering five themes: environment, population and settlement patterns, cultural coherence and diversity, geopolitical fragmentation and unity, and economic and social development. While examining the persistence of unique regions, the course will both scale up to global linkages and scale down to place-specific impacts of globalization processes. Same as ESE 106.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

GEOG 198 Freshman Honors Seminar credit: 3 Hours.

Through discussions and research projects, the seminar is designed to provide an in-depth understanding of topics in the field of systematic or regional geography which are selected for group study. Appropriate geographic methodology is emphasized. Prerequisite: James Scholar standing or other designation as a superior student.

GEOG 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GEOG 204 Cities of the World credit: 3 Hours.

In-depth exploration of global urbanization. Using a comparative regional approach, discuss the recent history of global urbanization, dissect its problems, and offer possible solutions. Approximately ten major regions of the world will be examined, exploring the significant urban patterns and processes, built and natural environments, and social, economic, and cultural landscapes of each.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

GEOG 205 Business Location Decisions credit: 3 Hours.

Analyzes location decision-making emphasizing industrial and commercial location patterns; identifies important institutional factors and their changing roles over the recent past; and focuses on plant closings, economic disruptions, and problems of structural change. Same as BADM 205. Prerequisite: ECON 102 or ECON 103, or equivalent.

GEOG 210 Social & Environmental Issues credit: 3 Hours.

Introduction to the complex relationship between people and the natural environment from a social science perspective. Explores different approaches to environmental issues, and examines the role of population change, political economy, technologies, environmental policymaking, and social institutions in causing and resolving contemporary social and environmental global issues. Same as ESE 210.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GEOG 215 Resource Conflicts credit: 3 Hours.

Geographic concepts of place, scale, region, and territoriality are used to explore the causes and consequences of competition for the control of natural resources. Situations that lead to violent conflict are discussed as well as mechanisms for the peaceful resolution of resource conflicts. Resources discussed include oil, water, access to land, and the impact of climate change. Same as ESE 215 and GLBL 215.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GEOG 221 Geographies of Global Conflict credit: 3 Hours.

Focuses on contemporary cultural conflicts, competition among nations for economic and mineral resources; treats territorial disputes from a cultural and geographic perspective. Case studies vary to illustrate types of contemporary conflicts. Same as GLBL 221. Credit is not given for GEOG 221 and GEOG 110.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GEOG 222 Big Rivers of the World credit: 3 Hours.

An interdisciplinary approach to the study of big rivers, encompassing geomorphology, engineering, ecology, risk assessment and planning. Commencing with an assessment of the nature of big rivers; their hydrology and geomorphic setting; hazards associated with large rivers, and issues of river impoundment and management, then proceed to examine the geography, geomorphology, and ecology and management of a range of the World's greatest rivers, focusing on how a geomorphological understanding of such large rivers can aid study of riverine ecohabitats and inform decisions regarding water usage and engineering management. If the weather permits, a one day field-trip will be organized in the second half of the course to view aspects of a local river in Illinois/Indiana. Same as ESE 222.

GEOG 224 Geog Patterns of Illinois credit: 3 Hours.

Systematic analysis of the environmental and human processes that have shaped the regional landscapes of rural and urban Illinois. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

GEOG 254 American People, Places, & Environments credit: 3 Hours.

Regional geography survey of the U.S., including physical settings, cultural and economic patterns, and human-environment relationships. Topics include spatial patterns of settlement and migration, uneven vulnerability to natural hazards, and cultural diversity as seen in the landscape, with an overall focus on how human and physical geography together shape the American environment across different regions. Same as ESE 254.

GEOG 280 Intro to Social Statistics credit: 4 Hours.

Same as SOC 280. See SOC 280. This course satisfies the General Education Criteria for: Quantitative Reasoning I

GEOG 287 Environment and Society credit: 3 Hours.

Same as ESE 287, NRES 287 and PS 273. See NRES 287. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci
Cultural Studies - Western

GEOG 310 Political Geography credit: 3 Hours.

Problems and issues surrounding the geographic distribution of political actions and outcomes in the context of globalization. Topics include war and peace, access to natural resources, nationalism, democratization, terrorism, and the politics of identity. Prerequisite: Junior standing or consent of instructor.

GEOG 350 Sustainability and the City credit: 3 Hours.

Examination of the tools, techniques, strategies, and rationales that can be used by urbanists to produce and sustain a productive, fair, and equitable city. Emphasis is placed on diagnosing, implementing, and sustaining an ideal U.S. city as a complex whole that embeds an array of interconnecting parts (neighborhoods, retail districts, downtowns, city economies). Lectures and discussion cover the broad background of theories, concepts, and principles that will be essential for imagining and implementing these ideals, strategies and plans.) Same as ESE 350.

GEOG 356 Sustainable Development in South Asia credit: 3 Hours.

Examination of sustainable development in the region of South Asia (India, Nepal, Pakistan, Afghanistan, Bangladesh, Sri Lanka). Geographic analysis of development processes since the colonial period, with particular emphasis on the interrelated processes of environment, society, and politics as related to sustainability. Prerequisite: Sophomore standing or consent of instructor.

GEOG 370 Water Planet, Water Crisis credit: 3 Hours.

Same as ESE 320 and GEOL 370. See ESE 320.

GEOG 371 Spatial Analysis credit: 4 Hours.

Overview of the spatial analysis (nomothetic) approach to geographic research, both physical and human; includes discussion of the scientific method, with explanations and uses of analytic geographic concepts in studying real world problems. Prerequisite: A course in geography. This course satisfies the General Education Criteria for: Quantitative Reasoning II

GEOG 373 Geography Field Course credit: 1 to 4 Hours.

Field observation and mapping of human and/or physical phenomena using basic geographic field techniques, including pre- and post-trip meetings. Required field trip. May be repeated if topics vary. Prerequisite: Major or minor in Geography & GIS, or consent of instructor.

GEOG 379 Intro to GIS Systems credit: 4 Hours.

Investigates the fundamentals of geographic information science as well as the basic skills in the execution of that theoretical knowledge with industry standard software packages. Student will learn the basics of projections and coordinate systems, how geographic information is stored and manipulated, and the theory and practice behind the production of thematic maps. Includes lecture and hands-on laboratory components. Same as ESE 379.

GEOG 380 GIS II: Spatial Prob Solving credit: 4 Hours.

Study of the analytical capabilities of geographic information systems with an emphasis on learning to solve spatial problems in both the vector and raster data formats. Students will develop the skills necessary to answer questions or solve problems in their areas of interest, with particular emphasis on problems and questions that require multiple steps to resolve. Students will learn the fundamental theory behind spatial problem solving, but also learn to execute these procedures with industry-standard software packages. Thus, this class contains both lecture/discussion elements and hands-on laboratory work. Same as ESE 380. Prerequisite: GEOG 379
This course satisfies the General Education Criteria for: Quantitative Reasoning II

GEOG 381 Environmental Perspectives credit: 3 Hours.

Focus on the major ideas in contemporary environmentalism, especially on how humans do and should interact with the environment. Same as ESE 381. Prerequisite: Junior or senior undergraduate standing.

GEOG 384 Population Geography credit: 3 Hours.

Problems and issues surrounding the geographic distribution of populations at the world, regional, and local levels; emphasizes problems associated with population growth and decline, recent population redistribution, births and deaths, and elderly and minority populations.

GEOG 390 Individual Study credit: 2 to 4 Hours.

Supervised independent study of special topics or regions. May be repeated once. Prerequisite: Junior standing; at least one formal course in the topic or region of interest; consent of instructor.

GEOG 391 Honors Individual Study credit: 2 to 4 Hours.

Individual study and research projects for students who are working toward the degree with distinction in geography. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing; consent of honors adviser.

GEOG 392 Geography & GIS Internship credit: 0 to 3 Hours.

Supervised, off-campus experience in a field directly pertaining to Geography and/or GIS. A written report is required at the end of the internship relating work accomplishments to the student's program of study. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Consent of faculty sponsor and Director of Undergraduate Studies; at least two courses taken within Geography & GIS.

GEOG 394 Special Topics Social Geog credit: 4 Hours.

Introduction to current research in social geography; includes such topics as access to public facilities, geography of crime, innovation diffusion, geography of communications, spatial assimilation of minorities, and geography of social well-being. See Schedule for current topics. May be repeated.

GEOG 401 Watershed Hydrology credit: 3 Hours.

Same as NRES 401. See NRES 401.

GEOG 405 Geography Field Course credit: 1 to 4 Hours.

Field observation and mapping of human and/or physical phenomena using basic geographic field techniques, including pre- and post-trip meetings. Required field trip. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Major or minor in Geography & GIS, or consent of instructor.

GEOG 406 Fluvial Geomorphology credit: 4 Hours.

Systematic overview of the forms and processes associated with rivers and drainage basins; topics include basin hydrology, drainage networks, river hydraulics, sediment transport processes, channel morphology, channel change, and human impacts on fluvial systems. Same as GEOL 406, and NRES 406. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 101, and GEOG 103 or GEOL 107, or consent of instructor.

GEOG 408 Humans and River Systems credit: 4 Hours.

Systematic analysis of the biophysical processes operating in rivers and watersheds and the interaction of humans on these processes. The course will emphasize the importance of biophysical processes and human interaction with these processes in river and watershed management. Class discussion and a class project will focus on analysis of practical river and watershed problems. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 103 or an introductory course in earth or environmental science.

GEOG 410 Green Development credit: 4 Hours.

Theory and practice of sustainable development. Course materials draw upon theoretical and case study material from the social and natural sciences to analyze environment and development relations with emphasis on the Global South. Same as ESE 410. 4 undergraduate hours. 4 graduate hours.

GEOG 412 Geospatial Tech & Society credit: 3 Hours.

Examines the use of geographic information systems (GIS), geographical positioning systems (GPS), and other geospatial technologies in everyday life with emphasis on their implications for social, economic, and environmental change. Topics include critical cartography, GIS, and social theory, crime and health, environmental justice, feminism, economic development and environmental change. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 105 or consent of instructor.

GEOG 421 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOL 481 and NRES 422. See ATMS 421.

GEOG 423 Politics of International Conservation and Development credit: 3 Hours.

Same as NRES 423. See NRES 423.

GEOG 436 Biogeography credit: 3 Hours.

Same as ANTH 436, ESE 439, IB 439 and NRES 441. See IB 439.

GEOG 438 Geography of Health Care credit: 3 or 4 Hours.

Methods and perspectives of health care. Emphasizing the spatial analysis of health and health care. The organization, provision and competition of health care will be highlighted. Same as SOC 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 384 or SOC 274 or consent of instructor.

GEOG 439 Health Applications of GIS credit: 3 Hours.

Same as CHLH 439 and PATH 439. See PATH 439.

GEOG 440 Business Applications of GIS credit: 3 Hours.

Design and implementation of GIS for business and strategic planning applications. Course goals include: (1) provide students with an understanding of Geographic Information Systems; (2) provide students with an understanding of how GIS can be applied in various business applications; (3) familiarize students with GIS and modeling techniques; (4) provide students with opportunities to work with various data sources through a project related to their own interest in business. Same as BADM 440. 3 undergraduate hours. 4 graduate hours.

GEOG 446 Sustainable Planning Seminar credit: 4 Hours.

Same as LA 446, NRES 446, and UP 446. See LA 446.

GEOG 455 Geog of Sub-Saharan Africa credit: 3 Hours.

Regional geography of Africa south of the Sahara. Geographic analysis of Africa which includes topics in both physical and human geography and provides a general overview of the processes and interactions between human and environmental factors that shape Africa's physical and human geography. 3 undergraduate hours. 3 graduate hours.

GEOG 459 Ecohydraulics credit: 4 Hours.

Interactions between hydraulic, ecological, and geomorphic processes in river environments at a wide range of both spatial and temporal scales. Draws upon and synthesizes fundamental concepts from biology, ecology, fluid mechanics and morphodynamics, to apply them to truly interdisciplinary problems. Such an approach, coupled with hands-on experience involving planning, conducting and analyzing hands-on experiments at the Ven Te Chow Hydrosystems Laboratory and field surveys on local natural waters will provide the students with a broad perspective on the interconnections between physical and ecological systems. Students will apply their knowledge of fundamental processes to assess complex problems involving monitoring, management, conservation and restoration of ecosystems. 4 undergraduate hours. 4 graduate hours.

GEOG 460 Aerial Photo Analysis credit: 3 or 4 Hours.

Review of methods for extracting quantitative and qualitative information from aerial photographs using computer-based techniques and visual interpretation. The first part of the course will cover basic photogrammetry and mapping. The second part will focus on interpretation of physical, biological, and cultural features. Same as NRES 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: Knowledge of trigonometry (MATH 014 or equivalent) and basic physical geography (GEOG 103 or equivalent).

GEOG 465 Transp and Sustainability credit: 3 or 4 Hours.

Descriptors of transportation systems; transportation as an industrial activity and public good; and transportation and spatial development, including the role of transportation in urban and regional development. Emphasis on the economic, environmental, and social aspects of sustainability as they apply to transportation systems and the activities they enable at local, regional, national and global levels. Field trip required. Same as ESE 465. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours.

This course satisfies the General Education Criteria for:
Advanced Composition

GEOG 466 Environmental Policy credit: 3 or 4 Hours.

Examination of the geographical and political aspects of human-environmental relations; focusing on how environmental problems are defined, negotiated, and addressed through policy formulation. Specific approaches to environmental policy will be considered at different geographical scales. Same as ESE 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Geography or Political Science or consent of instructor.

GEOG 468 Biological Modeling credit: 3 or 4 Hours.

Interdisciplinary modeling course for students interested in dynamic system modeling of living processes; each student will build a model by the end of the course. No special mathematical background required. Same as ANSC 449, CPSC 448, and IB 491. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 444 or equivalent, depending on curriculum.

GEOG 471 Recent Trends in Geog Thought credit: 4 Hours.

Examination of recent trends in human and physical geography. Themes include empiricism, logical positivism, regionalism, Marxism, realism, phenomenology, and post-modernism as applied to geographic research. Emerging geographic literature is explored to identify the latest conceptual developments. 4 undergraduate hours. 4 graduate hours.

GEOG 473 Digital Cartography & Map Design credit: 4 Hours.

Instruction and practice in the basic techniques of map making followed by a consideration of problems involved in the construction of maps for presentation in a reproduced form (i.e., printed, photographed); the selection of proper source materials for the base and body of the map, the compilation and correlation of these materials, and methods of mechanical and photographic reproduction. 4 undergraduate hours. 4 graduate hours.

GEOG 476 Applied GIS to Environ Studies credit: 3 Hours.

Demonstrates how geographic information systems (GIS) have become a major technology ubiquitously applied to solve important problems encountered in geospatial and environmental applications. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 103 or GEOG 104, consent of instructor.

GEOG 477 Introduction to Remote Sensing credit: 3 Hours.

Fundamentals of energy-matter interaction mechanisms, and the manifestation of reflected and emitted radiation on photographs and images; introduces characteristics of aerial films and filters, electro-optical scanners, and digital processing; and emphasizes applications in environmental problems. Same as NRES 477. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 280 (beginning statistics) or equivalent, or consent of instructor.

GEOG 478 Techniques of Remote Sensing credit: 4 Hours.

Optical and digital information processing of imagery acquired from aircraft and satellite remote sensing platforms; includes systems design, mensuration theory, photographic enhancement techniques, and automatic digital classification for all of the standard sensor systems; and laboratory focusing on the design and implementation of information processing techniques with application limited to a survey of uses. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 477 or equivalent.

GEOG 479 Advanced Topics in GIS credit: 3 Hours.

Introduces advanced concepts in Geographic Information Science. Course topics may vary. 3 undergraduate hours. 3 graduate hours. May be repeated, if topics vary, in separate terms to a maximum of 9 hours, but not more than 6 hours in any one term. Prerequisite: GEOG 379 or equivalent.

GEOG 480 Principles of GIS credit: 3 Hours.

Focuses on Geographic Information Science (GIScience) principles that underlie the development of Geographic Information Systems (GIS) software and its intelligent use. Helps students adapt to rapidly changing geospatial technologies. Knowledge gained in this course will be general and, thus, not be limited to any specific software product that may be revised in the future. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 379 and GEOG 380 or equivalent, or consent of instructor.

GEOG 481 Intl Environ Cooperation credit: 3 Hours.

Examines the problems, politics and policies related to environmental issues that require international cooperation to address effectively. Transboundary, regional, and global environmental issues will be analyzed, spanning the atmosphere (acid rain, protection of the ozone layer, and climate change), the oceans (pelagic fisheries), and biodiversity (whaling, trade in endangered species). Discusses methods for increasing international environmental cooperation, such as unilateral actions, trade sanctions, financial aid, non-governmental monitoring and innovations in institutional design. Same as ESE 481. 3 undergraduate hours. 3 graduate hours. Prerequisite: One course in Geography or Political Science or consent of instructor.

GEOG 482 Challenges of Sustainability credit: 3 Hours.

Same as ESE 482 and GEOL 483. See ESE 482.

GEOG 483 Urban Geography credit: 3 Hours.

Broad background of theories, concepts, and methods of research for understanding how and why our cities have reached their current status. Focus on examining the internal structure of the North American city, including analysis of the commercial, industrial, and residential sectors of the urban environment. Particular emphasis is placed on the range of urban theories developed to explain both urban structure and contemporary urban ills. 3 undergraduate hours. 3 graduate hours.

GEOG 484 Cities, Crime, and Space credit: 3 or 4 Hours.

Focusing on US cities, this theory-intensive course surveys traditional and critical perspectives on relations between crime, space, and place. We will explore this interplay within broader contexts of industrial and post-industrial urbanization, concentrating on dynamics including governances, economic processes, and social transformations. Emphasis will be placed on the extent to which these interwoven processes generate, classify, organize, and react to crime across cityscapes. 3 undergraduate hours. 4 graduate hours.

GEOG 489 Programming for GIS credit: 4 Hours.

Introduction to programming to customize and extend the capabilities of geographic information systems. Topics include the principles of programming, advanced function and tools coding, visualization, fundamental spatial data structures, and spatial algorithms. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 379 and GEOG 380 or equivalents, or consent of instructor.

GEOG 491 Research in Geography credit: 2 Hours.

Detailed examination and discussion of the methods of initiating and executing research projects in human or physical geography (taught in separate sections); requires students to write a research proposal of a quality suitable for a graduate thesis. 2 undergraduate hours. 2 graduate hours. Prerequisite: GEOG 471; either graduate standing in geography or senior standing as a geography major and consent of department.

GEOG 493 Democracy and Environment credit: 3 or 4 Hours.

Explores the effects of local democracy on natural resource management and the ways natural resource management can leverage the establishment and consolidation of local democracy. Investigates theoretical foundations of localism and decentralization, and analyzes the policy process by which theory is inscribed in law and project documents and translated into practice. Cases of global environmental policy, such as climate adaptation, UN Reduced Emissions from Deforestation and Degradation of the World Banks' Community Driven Development policies will be used for theoretical and empirical analysis. Draws case examples from developing countries. Same as NRES 494, SOC 493 and UP 493. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 210, course work in social science, or consent of instructor.

GEOG 495 Advanced Topics in Geography credit: 3 or 4 Hours.

Explores special topics not covered in regularly scheduled Geography courses. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary in the same term to a maximum of 9 undergraduate hours or 12 graduate hours or in separate terms to a maximum of 12 undergraduate hours or 12 graduate hours.

GEOG 496 Climate & Social Vulnerability credit: 3 or 4 Hours.

Existing climate variability and likely climate change call for policies to protect vulnerable people who make their livelihoods in a changing environment. Students will explore: 1) causes of climate related stress and disaster; 2) theories of vulnerability and adaptation; 3) practices and policies designed to reduce economic loss, hunger, famine and dislocation in the face of climate trends and events. Focus on multiple policy scales affecting poor and marginal populations, who are disproportionately vulnerable when facing climate stress, drawing on case examples primarily from the developing world. Same as ATMS 446 and SOC 451. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 410, GEOG 466, GEOG 471, GEOG 520, or consent of instructor.

General Geography Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geograph@illinois.edu

A minimum of 35 credit hours of Geography and Geographic Information Science courses are required for the major.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in Geography and Geographic Information Science can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

For distinction: 3.3 GPA overall; 3.3 GPA in GIS courses.

For high distinction: 3.3 GPA overall; 3.75 GPA in GIS courses.

For highest distinction: 3.3 GPA overall; 3.75 GPA in GIS courses; satisfactorily complete an independent project (GEOG 391).

Students should consult their advisors regarding distinction requirements as soon as they enter the major (no later than the end of their junior year).

Code	Title	Hours
Geography and Geographic Information Science Core Requirements		
Select one of the following:		3-4
ATMS/GEOG 100	Introduction to Meteorology	
GEOG 103	Earth's Physical Systems	
GEOG 222	Big Rivers of the World	
Select one of the following:		3-4
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
Choose one of the following:		4
GEOG 371	Spatial Analysis	
GEOG 379	Intro to GIS Systems	
General Geography Concentration Requirements		
Geography and Geographic Information Science courses, selected from 200- to 400-level courses, of which 6 hours must be at the 300 or 400 level (p. 1162)		25-27
Total Hours		35-39

Geographic Information Science Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geograph@illinois.edu

A minimum of 35 credit hours of Geography and Geographic Information Science courses are required for the major.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in Geography and Geographic Information Science can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

For distinction: 3.3 GPA overall; 3.3 GPA in GGIS courses.

For high distinction: 3.3 GPA overall; 3.75 GPA in GGIS courses.

For highest distinction: 3.3 GPA overall; 3.75 GPA in GGIS courses; satisfactorily complete an independent project (GEOG 391).

Students should consult their advisors regarding distinction requirements as soon as they enter the major (no later than the end of their junior year).

Code	Title	Hours
Geography and Geographic Information Science Core Requirements		
Select one of the following:		3-4
ATMS/GEOG 100	Introduction to Meteorology	
GEOG 103	Earth's Physical Systems	
GEOG 222	Big Rivers of the World	
Select one of the following:		3-4
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
GEOG 379	Intro to GIS Systems	4
Geographic Information Science Concentration Requirements		
GEOG 371	Spatial Analysis	4
GEOG 380	GIS II: Spatial Prob Solving	4
Select one of the following courses:		3
CS 105	Intro Computing: Non-Tech	
CS 125	Intro to Computer Science	
or equivalent course approved by the Department's Advisor		
Select a minimum of three courses from the following:		9-11
GEOG 205	Business Location Decisions	
SOC 280	Intro to Social Statistics	
GEOG 412	Geospatial Tech & Society	
ATMS/GEOG 421	Earth Systems Modeling	
PATH/GEOG 439	Health Applications of GIS	

GEOG 460	Aerial Photo Analysis	
GEOG 468	Biological Modeling	
GEOG 473	Digital Cartography & Map Design	
GEOG 476	Applied GIS to Environ Studies	
GEOG 477	Introduction to Remote Sensing	
GEOG 478	Techniques of Remote Sensing	
GEOG 479	Advanced Topics in GIS	
GEOG 480	Principles of GIS	
GEOG 489	Programming for GIS	
Select two additional Geography and Geographic Information Science courses from the Human Geography Concentration and/or Physical Geography Concentration course lists		6-8
Total Hours		36-42

Human Geography Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geograph@illinois.edu

A minimum of 35 credit hours of Geography and Geographic Information Science courses are required for the major.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in Geography and Geographic Information Science can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

For distinction: 3.3 GPA overall; 3.3 GPA in GGIS courses.

For high distinction: 3.3 GPA overall; 3.75 GPA in GGIS courses.

For highest distinction: 3.3 GPA overall; 3.75 GPA in GGIS courses; satisfactorily complete an independent project (GEOG 391).

Students should consult their advisors regarding distinction requirements as soon as they enter the major (no later than the end of their junior year).

Code	Title	Hours
Geography and Geographic Information Science Core Requirements		
Select one of the following:		3-4
ATMS/GEOG 100	Introduction to Meteorology	
GEOG 103	Earth's Physical Systems	
GEOG 222	Big Rivers of the World	
Select one of the following:		3-4

GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
Choose one of the following:		4
GEOG 371	Spatial Analysis	
GEOG 379	Intro to GIS Systems	
Human Geography Concentration Requirements		
200-to 400-level Geography and Geographic Information Science courses (of which at least 6 hours must be at the 300 or 400 level) selected from the following:		25-27
GEOG 204	Cities of the World	
GEOG 205	Business Location Decisions	
GEOG 210	Social & Environmental Issues	
GEOG 215	Resource Conflicts	
GEOG 224	Geog Patterns of Illinois	
SOC 280	Intro to Social Statistics	
NRES/GEOG 287	Environment and Society	
GEOG 310	Political Geography	
GEOG 350	Sustainability and the City	
GEOG 356	Sustainable Development in South Asia	
ESE 320/ GEOG 370	Water Planet, Water Crisis	
GEOG 371	Spatial Analysis	
GEOG 373	Geography Field Course	
GEOG 381	Environmental Perspectives	
GEOG 384	Population Geography	
GEOG 390	Individual Study	
GEOG 391	Honors Individual Study	
GEOG 394	Special Topics Social Geog	
GEOG 410	Green Development	
GEOG 412	Geospatial Tech & Society	
LA 427	Amer Vernacular Cultural Land	
GEOG 438	Geography of Health Care	
PATH/GEOG 439	Health Applications of GIS	
UP/GEOG 446	Sustainable Planning Seminar	
GEOG 455	Geog of Sub-Saharn Africa	
GEOG 465	Transp and Sustainability	
GEOG 466	Environmental Policy	
GEOG 471	Recent Trends in Geog Thought	
GEOG 473	Digital Cartography & Map Design	
GEOG 477	Introduction to Remote Sensing	
GEOG 481	Intl Environ Cooperation	
ESE/GEOG 482	Challenges of Sustainability	
GEOG 483	Urban Geography	
GEOG 493	Democracy and Environment	
GEOG 496	Climate & Social Vulnerability	
Total Hours		35-39

Physical Geography Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geograph@illinois.edu

A minimum of 35 credit hours of Geography and Geographic Information Science courses are required for the major.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in Geography and Geographic Information Science can earn distinction, high distinction, and highest distinction upon graduation. The requirements for these awards are:

For distinction: 3.3 GPA overall; 3.3 GPA in GIS courses.

For high distinction: 3.3 GPA overall; 3.75 GPA in GIS courses.

For highest distinction: 3.3 GPA overall; 3.75 GPA in GIS courses; satisfactorily complete an independent project (GEOG 391).

Students should consult their advisors regarding distinction requirements as soon as they enter the major (no later than the end of their junior year).

Code	Title	Hours
Geography and Geographic Information Science Core Requirements:		
Select one of the following:		3-4
ATMS 100	Introduction to Meteorology	
GEOG 103	Earth's Physical Systems	
GEOG 222	Big Rivers of the World	
Select one of the following:		3-4
GEOG 101	Global Development&Environment	
GEOG 104	Social and Cultural Geography	
GEOG 105	The Digital Earth	
GEOG 106	Geographies of Globalization	
GEOG 210	Social & Environmental Issues	
GEOG 221	Geographies of Global Conflict	
Choose one of the following:		4
GEOG 371	Spatial Analysis	
GEOG 379	Intro to GIS Systems	

Physical Geography Concentration Requirements:

200- to 400-level Geography and Geographic Information Science courses (of which at least 6 hours must be at the 300 or 400 level) selected from the following:

GEOG 210	Social & Environmental Issues	
GEOG 222	Big Rivers of the World	
ESE 320/ GEOG 370	Water Planet, Water Crisis	
NRES/GEOG 287	Environment and Society	
GEOG 371	Spatial Analysis	
GEOG 373	Geography Field Course	
GEOG 381	Environmental Perspectives	
GEOG 390	Individual Study	
GEOG 391	Honors Individual Study	
NRES/GEOG 401	Watershed Hydrology	
GEOG 406	Fluvial Geomorphology	
GEOG 408	Humans and River Systems	
GEOG 412	Geospatial Tech & Society	
ATMS/GEOG 421	Earth Systems Modeling	
IB 439/GEOG 436	Biogeography	
GEOG 460	Aerial Photo Analysis	
GEOG 468	Biological Modeling	
GEOG 471	Recent Trends in Geog Thought	
GEOG 473	Digital Cartography & Map Design	
GEOG 476	Applied GIS to Environ Studies	
GEOG 477	Introduction to Remote Sensing	
GEOG 478	Techniques of Remote Sensing	
GEOG 481	Intl Environ Cooperation	
MATH 220	Calculus	4-5
or MATH 221	Calculus I	
PHYS 101	College Physics: Mech & Heat	4-5
or PHYS 211	University Physics: Mechanics	
Select one of the following:		4
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
Total Hours		47-53

Geology

Tom Johnson

3028 Natural History Building

1301 W. Green St.

Urbana, IL 61801

PH: (217) 333-3540

<http://www.geology.illinois.edu>

The **Sciences and Letters Curriculum major in Geology**, administered by the Department of Geology, is designed for students who want a more flexible course of study than is provided by the Specialized Curriculum in Geology and Geophysics. It may be used by those wishing to obtain a more liberal education and/or background in geology for use in fields such as anthropology, business, mineral economics, regional planning, journalism, law, sales, or library and information science. It is not intended to prepare a student for graduate work in the geological sciences unless the student selects additional courses in mathematics, chemistry, and physics comparable to those required in the Specialized Geology and Geophysics Curriculum. Students must choose one concentration: Geology, Earth and Environmental Sciences,

or Earth Science Teaching. The Earth Science Teaching Concentration is designed for students preparing to teach earth science at the secondary school level.

The **Specialized Curriculum in Geology and Geophysics** is designed for students who plan to pursue graduate study in geology or geophysics or who wish to work professionally in the environmental field upon obtaining the bachelor's degree. It consists of geology, geophysics, and environmental geology concentrations, and offers more training in geology and related science than is required of students who make geology their major in the Sciences and Letters Curriculum. Students must choose one concentration: Geology, Geophysics, or Environmental Geology.

The Department of Geology also sponsors the **Minor in Geology**.

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Select one concentration in consultation with an adviser.

- Earth and Environmental Science Concentration (p. 436)
- Earth Science Teaching Concentration (p. 436)
- Geology Concentration (p. 438)

For the Degree of Bachelor of Science in Geology

Major in Specialized Curriculum in Geology and Geophysics

Select one concentration in consultation with an adviser.

- Geology Concentration (p. 438)
- Geophysics Concentration (p. 439)
- Environmental Geology Concentration (p. 437)

Minor in Geology

The geology minor is designed for students who desire a significant background in Geology to support study and practice of their major field. Selection of courses at the 300- or 400- level will depend on the major and interests of the student.

E-mail: geology@illinois.edu

Web address for department: www.geology.illinois.edu (<http://www.geology.illinois.edu>)

Code	Title	Hours
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
Select at least 10 hours of advanced geology courses from the following:		10-11
GEOL 333	Earth Materials and the Env	
GEOL 380	Environmental Geology	
400-level courses taught by the Department of Geology		
Total Hours		18-19

¹ *Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.*

GEOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GEOL>)

Courses

GEOL 100 Planet Earth credit: 3 Hours.

Introduces non-science majors to physical aspects (earthquakes, volcanoes, floods, tsunamis, mountains, plate tectonics) and historical aspects (formation of earth and life, dinosaurs, ice age, evolution of climate) in earth science. Presents information on earth resources, natural hazards, and development of natural landscapes. Focuses on humanistic issues; provides context for understanding environmental change. Optional lab demonstrations and field trips with co-registration in GEOL 110. Credit is not given for both GEOL 100 and GEOL 101, GEOL 103 or GEOL 107.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 103 Planet Earth QR II credit: 3 Hours.

Topics covered are very similar to those of GEOL 101. Emphasizes application of quantitative methods in deriving geological knowledge. A weekly computer laboratory is an essential component of the course. Credit is not given for both GEOL 103 and GEOL 100, GEOL 101 or GEOL 107.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

GEOL 104 Geology of the National Parks credit: 3 Hours.

Develops geologic background, concepts, and principles through study of selected national parks and monuments. Examines the geologic framework and history, modern geologic processes, and factors influencing the present day landscape for each park area. Same as ESE 104.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 107 Physical Geology credit: 4 Hours.

Introduces Earth phenomena and processes. Includes minerals and rocks, continental drift, plate tectonics, rock deformation, igneous and sedimentary processes, geologic time, landscape evolution, internal structure and composition of the earth, groundwater, seismology and earthquakes, and formation of natural resources. Emphasizes the chemical and physical aspects of the Earth, and the basis for geological inference. Field trip required. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 107 and GEOL 100, GEOL 101 or GEOL 103. Prerequisite: Intended for science and science-oriented students.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 110 Exploring Geology in the Field credit: 1 Hour.

Introduces practical techniques for identification of rocks, minerals, and fossils; interpretation of geologic maps and cross-sections; appreciation of Midwestern geologic history and geologic features and landforms in the field. Additional fees may apply. See Class Schedule.

GEOL 111 Emergence of Life credit: 3 Hours.

Examines important theoretical and practical questions regarding the origin and evolution of life, as well as the search for life elsewhere in the universe. Uses the pioneering work of Carl Woese, whose "Tree of Life" revolutionized our understanding of the fundamental structure and evolutionary relatedness of all living entities on Earth. Same as ESE 111. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

GEOL 117 The Oceans credit: 3 Hours.

Integrated introduction to oceanography and marine geology and geophysics. Topics include ocean-basin formation and evolution (in the context of plate tectonics), ocean ecology, the hydrologic cycle, water chemistry, currents and waves, the interaction of oceans with climate, coastal hazards, resources, pollution, and the Law of the Sea. Course is oriented toward students not majoring in science. Same as ESE 117.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 118 Natural Disasters credit: 3 Hours.

Introduces the nature, causes, risks, effects, and prediction of natural disasters including earthquakes, volcanoes, landslides, subsidence, global climate change, severe weather, coastal erosion, floods, mass extinctions, and meteorite impacts; covers scientific principles and case histories of natural disasters as well as human responses (societal impact, mitigation strategies, and public policy). Same as ESE 118 and GLBL 118.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 143 History of Life credit: 3 Hours.

Evolution of life from its beginning, illustrating changing faunas and floras through time; the invasion of land and of the skies; the effects of a changing atmosphere, changing climates, and continental drift. Emphasis on dinosaur evolution, ecology, and extinction; also other vertebrates, including mammal-like reptiles, mammals, and the emergence of humans, as well as plants and invertebrates. Same as ESE 143.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

GEOL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GEOL 201 History of Geology credit: 3 Hours.

Traces the development of key ideas in the science, beginning with musings of the ancient Greek and Roman philosophers and early observations of the Earth by European and Arab scholars. Considers advances in mapmaking that span thousands of years and examines the origins of the Geologic Time Scale, including determination of the ages of rocks. Looks at early geologists from around the world, in the US, in Illinois, and at the U of I. Reads some classic papers establishing the grand unifying theory of geology: plate tectonics. Prerequisite: A 100-level geology course (excluding GEOL 110 and GEOL 143). Intended for both non-science students and geology majors.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

GEOL 208 History of the Earth System credit: 4 Hours.

Presents systematic analysis of formation and evolution of the Earth and its dynamic systems (lithosphere, hydrosphere, atmosphere, and biosphere). Also introduces methods of reconstructing Earth's history through use of geochronology, paleontology, and the stratigraphic records. Introduces the geological history of life evolution, mountain belts and continents, geochemical systems, climate, sea level, and the Earth's interior. Field trip required. Same as ESE 208. Additional fees may apply. See Class Schedule. Prerequisite: One of GEOL 100, GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 333 Earth Materials and the Env credit: 4 Hours.

Studies the origin, identification, and environmental significance of earth materials (minerals, rocks, and soil). Environmental topics include: mineral resources; acid mine drainage; volcanic hazards; swelling soils; engineering strength, porosity/permeability, and architectural uses of earth materials; and asbestos. One day field trip is required. Same as ESE 333. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 333 and GEOL 432. Prerequisite: CHEM 102 and CHEM 103; GEOL 100 and GEOL 110, or one of GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

GEOL 350 Volcanoes credit: 3 Hours.

Explores volcanoes from a hazards standpoint by investigating case studies of volcanic disaster, evaluating important controls of volcanism such as magma viscosity and behavior of bubbles, and introducing the monitoring of active volcanoes with cutting edge methods such as seismicity, gravity, and remote sensing. Understanding the interactions among these complex parameters plays a critical role in assessing the evolution of shallow magma systems and investigating their potential for remaining stable or developing into hazardous eruptive systems, which can threaten nearby populations. Prerequisite: Any 100-level Geology course (excluding GEOL 106, GEOL 111, and GEOL 143).

GEOL 370 Water Planet, Water Crisis credit: 3 Hours.

Same as ESE 320 and GEOG 370. See ESE 320.

GEOL 380 Environmental Geology credit: 4 Hours.

Increases student understanding of environmental issues of water supply and pollution, waste disposal, energy, environmental health, global change, and land evaluation and use by emphasizing the role of geology and its relationships to human activities. Course requires a one-day field trip. Same as ENVS 380. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 380 and ESE 445. Prerequisite: CHEM 102 and CHEM 103; and GEOL 100 and GEOL 110, or one of GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

GEOL 390 Individual Study credit: 1 to 4 Hours.

Research and individual study in geology. May be repeated. A maximum of 8 hours of GEOL 390 plus GEOL 391 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; consent of supervising faculty member; advance approval by Department of Geology.

GEOL 391 Individual Honors Study credit: 1 to 4 Hours.

Research and individual study in geology for honors credit. May be repeated. A maximum of 8 hours of GEOL 390 plus GEOL 391 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; consent of supervising faculty member and of departmental honors advisor; advance approval by Department of Geology.

GEOL 401 Geomorphology credit: 4 Hours.

History, origin, and characteristics of land forms produced by weathering, fluvial, glacial, wind, and wave processes or by a combination of these acting upon the major kinds of geologic materials and structures. Lectures, laboratory, and field trips. Same as ESE 411. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 208 or consent of instructor.

GEOL 406 Fluvial Geomorphology credit: 4 Hours.

Same as GEOG 406 and NRES 406. See GEOG 406.

GEOL 411 Structural Geol and Tectonics credit: 4 Hours.

Introduction to principles of rock deformation, stress, and strain; description and interpretation of geologic structures; study of methods for structural analysis; outline of geotectonic processes; three hours of lecture and a three-hour lab per week. Required four-day field trip. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 107 or consent of instructor.

GEOL 415 Field Geology credit: 2 to 8 Hours.

Group field study in a prominent geologic locality; includes in-class meetings, student-led presentation, and field trip; trips run during spring break, winter break, in mid-end May or intercession; dates depend on location. Additional fees may apply. See Class Schedule. 2 to 8 undergraduate hours. 2 to 8 graduate hours. May be repeated. Prerequisite: Consent of instructor.

GEOL 417 Geol Field Methods, Western US credit: 6 Hours.

Field course based in the mountains of the western United States. Provides intensive practical experience in geologic mapping, as well as instruction in field structural, stratigraphic, geomorphologic, and petrologic analysis. Offered during summer session only. Additional fees may apply. See Class Schedule. 6 undergraduate hours. 6 graduate hours. Prerequisite: Eight hours of 400-level credit in geology, or consent of instructor; GEOL 411, GEOL 432, and GEOL 440 are recommended.

GEOL 432 Mineralogy and Mineral Optics credit: 4 Hours.

Introduction to: crystallography; crystal optics; structure, composition, properties, stability and geological occurrences of minerals; and mineral identification. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for both GEOL 333 and GEOL 432. Prerequisite: GEOL 208 and CHEM 104 and CHEM 105.

GEOL 436 Petrology and Petrography credit: 4 Hours.

Study of the minerals, compositions, textures, structures, classifications, and origins of igneous and metamorphic rocks; lectures emphasize rock forming processes (petrology), and laboratories emphasize use of the petrographic microscope (petrography). Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 432.

GEOL 440 Sedimentology and Stratigraphy credit: 4 Hours.

Introduces dynamics of sedimentation, geology of sedimentary basins, the distribution of geologic processes through time, definition and correlation of stratigraphic units, principles of paleogeography, stratigraphy and tectonics. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 208 or consent of instructor.

GEOL 450 Probing the Earth's Interior credit: 3 Hours.

Overview of how seismology, magnetics, gravity, geodesy, and surface geology can help us understand the Earth from its surface to its core as well as its temporal evolution. Topics include the internal composition and dynamics of Earth, generation of Earth's gravitational and geomagnetic fields, driving mechanisms for tectonic plate motion, continental deformation, and surface topography. Students wanting a more quantitative treatment of geophysics should enroll in GEOL 452. 3 undergraduate hours. 3 graduate hours. Credit is not given for both GEOL 450 and GEOL 452. Prerequisite: PHYS 102 or 212, GEOL 107 or 101, or consent of instructor.

GEOL 451 Env and Exploration Geophysics credit: 4 Hours.

Discusses geophysical methods to reveal subsurface structures. Topics include seismic methods, gravity, magnetics, electrical methods, ground penetrating radar, borehole geophysics, and their applications to hydrocarbon and mineral exploration as well as engineering and environmental investigations. 4 undergraduate hours. 4 graduate hours. Several required local trips for field experiments. Prerequisite: MATH 241 and PHYS 212; or consent of instructor.

GEOL 452 Introduction to Geophysics credit: 4 Hours.

Provides a broad overview of basic concepts and fundamental knowledge of the physics of the Earth. Topics include seismology, gravity, geomagnetism, Earth's thermal state, and geodynamics. Intended for undergraduates in the geophysics concentration and other students who want a more quantitative treatment of the subject than GEOL 450. 4 undergraduate hours. 4 graduate hours. Credit is not given for both GEOL 452 and GEOL 450. Prerequisite: MATH 241 and PHYS 211; or consent of instructor.

GEOL 454 Introduction to Seismology credit: 3 or 4 Hours.

Introducing the basic theory of seismic wave generation and propagation and its application to Earth structure and earthquakes, including body waves, surface waves, inference of Earth structure, seismic prospecting, earthquake mechanisms, and strong ground motions. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students participating in optional class projects receive an additional hour of credit. Prerequisite: MATH 285 or consent of instructor.

GEOL 460 Geochemistry credit: 3 Hours.

Fundamental chemical and physical concepts applied to geological processes; topics include: origin, distribution, and geochemical behavior of elements; chemical evolution of the Earth; geochemistry of natural waters and sedimentary rocks; isotope geochemistry, crystal chemistry, trace element geochemistry and organic geochemistry. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOL 101 or GEOL 107; CHEM 104; CHEM 105; MATH 220 or MATH 221; or consent of instructor.

GEOL 470 Introduction to Hydrogeology credit: 4 Hours.

Introduction to environmental and economic aspects of the occurrence and movement of groundwater through the earth's crust; topics include the hydrologic cycle, groundwater contamination, petroleum migration, formation of mineral resources, and groundwater chemistry. Same as ESE 470. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or MATH 221; senior standing is recommended; or consent of instructor.

GEOL 481 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOG 421 and NRES 422. See ATMS 421.

GEOL 483 Challenges of Sustainability credit: 3 Hours.

Same as ESE 482 and GEOG 482. See ESE 482.

GEOL 484 Paleoclimatology credit: 4 Hours.

Survey of Earth's past climate variability, ranging from million-year to interannual time scales. Introduction to paleoclimate proxies including tree rings, marine and lake sediment cores, ice cores, corals, and speleothems. Focus on the drivers of climate change, major modes of climate variability, and how paleoclimate data can inform projections of future climate change. Same as IB 484. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing required.

GEOL 485 Risk Analysis in Earth Science credit: 3 or 4 Hours.

Same as ATMS 404. See ATMS 404.

GEOL 488 Environmental Stable Isotopes credit: 3 Hours.

Same as ATMS 422, NRES 478, and IB 488. See IB 488.

GEOL 490 Undergraduate Research credit: 1 to 3 Hours.

Students will conduct research under the direct supervision of a geology faculty member. Research topics will vary, and either a summary paper or a poster presentation at a regional or national science conference is required. 1 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated up to six hours. A maximum of 6 credit hours of GEOL 490 and GEOL 491 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; Consent of supervising faculty member; advance approval by Department of Geology. Intended primarily for sophomores and juniors; not available to freshman students.

GEOL 491 Honors Undergraduate Research credit: 1 to 3 Hours.

Students will conduct research for honors credit under the direct supervision of a geology faculty member. Research topics will vary, and either a summary paper or a poster presentation at a regional or national science conference is required. 1 to 3 undergraduate hours. No graduate credit. May be repeated up to 6 hours. A maximum of 6 credit hours of GEOL 490 and GEOL 491 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; Consent of supervising faculty member and of departmental honors advisor; advance approval by Dept. of Geology. Intended primarily for sophomores and juniors who are James Scholars or Chancellor's Scholars; not available to freshman students.

GEOL 492 Senior Thesis credit: 2 to 8 Hours.

Research in geology, with thesis; a thesis must be submitted for credit to be received. 2 to 8 undergraduate hours. No graduate credit. May be repeated. A maximum of 10 hours of GEOL 492 plus GEOL 493 may be counted toward graduation. Prerequisite: Consent of supervising faculty member.

GEOL 493 Honors Senior Thesis credit: 2 to 8 Hours.

Research in geology with honors thesis; a thesis must be submitted for credit to be received. 2 to 8 undergraduate hours. No graduate credit. May be repeated. A maximum of 10 hours of GEOL 492 plus GEOL 493 may be counted toward graduation. Prerequisite: Consent of supervising faculty member and of departmental honors advisor.

GEOL 497 Special Topics in Geology credit: 1 to 4 Hours.

Seminar or lectures in subjects not covered by regular course offerings; for advanced undergraduates and graduate students. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Consent of instructor.

Earth Science Teaching Concentration within the Sciences and Letters Curriculum

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geology@illinois.edu

Web address for department: www.geology.illinois.edu (<http://www.geology.illinois.edu>)

Minimum required course work normally equates to 55-59 hours in the concentration and 39 hours for the Teacher Education Minor in Secondary School Teaching.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school (grades 9-12) Earth and Space Science through the AP/honors level and biology, chemistry, environmental science and physics up to but not including the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters. Some students require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

In order to remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental distinction: The student must have a grade-point average of at least 3.5 in all geology courses as well as all courses in the Teacher Education Minor and a GPA of at least 3.0 in all other science and mathematics courses and must present evidence of exemplary teaching.

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
GEOL 333	Earth Materials and the Env ²	4
MATH 220	Calculus	4-5

or MATH 221	Calculus I	
or MATH 234	Calculus for Business I	
Additional Required Coursework		
Teacher Education Minor in Secondary School Teaching (p. 139)		39
Select one group of courses:		5-6
ASTR 100 & ASTR 131 & ASTR 132	Introduction to Astronomy and The Solar System Lab and Stars and Galaxies Lab	
or		
ASTR 121 & ASTR 122	Solar System and Worlds Beyond and Stars and Galaxies	
ATMS 100	Introduction to Meteorology	3
IB 100	Biology in Today's World	3
Select one group of courses:		4
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
or		
CHEM 202 & CHEM 203	Accelerated Chemistry I and Accelerated Chemistry Lab I	
GEOL 117	The Oceans	3
GEOL 143	History of Life	3
Advanced-hour course work in Geology		8
Select one group of courses:		10-12
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	
or		
PHYS 211 & PHYS 212 & PHYS 213 & PHYS 214	University Physics: Mechanics and University Physics: Elec & Mag and Univ Physics: Thermal Physics and Univ Physics: Quantum Physics	

¹ Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

² Students can substitute GEOL 333 with GEOL 432.

Earth and Environmental Science Concentration within the Sciences and Letters Curriculum

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geology@illinois.edu

Minimum required coursework normally equates to 43 hours including at least 26 hours in Geology.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students who maintain grade point averages of at least 3.5 in all geology courses and 3.0 in all other science and mathematics courses and who complete an acceptable senior thesis, including at least four hours of credit in GEOL 492 or GEOL 493, are recommended for graduation with distinction.

Code	Title	Hours
Core requirements:		
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
Select one of the following MATH courses: ²		4-5
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Courses beyond the core requirements		
ATMS 140	Climate and Global Change	3
or GEOL 118	Natural Disasters	
GEOL 333	Earth Materials and the Env	4
or GEOL 432	Mineralogy and Mineral Optics	
GEOL 380	Environmental Geology	4
Ten to twelve hours of additional advanced geology courses		10-12
Six to eight hours Environmental Studies electives. (see Geology advisor for list of approved courses)		6-8

¹ Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

² An introductory Statistics course, e.g., STAT 100, SOC 280, ECON 202, or a second semester of Calculus is recommended.

Environmental Geology Concentration within the Specialized Curriculum

For the Degree of Bachelor of Science in Geology

Major in Specialized Curriculum in Geology and Geophysics

Graduation requires a grade point average of at least 2.0 overall and a 2.0 average in all required science and technical courses (geology, physics, mathematics, chemistry, and technical requirements listed below). The Department of Geology will supply upon request a Guide for Geology Undergraduates giving more information about the curriculum.

E-mail: geology@illinois.edu

Web address for department: www.geology.illinois.edu (<http://www.geology.illinois.edu>)

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 126 hours

Departmental distinction: Students who maintain a grade point average of at least 3.5 in all geology courses and 3.0 in all other science and mathematics courses and who complete an acceptable senior thesis, including at least 4 hours credit in GEOL 492 or GEOL 493, are recommended for graduation with distinction.

Code	Title	Hours
Chemistry- Select one group of courses:		8-9
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
24 hours of Geology Courses		
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
GEOL 380	Environmental Geology	4
GEOL 401	Geomorphology	4
GEOL 451	Env and Exploration Geophysics	4
or GEOL 452	Introduction to Geophysics	
GEOL 470	Introduction to Hydrogeology	4
Mathematics		11-12
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	
MATH 241	Calculus III	
Physics		8-10
PHYS 211 & PHYS 212	University Physics: Mechanics and University Physics: Elec & Mag	
or		
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	
Statistics- Select one of the following:		4
CPSC 440	Applied Statistical Methods I	
STAT 400	Statistics and Probability I	
Additional Technical Requirements		24
Select from the following courses. At least 9 hours must be geology courses and at least 9 hours must be non-geology courses.		
CEE 330	Environmental Engineering	
CHEM 232	Elementary Organic Chemistry I	
CS 101	Intro Computing: Engrg & Sci	
CS 125	Intro to Computer Science	
ENVS 431	Environ Toxicology & Health	
GEOG 477	Introduction to Remote Sensing	

GEOL 411	Structural Geol and Tectonics
GEOL 417	Geol Field Methods, Western US ²
GEOL 432	Mineralogy and Mineral Optics
GEOL 436	Petrology and Petrography
GEOL 440	Sedimentology and Stratigraphy
GEOL 460	Geochemistry
MATH 225	Introductory Matrix Theory
MATH 415	Applied Linear Algebra
MATH 285	Intro Differential Equations
MATH 441	Differential Equations
MCB 100	Introductory Microbiology
MCB 101	Intro Microbiology Laboratory
PHYS 213	Univ Physics: Thermal Physics
PHYS 214	Univ Physics: Quantum Physics
STAT 420	Methods of Applied Statistics
TAM 210	Introduction to Statics
TAM 211	Statics

¹ Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

² GEOL 417 is a 6-hour summer field course taught off campus.

Geology Concentration within the Sciences and Letters Curriculum

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: geology@illinois.edu

Minimum required course work normally equates to 47-52 hours including at least 26 hours in Geology.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students who maintain grade point averages of at least 3.5 in all geology courses and 3.0 in all other science and mathematics courses and who complete an acceptable senior thesis, including at least four hours of credit in GEOL 492 or GEOL 493, are recommended for graduation with distinction.

Code	Title	Hours
Core requirements:		
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
Select one of the following MATH courses: ²		4-5

MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Additional requirements beyond the core requirements:		
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
PHYS 101	College Physics: Mech & Heat	4-5
or PHYS 211	University Physics: Mechanics	
GEOL 411	Structural Geol and Tectonics	4
GEOL 417	Geol Field Methods, Western US ³	6
GEOL 432	Mineralogy and Mineral Optics	4
GEOL 436	Petrology and Petrography	4
GEOL 440	Sedimentology and Stratigraphy	4
Three to four hours of advanced Geology or cognate science elective		3-4

¹ Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

² An introductory Statistics course, e.g., STAT 100, SOC 280, ECON 202, or a second semester of Calculus is recommended

³ GEOL 417 is a summer field course taught off campus.

Geology Concentration within the Specialized Curriculum

For the Degree of Bachelor of Science in Geology

Major in Specialized Curriculum in Geology and Geophysics

Graduation requires a grade point average of at least 2.0 overall and a 2.0 average in all required science and technical courses (geology, physics, mathematics, chemistry, and technical requirements listed below). The Department of Geology will supply upon request a Guide for Geology Undergraduates giving more information about the curriculum.

E-mail: geology@illinois.edu

Web address for department: www.geology.illinois.edu (<http://www.geology.illinois.edu>)

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 126 hours

Departmental distinction: Students who maintain a grade point average of at least 3.5 in all geology courses and 3.0 in all other science and mathematics courses and who complete an acceptable senior thesis, including at least 4 hours credit in GEOL 492 or GEOL 493, are recommended for graduation with distinction.

Code	Title	Hours
Chemistry: Select one group of courses:		
CHEM 102	General Chemistry I	8-9

CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
45 hours of Geology Courses: ¹		
GEOL 107	Physical Geology ²	4
GEOL 208	History of the Earth System	4
GEOL 143	History of Life	3
GEOL 411	Structural Geol and Tectonics	4
GEOL 417	Geol Field Methods, Western US ³	6
GEOL 432	Mineralogy and Mineral Optics	4
GEOL 436	Petrology and Petrography	4
GEOL 440	Sedimentology and Stratigraphy	4
Select one of the following:		3-4
GEOL 450	Probing the Earth's Interior	
or GEOL 452	Introduction to Geophysics	
GEOL 460	Geochemistry	3
6 additional hours 300- or 400-level geology		6
Mathematics		13-15
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	
MATH 225	Introductory Matrix Theory	
or MATH 415	Applied Linear Algebra	
MATH 241	Calculus III	
Physics. Select one group of courses:		8-10
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
or		
PHYS 101	College Physics: Mech & Heat	
PHYS 102	College Physics: E&M & Modern	
Additional Technical Requirements		3
Select at least 3 hours from the following:		
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
CS 101	Intro Computing: Engrg & Sci	
CS 125	Intro to Computer Science	
CPSC 440	Applied Statistical Methods I	
STAT 400	Statistics and Probability I	
MATH 285	Intro Differential Equations	
MATH 441	Differential Equations	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	

¹ Students transferring into the geology concentration from another science or engineering program may substitute up to 8 hours of 300- or 400-level science or engineering credits for 8 hours of 300- or 400-level geology courses with departmental approval.

² Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

³ GEOL 417 is a 6-hour summer field course taught off campus.

Geophysics Concentration within the Specialized Curriculum

For the Degree of Bachelor of Science in Geology

Major in Specialized Curriculum in Geology and Geophysics

Graduation requires a grade point average of at least 2.0 overall and a 2.0 average in all required science and technical courses (geology, physics, mathematics, chemistry, and technical requirements listed below). The Department of Geology will supply upon request a Guide for Geology Undergraduates giving more information about the curriculum.

E-mail: geology@illinois.edu

Web address for department: www.geology.illinois.edu (<http://www.geology.illinois.edu>)

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 126 hours

Departmental distinction: Students who maintain a grade point average of at least 3.5 in all geology courses and 3.0 in all other science and mathematics courses and who complete an acceptable senior thesis, including at least 4 hours credit in GEOL 492 or GEOL 493, are recommended for graduation with distinction.

Code	Title	Hours
Chemistry: Select one group of courses:		
8-9		
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
22 hours of Geology Courses		
GEOL 107	Physical Geology ¹	4
GEOL 208	History of the Earth System	4
GEOL 452	Introduction to Geophysics	4
10 additional hours of 300 or 400 level geology courses		10
Mathematics		16-18
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	

MATH 241	Calculus III	
MATH 225 or MATH 415	Introductory Matrix Theory Applied Linear Algebra	
MATH 285	Intro Differential Equations	
Physics		15-17
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	
Select one of the following:		
PHYS 325	Classical Mechanics I	
or		
TAM 210 & TAM 212	Introduction to Statics and Introductory Dynamics	
Additional Technical Requirements		13
CS 101 or CS 125	Intro Computing: Engrg & Sci Intro to Computer Science	
MSE 401 or PHYS 427 or CHEM 444	Thermodynamics of Materials Thermal & Statistical Physics Physical Chemistry II	
Six hours of other 300- or 400-level science, math, or engineering courses selected with adviser approval.		

¹ Students who decide to follow the curriculum after first taking GEOL 100 or GEOL 103 should enroll in GEOL 208. GEOL 100 or GEOL 103 will be accepted as a substitute for GEOL 107, but students should be aware that these courses are not intended for science majors.

Germanic Languages and Literatures

Stephanie Hilger

2090 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 333-1288

<http://www.germanic.illinois.edu>

The Department of Germanic Languages and Literatures offers the following majors and minors along with study abroad programs:

The **BALAS in Germanic Studies** serves to develop competence in German or Scandinavian languages and cultures. Students will gain familiarity with the structure of the language and its use in the context of business, contemporary culture, intellectual history, literature, and science. Students specialize in one of the following concentrations:

- German Culture and Literature Concentration
- German Business and Commercial Studies Concentration
- German Linguistics Concentration
- Scandinavian Studies Concentration

The **BA in the Teaching of German** prepares student to teach in German.

The **5 year BALAS/MA in Germanic Studies** allows students to receive two degrees, a BALAS in Germanic Languages and Literatures and an MA in German.

The **minor in German** offers students a background in the language through the advanced undergraduate level, an introduction to the study

of German literary classics, and a knowledge of the history of German culture.

The **minor in Scandinavian Studies** offers students exposure to the study of a Scandinavian language and broad knowledge of Scandinavian culture, literature, film, art, and history.

The **5 Year BALAS/MA in German and European Union Studies** allows students to receive two degrees, a BALAS in Germanic Studies and an MA in European Union Studies.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Students must select one concentration in consultation with an adviser.

- German Culture and Literature Concentration (p. 447)
- German Business and Commercial Studies Concentration (p. 447)
- German Linguistics Concentration (p. 446)
- Scandinavian Studies Concentration (p. 446)

For the Degree of Bachelor of Arts in the Teaching of German

Curriculum Preparatory to the Teaching of German (p. 444)

5 year BALAS/MA in Germanic Studies

The Department of Germanic Languages and Literatures offers a 5-year program leading to two degrees, a BALAS in Germanic Studies and an MA in German. In order to be admitted to this program, student can apply during their second or third year of studies. Requirements for this program are identical to those for the BALAS and the MA in the Department of Germanic Languages and Literatures.

In order to be admitted to the 5-year BALAS/MA during their *second* year, students will need to be in good standing, have finished GER 211 and GER 331, have a general **GPA of 3.0** and a German GPA of 3.0, and be required to write a short essay in German.

In order to apply for the 5-year BALAS/MA during their *third* year, students will have to have finished GER 401 and GER 420, have a general **GPA of 3.0** and a German GPA of 3.0, and be required to write a short essay in German.

The department will continue to monitor the GPAs of students admitted to the BALAS/MA program into their third and fourth years and before formal admission to the Graduate College. The decision about students' admission to the 5-year program will be made by the graduate admissions committee in conjunction with undergraduate and graduate advisors of the department. The Department will consider students in the fifth year of this program for departmental support as Teaching Assistants and Research Assistants, or for fellowships and scholarships.

The minimum total number of hours required for graduation from the BALAS/MA program is 152. Up to 12 hours not required for the BALAS (120 hours) taken during the fourth year can be used to meet the requirements for the MA (32 hours). Students admitted to the program will receive both degrees once all requirements for the 5-year BALAS/MA degree program have been successfully completed. More detailed information may be obtained from the departmental office.

5 Year BALAS/MA in German and European Union Studies

The Department of Germanic Languages & Literatures with the European Union Center offers a 5-year BALAS/MA degree program in German (including a Scandinavian Studies Concentration) and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS-granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the standalone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; the BALAS and MA degrees will be conferred separately and independently. More detailed information may be obtained from department and EUC offices.

- Minor in German (p. 445)
- Minor in Scandinavian Studies (p. 445)

GER Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GER>)

German Courses

GER 101 Beginning German I credit: 4 Hours.

Oral practice, reading, and grammar for beginners.

GER 102 Beginning German II credit: 4 Hours.

Continuation of GER 101. Prerequisite: One semester of college German or equivalent.

GER 103 Intermediate German I credit: 4 Hours.

Continuation of GER 102. Prerequisite: Two semesters of college German or equivalent.

GER 104 Intermediate German II credit: 4 Hours.

Continuation of GER 103. Prerequisite: Three semesters of college German or equivalent.

GER 189 Living German - German Living credit: 1 Hour.

Practice in speaking German for students living in the German House. Approved for letter and S/U grading. May be repeated to a maximum of 3 hours. Prerequisite: Elementary speaking knowledge of German.

GER 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated once. Prerequisite: Consent of departmental honors advisor.

GER 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. May be repeated.

GER 200 German Literature in Trans credit: 3 Hours.

Introduction to German literature for students with no knowledge of German. Same as CWL 224. May be repeated if topics vary.

GER 201 German Popular Culture credit: 3 Hours.

Introduction to the study of modern and contemporary German culture through examining examples of popular culture from the late-eighteenth century to the present. Looks at texts and films as a mirror and critique of modern German society. Topics to be discussed: nationalism, gender, ethnicity, minority cultures, Jewish life in Germany, German images of other cultures, etc. Course taught in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

GER 205 Germany and Europe credit: 3 Hours.

Introduction into major issues in contemporary German society with a special focus on Germany's functioning within Europe and the European Union through novels, films, essays, interviews etc. Course taught in English.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

GER 211 Conversation and Writing I credit: 3 Hours.

Prerequisite: GER 104 or equivalent, or consent of instructor.

GER 212 Conversation and Writing II credit: 3 Hours.

Continuation of GER 211. Prerequisite: GER 211 or equivalent, or consent of instructor.

GER 250 Grimms' Fairy Tales - ACP credit: 3 Hours.

Special attention is paid to the Grimms' tales in terms of traditional narrative genres, elements of life in early modern Europe, and versions from Italy and France as well as Germany. Course is conducted in English. Same as CWL 250 and ENGL 267. Credit is not given for both GER 250 and GER 251. Prerequisite: Completion of the Campus Composition I requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

GER 251 Grimm's Fairy Tales in Context credit: 3 Hours.

Special attention is paid to the Grimms' tales in terms of traditional narrative genres, elements of life in early modern Europe, and versions from Italy and France as well as Germany. Course is conducted in English. Same as CWL 254 and ENGL 266. Credit is not given for both GER 251 and GER 250.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

GER 260 The Holocaust in Context - ACP credit: 3 Hours.

Jewish contributions to German Literature from 1200 to the present day. Includes trips to the University Library's Rare Book Room. Same as CWL 271 and ENGL 268. Credit is not given for both GER 260 and GER 261. Prerequisite: Completion of the Campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

GER 261 The Holocaust in Context credit: 3 Hours.

Examines cultural representations of the Holocaust in literature, film, and critical essays. Same as CWL 273 and ENGL 269. Credit is not given for both GER 261 and GER 260.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

GER 270 Sexuality and Literature credit: 3 Hours.

Examination of the historical contexts in which sexuality has been debated during the past three centuries, and to what extent sexuality is perceived differently in diverse cultures. Part one will look at the Western tradition, especially Germany. Part two will shift focus to the non-Western world, especially to the colonial history of Indonesia. Same as CWL 272 and GWS 270.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

GER 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in German language, literature, civilization, and in other academic areas appropriate to the student's course of study. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 18 hours; may be repeated in separate terms to a maximum of 36 hours. Prerequisite: GER 104 or equivalent; 2.75 overall average; 3.0 average in German courses.

GER 320 German for Business credit: 3 Hours.

Introduces German business language as used in basic operations in retail/wholesale, export/import, banking transactions. Prerequisite: GER 211 or consent of instructor.

GER 321 German for Economics credit: 3 Hours.

German language as used in professional contexts involving economic matters: texts and documents relating to forms of enterprises and their financing, to macroeconomic structures of domestic and foreign trade, and to reports on the economies of German-speaking countries. Prerequisite: GER 320 or consent of instructor.

GER 331 Intro to German Literature credit: 3 Hours.

Introductory study of representative works (prose, drama, lyric) by outstanding German, Austrian, and Swiss writers of the modern period. Prerequisite: Two years of college German or equivalent.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

GER 332 German Literature and Culture credit: 3 Hours.

In German. Seminar in the literature and culture of German-speaking countries since 1750. Topic varies. Format: lecture; discussion; film screenings. Prerequisite: GER 331 or equivalent.

GER 385 Politics of the European Union credit: 3 Hours.

Same as EURO 385, FR 385, and PS 385. See PS 385.

GER 396 Special Topics German Studies credit: 3 Hours.

Introductory study in such topics as individual authors, selected literary movements or periods, modes of inquiry in literary study, minor genres, subgenres, extraliterary influences, etc. Same as CWL 328. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Reading fluency in German beyond the fourth-semester college level.

GER 401 Global Issues in German credit: 3 Hours.

Introduction to global issues in German media. Taught in German. 3 undergraduate hours. 3 graduate hours. Prerequisite: GER 212 or equivalent.

GER 403 German-English Translation: Theory & Practice credit: 3 Hours.

Theory and practice of translating technical, commercial, scientific, and literary texts from German into English and vice versa. Same as TRST 403. 3 undergraduate hours. 3 graduate hours. Prerequisite: GER 401 or consent of instructor.

GER 405 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, ENGL 486, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

GER 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, ITAL 418, LING 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

GER 420 German Cultural History credit: 4 Hours.

A general introduction to German culture from the pre-Christian period to the twenty-first century, focusing on the tension between forces of history and modernization in German culture. Course materials include literary and philosophical texts, film, painting, and music. Particular attention will be paid to the role of art in society. 4 undergraduate hours. 4 graduate hours. Prerequisite: One 200-level German course and GER 331; or consent of instructor.

GER 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

GER 465 Ling Structures of German credit: 3 Hours.

Survey of the linguistic structures of German in historical, geographic, and social context. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of college German or equivalent.

GER 470 Middle Ages to Baroque credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 750-1720. Same as MDVL 470. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 6 hours if topics vary. Prerequisite: GER 332 or equivalent.

GER 471 Enlightenment to Romanticism credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1720 to 1830. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 472 Realism to Expressionism credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1830 to 1920. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 473 1920s to Today credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1920 to the present. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, ITAL 489, LING 489, PORT 489, and SPAN 489. See LING 489.

GER 491 Honors Senior Thesis credit: 1 to 4 Hours.

Intended primarily for candidates for honors in German, but open to other seniors. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; consent of instructor.

GER 493 German Cinema I credit: 3 Hours.

Focus on the rise of German film from its earliest beginnings until 1945. Same as MACS 493. 3 undergraduate hours. 3 graduate hours.

GER 494 German Cinema II credit: 3 Hours.

Study of German film from 1945 until the present. Same as MACS 494. 3 undergraduate hours. 3 graduate hours.

GER 496 Special Topics German Studies credit: 3 Hours.

Intensive study of restricted topics in German language, literature, and culture. 3 undergraduate hours. 3 graduate hours. May be repeated as topics vary to a maximum of 9 undergraduate hours or 8 graduate hours. Prerequisite: Three years of college German or equivalent.

GMC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GMC>)

Germanic Courses**GMC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

May be repeated.

SCAN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SCAN>)

Scandinavian Courses**SCAN 101 Beginning Scandinavian I credit: 4 Hours.**

First course in the Scandinavian language sequence (usually Swedish). Instruction is by immersion, emphasis is on basic skills: reading, writing, speaking, and aural comprehension.

SCAN 102 Beginning Scandinavian II credit: 4 Hours.

Second course in the Scandinavian language sequence (usually Swedish). Instruction is by immersion, emphasis is on further developing basic skills: reading, writing, speaking, and aural comprehension. Prerequisite: SCAN 101 or consent of instructor.

SCAN 103 Intermediate Scandinavian I credit: 4 Hours.

Third course in the Scandinavian language sequence (usually Swedish). Emphasis is on conversational skills, discussion techniques and aural comprehension through the study of authentic texts, television and films, with emphasis on learning about contemporary issues in Sweden, including its relationship to the European Union. Instruction is by immersion. Prerequisite: SCAN 102 or consent of instructor.

SCAN 104 Intermediate Scandinavian II credit: 4 Hours.

Fourth course in the Scandinavian language sequence (usually Swedish). Emphasis is on close reading, translation and analysis of authentic texts, such as novels and drama in the target language. Instruction is by immersion. Prerequisite: SCAN 103 or consent of instructor.

SCAN 110 Intensive Intermediate Scan credit: 4 Hours.

Intensive course in a Scandinavian language (usually Swedish) that emphasizes development of reading and writing skills. Focus of class discussions and activities is the study of authentic texts, audio and/or visual media. Instruction is by immersion. May be repeated in the same or separate term up to 8 hours. Prerequisite: SCAN 102 or equivalent or consent of instructor.

SCAN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

SCAN 215 Madness, Myth, and Murder credit: 3 Hours.

Focuses on the achievements of major Scandinavian writers of prose fiction, from 1850 to today. Explores topics of madness, myth, and murder in literature. All reading, discussion, and writing in English. Same as CWL 215.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

SCAN 225 Vikings to Volvos: Scandinavia credit: 3 Hours.

An introduction to the history, literature, and culture of Scandinavia and the Nordic region, from the Viking age until the modern era (700s-present). Includes discussion of Denmark, Norway, Sweden, Finland, Iceland, Faroe Islands, Svalbard, and Greenland. All readings in English. Same as HIST 254.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SCAN 240 Arctic Narratives credit: 3 Hours.

Study of the Arctic, its peoples and cultures, as imagined in literature, art, history, media and film. This course makes cross-cultural comparisons with accounts by indigenous people and Scandinavian, American, and European visitors to or settlers in to the Arctic. This course includes emphasis on environmental, colonial, and social aspects from theoretical and historical perspectives. Same as CWL 282, EURO 240. See SCAN 240. This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

SCAN 251 Viking Mythology credit: 3 Hours.

Studies pre-Christian beliefs of the Germanic peoples as reflected primarily in medieval Icelandic prose and poetry (in translation). Same as CWL 251, MDVL 251, and REL 251.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

SCAN 252 Viking Sagas in Translation credit: 3 Hours.

Studies Old Norse-Icelandic literature: kings' sagas, family sagas, mythical-heroic sagas, and romances. Texts and lectures in English. Same as CWL 252 and MDVL 252.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SCAN 305 Old Norse - Icelandic I credit: 3 Hours.

Provides a solid proficiency in reading texts in Old Norse, the language of the Viking sagas and mythology. Prerequisite: Any SCAN course or knowledge or one other foreign language.

SCAN 306 Old Norse - Icelandic II credit: 3 Hours.

Assumes general competence in reading Old Norse. Readings and exploration of a wide assortment of essential text in the original language. Prerequisite: SCAN 305 or consent of instructor.

SCAN 376 Children and Youth Literature credit: 3 Hours.

Explores the understanding of childhood and youth in Scandinavia, with comparative focus on the US and the UK through children's literature and classic accounts of childhood in fiction, film, and related media. Will investigate how childhood is construed in books self-described as children's literature as well as in adult-audience fiction and memoirs; and how representations of childhood correlate with evolving ideas about family formation, child-rearing, the welfare state, and education in twentieth- and twenty-first century Scandinavia. This is put in comparative context with British and/or US children's literature. Same as CWL 376, EURO 376, and GWS 376. Credit is not given for both SCAN 376 and SCAN 576.

SCAN 386 Arctic Environmt & Society credit: 6 Hours.

Same as ESE 386 and GLBL 386. See GLBL 386.

SCAN 463 Modern Scandinavian Drama credit: 3 or 4 Hours.

Thematic and conceptual study of the Scandinavian dramatic tradition, from the late-nineteenth century classics of Henrik Ibsen and August Strindberg, to mid-century intermediality in works by Ingmar Bergman, and to hyperrealism, postmodernism, and digital performativity by contemporary playwrights. Interpretive contexts include text-image studies, performativity, socio-cultural aspects of the Nordic region, theatre and production history, and gender and sexuality studies. Same as CWL 463 and THEA 483. 3 undergraduate hours. 4 graduate hours. Prerequisite: One college-level literature or theatre course, or consent of instructor.

SCAN 470 Imagining the Welfare State credit: 3 or 4 Hours.

Investigate conceptions of the Nordic and West-European welfare state from the early twentieth-century to today from critical interpretive, historical, and cultural studies perspectives. Building on close analysis of influential works in literature, film, arts, and architecture from primarily Denmark, Sweden, and Norway, the course will address historical factors and characteristics of the socio-cultural imaginary surrounding the rise and, some argue, subsequent dismantling of the Nordic welfare state. Same as CWL 470 and EURO 470. 3 undergraduate hours. 4 graduate hours. Prerequisite: At least one course in literature, film, or the arts; or consent of the instructor.

SCAN 472 Kierkegaard and the Self credit: 3 or 4 Hours.

Soren Kierkegaard is an early author who wrestled with the concept of the individual self and championed subjective experience as a counterbalance to objective rationalism. Students in this seminar-style course will gain extensive familiarity with Kierkegaard's major works, as well as how they relate to two currents in 19th century society, existentialism and pietism. These works will be evaluated within their particular Nordic literary context, through critical analysis of related novels, plays and films by Andersen, Ibsen, Bremer, Strindberg, Lagerlof, Blixen, and Bergman (readings in English translation). Same as CWL 472, PHIL 472, and REL 472. 3 undergraduate hours. 4 graduate hours.

SCAN 490 Green Screen: Film and Nature credit: 3 or 4 Hours.

Provides a thorough examination of documentary and feature film in relation to the natural environment, sustainability studies, ecocriticism, and landscape representation especially in the Scandinavian film tradition. Incorporates theory, film culture and production analysis, and thematic interpretation. Films by Victor Sjostrom, Ingmar Bergman, Mai Zetterling, Lars von Trier, Susanne Bier, Jan Troell, and others. Same as EURO 489 and MACS 490. 3 undergraduate hours. 4 graduate hours.

SCAN 492 Scandinavian Cinema credit: 3 or 4 Hours.

Covers major directors, traditions, genres, themes, and production and distribution contexts of Scandinavian cinema and media industries. Addressing early cinema, fiction feature, documentary, shorts, experimental, and new and emergent artistic forms, the course will provide students with an in depth understanding of the rich culture of Scandinavian cinema since its inception. Same as MACS 492. 3 undergraduate hours. 4 graduate hours.

SCAN 493 Honors Senior Thesis credit: 2 to 4 Hours.

2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; consent of instructor.

SCAN 494 Topics in Scan Languages credit: 1 to 4 Hours.

Advanced Scandinavian languages instruction. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate or 9 graduate hours if topics vary. Prerequisite: SCAN 104 or equivalent as approved by instructor.

SCAN 496 Special Topics in Scan Studies credit: 1 to 4 Hours.

Individual study in selected topics, such as individual authors, literary movements, periods, genres, or themes, and Scandinavian culture. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

YDSH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/YDSH>)

Yiddish Courses**YDSH 101 Beginning Yiddish I credit: 4 Hours.**

Course develops basic conversational and reading skills as well as the essentials of Yiddish grammar.

YDSH 102 Beginning Yiddish II credit: 4 Hours.

Continuation of YDSH 101 focusing on comprehension and reading skills. Prerequisite: YDSH 101.

YDSH 103 Intermediate Yiddish I credit: 4 Hours.

Continuation of YDSH 102. Develops more advanced conversational, comprehension, reading and writing skills as well as introducing more advanced features of Yiddish grammar. Prerequisite: YDSH 102 or equivalent placement score.

YDSH 104 Intermediate Yiddish II credit: 4 Hours.

Continuation of YDSH 103. Prerequisite: YDSH 103 or equivalent placement score.

YDSH 220 Jewish Storytelling credit: 3 Hours.

Course will introduce the great Jewish storytellers such as Nachman of Bratslav, Scholem-Aleichem, and I.B. Singer through readings of Yiddish tales, short stories, poetry, drama and excerpts from novels and autobiographies from the 19th and 20th centuries. In addition, Yiddish films and folklore will be used to exemplify the variety of Jewish cultural expression in Eastern Europe, Russia, and America. Course will also present a sample of critical approaches to Yiddish literature. Taught in English translation. Same as CWL 221, ENGL 223, JS 220, and REL 220. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

YDSH 320 Lit Responses to the Holocaust credit: 3 Hours.

Course introduces a variety of Jewish literary responses to the Holocaust written during and after the Second World War (from 1939). The discussion of Holocaust memoirs, diaries, novels, short stories, poems, and other texts will focus on the unique contribution of literary works to our understanding of the Holocaust. In addition, the works and their authors will be situated in their Jewish cultural historical context. Taught in English translation. Same as CWL 320, ENGL 359, JS 320, and REL 320. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

YDSH 420 Jewish Life-Writing credit: 3 or 4 Hours.

Jewish life-writing from the late 18th century until today. Emphasis on cultural historical context, literary styles, and forms. All texts will be available in English translation. Same as CWL 421, HIST 436, REL 420, and SLAV 420. 3 undergraduate hours. 4 graduate hours.

Curriculum Preparatory to the Teaching of German

In order to remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A=

4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

E-mail: german@illinois.edu

Web address for department: www.germanic.illinois.edu (<http://www.germanic.illinois.edu>)

Degree title: Bachelor of Arts in the Teaching of German

Minimum required course work normally equates to 76 hours

General education: Consult the Curricula Preparatory to Teaching Foreign Languages (p. 410).

Minimum hours required for graduation: A minimum of 120 hours of credit is required for graduation. Consult the certification officer at 505 East Green Suite 203 for additional information. <http://www.cote.illinois.edu/>

Departmental distinction: Students should consult their advisers by the second semester of the junior year for information pertaining to seminar honors work and honors awards in the department.

The total of 47 hours may be reduced by as much as 16 hours through prerequisite credit for work equivalent to GER 101-GER 104 taken in secondary school.

Code	Title	Hours
Professional education courses. (See Foreign Languages-Curricula Preparatory to Teaching Foreign Languages.) (p. 410)		29
GER 101	Beginning German I	4
GER 102	Beginning German II	4
GER 103	Intermediate German I	4
GER 104	Intermediate German II	4
GER 211	Conversation and Writing I	3
GER 212	Conversation and Writing II	3
GER 331	Intro to German Literature	3
GER 332	German Literature and Culture	3
GER 401	Global Issues in German	3
GER 420	German Cultural History	4
Select one of the following:		3
GER 470	Middle Ages to Baroque	
GER 471	Enlightenment to Romanticism	
GER 472	Realism to Expressionism	
GER 473	1920s to Today	
GER 465	Ling Structures of German	3
Two German courses as electives		6
Total Hours		76

Minor in German

The minor in German offers students a background in the language through the advanced undergraduate level, an introduction to the study of German literary classics, and a knowledge of the history of German culture.

E-mail: german@illinois.edu

Web address for department: www.germanic.illinois.edu (<http://www.germanic.illinois.edu>)

Code	Title	Hours
Select four of the following:		12
GER 104	Intermediate German II	
GER 211	Conversation and Writing I	
GER 212	Conversation and Writing II	
GER 320	German for Business	
GER 321	German for Economics	
GER 401	Global Issues in German	
Select one of the following:		3
GER 331	Intro to German Literature	
GER 332	German Literature and Culture	
GER 465	Ling Structures of German	
GER 470	Middle Ages to Baroque	
GER 471	Enlightenment to Romanticism	
GER 472	Realism to Expressionism	
GER 473	1920s to Today	
GER 420	German Cultural History	4
Total Hours		19

Minor in Scandinavian Studies

The Minor in Scandinavian Studies offers students exposure to the study of a Scandinavian language and broad knowledge of Scandinavian culture, literature, film, art, and history. Prerequisite: SCAN 101 or the equivalent.

E-mail: german@illinois.edu (german@uiuc.edu)

Web address for department: www.germanic.illinois.edu (<http://www.germanic.illinois.edu>)

Code	Title	Hours
SCAN 102	Beginning Scandinavian II	0-4
Any of the following, with at least 6 credits at the 300- or 400-level		18-22
SCAN 103	Intermediate Scandinavian I	
SCAN 104	Intermediate Scandinavian II	
SCAN 110	Intensive Intermediate Scan ¹	
SCAN 215	Madness, Myth, and Murder	
SCAN 225	Vikings to Volvos: Scandinavia	
SCAN 240	Arctic Narratives	
SCAN 251	Viking Mythology	
SCAN 252	Viking Sagas in Translation	
SCAN 305	Old Norse - Icelandic I	
SCAN 306	Old Norse - Icelandic II	
SCAN 376	Children and Youth Literature	
GLBL/SCAN 386	Arctic Environmt & Society	
SCAN 463	Modern Scandinavian Drama	
SCAN 470	Imagining the Welfare State	
SCAN 472	Kierkegaard and the Self	
SCAN 490	Green Screen: Film and Nature	
SCAN 492	Scandinavian Cinema	

SCAN 494	Topics in Scan Languages
SCAN 496	Special Topics in Scan Studies

¹ Students with credit in SCAN 103 and SCAN 104 will not receive credit for SCAN 110.

Scandinavian Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: german@illinois.edu

Minimum required major and supporting course work normally equates to 41-42 hours with at least 29 credit hours of Scandinavian courses beyond SCAN 101-102.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in the Department of Germanic Languages and Literatures are urged to consult the departmental honors adviser by the second semester of the junior year for information pertaining to senior honors work and honors awards in the department.

Designed for students with a broad interest in Scandinavian Studies, including acquiring proficiency in a modern Scandinavian language. Fulfilling the requirements for the Major usually involves one semester of study abroad at a Scandinavian university.

Code	Title	Hours
Language Courses beyond SCAN 101-SCAN 102: ¹		11-12
SCAN 103	Intermediate Scandinavian I	
SCAN 104	Intermediate Scandinavian II	
SCAN 494	Topics in Scan Languages	
At least 6 hours from the following 200-level course offerings:		6
SCAN 215	Madness, Myth, and Murder	
SCAN 225	Vikings to Volvos: Scandinavia	
SCAN 240	Arctic Narratives	
SCAN 251	Viking Mythology	
SCAN 252	Viking Sagas in Translation	
At least 12 hours from the following 300- and 400-level course offerings:		12
SCAN 305	Old Norse - Icelandic I	
SCAN 306	Old Norse - Icelandic II	
SCAN 376	Children and Youth Literature	
GLBL/SCAN 386	Arctic Environmt & Society	
SCAN 463	Modern Scandinavian Drama	

SCAN 470	Imagining the Welfare State	
SCAN 472	Kierkegaard and the Self	
SCAN 490	Green Screen: Film and Nature	
SCAN 492	Scandinavian Cinema	
SCAN 496	Special Topics in Scan Studies	
Supporting Courses approved by the Undergraduate Adviser		12
Total Hours		41-42

¹ Students may substitute credit in SCAN 110 for SCAN 103 and/or SCAN 104. Students should meet with the Scandinavian advisor for information.

German Linguistics Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: german@illinois.edu

Minimum required major and supporting course work normally equates to 44 hours with at least 38 hours in Germanic languages.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in the Department of Germanic Languages and Literatures are urged to consult the departmental honors adviser by the second semester of the junior year for information pertaining to senior honors work and honors awards in the department.

The German Linguistics concentration focuses on the structure, development and diversity of the Germanic languages, plus the flexibility to complement language study with a mixture of literature and culture courses of the student's choice.

Code	Title	Hours
GER 211	Conversation and Writing I	3
GER 212	Conversation and Writing II	3
GER 418	Language&Minorities in Europe	3
GER 465	Ling Structures of German	3
SCAN 101	Beginning Scandinavian I	4
SCAN 102	Beginning Scandinavian II	4
At least 12 additional hours at the 300- and 400-level in GER or SCAN or GMC or YDSH		12
At least 6 hours of Germanic language courses chosen from the following:		6
SCAN 103	Intermediate Scandinavian I	

SCAN 104	Intermediate Scandinavian II	
SCAN 305	Old Norse - Icelandic I	
SCAN 306	Old Norse - Icelandic II	
YDSH 101	Beginning Yiddish I	
YDSH 102	Beginning Yiddish II	
Supporting Courses approved by the Undergraduate Advisor		6
Total hours		44

German Business and Commercial Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: german@illinois.edu

Minimum required major and supporting course work normally equates to 43 hours with at least 31 hours in German.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in the Department of Germanic Languages and Literatures are urged to consult the departmental honors adviser by the second semester of the junior year for information pertaining to senior honors work and honors awards in the department.

The German Business and Commercial Studies concentration focuses on the language and customs of the business world in German-speaking countries, together with study of international affairs and commerce, especially trade with Europe.

Code	Title	Hours
Minimum of 31 hours of German courses including:		
GER 205	Germany and Europe	3
GER 211	Conversation and Writing I	3
GER 212	Conversation and Writing II	3
GER 320	German for Business	3
GER 321	German for Economics	3
GER 331	Intro to German Literature	3
GER 420	German Cultural History	4
Select three from:		9
GER 401	Global Issues in German	
GER 403	German-English Translation: Theory & Practice	
GER 465	Ling Structures of German	

GER 470	Middle Ages to Baroque	
GER 471	Enlightenment to Romanticism	
GER 472	Realism to Expressionism	
GER 473	1920s to Today	
Supporting Courses approved by the Undergraduate Advisor		12
Total hours		43

German Culture and Literature Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: german@illinois.edu

Minimum required major and supporting course work normally equates to 43 hours with at least 31 hours in German.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students majoring in the Department of Germanic Languages and Literatures are urged to consult the departmental honors adviser by the second semester of the junior year for information pertaining to senior honors work and honors awards in the department.

The German Culture and Literature Concentration provides a multidisciplinary approach to the study of German, emphasizing a balanced knowledge of German language, literature, and culture as well as exposure to contemporary politics and social issues in broader European and global contexts.

Code	Title	Hours
Minimum of 31 hours of German courses including:		
GER 201	German Popular Culture	3
or GER 205	Germany and Europe	
or SCAN 251	Viking Mythology	
GER 211	Conversation and Writing I	3
GER 212	Conversation and Writing II	3
GER 331	Intro to German Literature	3
GER 332	German Literature and Culture	3
GER 403	German-English Translation: Theory & Practice	3
GER 420	German Cultural History	4
Select three from:		9
GER 401	Global Issues in German	

GER 465	Ling Structures of German	
GER 470	Middle Ages to Baroque	
GER 471	Enlightenment to Romanticism	
GER 472	Realism to Expressionism	
GER 473	1920s to Today	
Supporting Courses approved by the Undergraduate Advisor		12
Total hours:		43

Global Studies

Zsuzsa Gille, Director

616 E. Green St., Suite 201, MC-380
Champaign

<http://globalstudies.illinois.edu>

The Global Studies major develops knowledge sets, skills and values necessary for the analysis and solution of contemporary world problems. The requirements of the major enrich, complement, and coordinate departmental offerings with the goals of:

- providing knowledge of diverse cultures: their social, economic and political interactions and impacts on the world;
- developing skills for successfully negotiating realities of contemporary societies;
- fostering values that respect diverse ways of living and deepen commitment to sustainability.

The Global Studies major is interdisciplinary, drawing upon the resources of faculty and departments across the university. The major has three elements. The Foundations requirement introduces a variety of global issues and skills necessary for their analysis. The Language and Culture requirements allow students to develop area expertise in one world region through on-campus coursework and a semester-long study abroad. The Thematic Area focuses student programs on a topic of global importance to allow for an in-depth and multidisciplinary understanding of relevant historical and emerging issues, how they are analyzed and addressed. Students work with an advisor to customize the major curriculum most appropriate to their individual interests and career plans.

This program of study was developed in response to the growing demand for knowledge and skills to successfully navigate concerns at international and global levels. The competencies established through this program are critical for students preparing for careers or further study in a variety of fields including international affairs, public policy, business, law, finance, education, and communications.

The LAS Global Studies program with the European Union Center offers a **5 Year BALAS/MA in Global Studies and European Union Studies**.

LAS Global Studies also offers two undergraduate minors.

The **Global Studies minor** develops the interdisciplinary knowledge and intercultural skills necessary to analyze and solve contemporary world problems. In consultation with an advisor, students select courses from a variety of departments to form a coherent program of study suited to individual interests, educational and career aspirations. The Global Studies minor can complement any major.

The **Global Markets and Society minor** enables students at the University of Illinois to gain interdisciplinary knowledge of global market-society relations through historical and global perspectives that emphasize the

social, political, and economic forces that shape market institutions and practices. A professional development capstone experience course is optional and can be met by completing an internship or participating in a research experience and/or written project. The LAS Global Markets and Society Minor is open to undergraduate students in any major at the University of Illinois at Urbana-Champaign campus.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences Major in Sciences and Letters Curriculum

E-mail: globalstudies@illinois.edu

Minimum required major and supporting course work equates to 51-52 hours and includes a semester-long full time study abroad program and a minimum of 12 hours of 300- and 400-level courses.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the Global Studies academic advisor before the end of the fourth semester (60 hours) and prior to the required study abroad. Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: The department may award distinction, high distinction, or highest distinction to any Global Studies major whose overall and major grade point averages are 3.25 or higher, who successfully completes 3 hours of GLBL 494 or other approved research methods course and who completes a distinction research project. See the departmental academic advisor for details.

Code	Title	Hours
Foundations Requirements		
GLBL 100	Intro to Global Studies	3
	Global Studies. Four courses must be selected from the approved course list; they must include no more than one course from four of the following six departments: Anthropology, Economics, Geography, History, Political Science, and Sociology.	12
	Global Studies Seminars. Students study current events and contemporary global issues. Select three courses from GLBL 296 or one GLBL 298 course and one GLBL 296 course.	3-4
Language and Culture Requirements		
	Language. Select courses from the approved course list in a language other than your primary language(s). These various courses represent the 5th and 6th level of study.	6
	Area Studies. 200- to 400-level courses which complement the language requirement must include work in at least two disciplinary departments. Area Studies and Language must be geographically related and correspond to language and study abroad location.	9
	One Semester (Fall or Spring) Study Abroad. Students study a variety of subjects in an approved study abroad program that furthers their language and cultural knowledge or their cultural knowledge and thematic area knowledge. Students must be enrolled full-time to receive credit toward this requirement.	

Thematic Area Requirements

Students choose an approved thematic area and, in consultation with a Global Studies advisor, construct an appropriate customized curriculum of a minimum of 18 hours. Students cannot include more than 3 hours of 100-level work and must complete 9 hours of 300- and 400-level coursework. Courses must be taken from more than one department.

18

Approved thematic areas are:

- A. Cultures in Contact
- B. Wealth and Poverty in a Globalized World
- C. Human Rights
- D. Governance, Conflict and Resolution
- E. Knowledge, Communication and Information Systems
- F. Environment, Sustainability, and Social Responsibility
- G. Global Health

Optional Senior Capstone. Students do an individual research project (GLBL 200, 494 and GLOBL 495) based on their Thematic Area.

Total Hours 51-52

5 Year BALAS/MA in Global Studies and European Union Studies

The Program in Global Studies with the European Union Center offers a 5-year BALAS /MA degree program in Global Studies and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS-granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the stand-alone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; the BALAS and MA degrees will be conferred separately and independently. More detailed information may be obtained from department and EUC offices.

Global Studies Minor (p. 452)

Global Markets and Society Minor (p. 451)

GLBL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GLBL>)

Courses

GLBL 100 Intro to Global Studies credit: 3 Hours.

Foundation course for understanding a range of contemporary issues and learning to analyze them from multiple disciplinary perspectives. Students consider globalizing trends within themes of wealth and poverty; population, cultures, and human rights; environment and sustainability; and governance, conflict, and cooperation. Course objectives are to enhance knowledge of human cultures, their interactions and impacts on the world; develop skills for successfully negotiating realities of contemporary societies; and promote values for global learning, diversity, and sustainable futures.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

GLBL 118 Natural Disasters credit: 3 Hours.

Same as ESE 118 and GEOL 118. See GEOL 118.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

GLBL 199 Undergraduate Open Seminar credit: 0 to 6 Hours.

See Class Schedule for topics. Approved for Letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours.

GLBL 200 Foundations of Research credit: 3 Hours.

Introduction to the foundations of interdisciplinary, social science research. Topic include understanding the purpose for research, identifying researchable issues, finding evaluating and using sources effectively, recognizing methods associated with different types of data and disciplines, and writing a literature review. Prepares students for course-based research papers and advanced research methods courses. Guest faculty present their Global Studies-relevant research as students (b)log their own research interests.

GLBL 201 Energy Systems credit: 2 or 3 Hours.

Same as NPRE 201. See NPRE 201.

GLBL 215 Resource Conflicts credit: 3 Hours.

Same as ESE 215 and GEOG 215. See GEOG 215.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GLBL 220 Governance credit: 3 Hours.

Gateway course into the Governance thematic area for Global Studies majors providing an introduction to important themes, problems and approaches to global governance in a series of issue areas, including security, economics, migration, and the environment. Covers the historical development of the international system as well as contemporary controversies. Case studies are used to explore the strength and weaknesses of current governance approaches, and students will conduct independent research into existing structures. Prerequisite: GLOBL 100.

GLBL 221 Geographies of Global Conflict credit: 3 Hours.

Same as GEOG 221. See GEOG 221.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GLBL 225 Career Development: Internships credit: 1 Hour.

Teaches students with global studies academic interests how to identify internships and service-learning learning opportunities relevant to their major. Students prepare application materials, conduct informational interviews, participate in mock job interviews, explore networking strategies, and create a career narrative that represents their academic interests and skills. Prepares students on what to expect from their internships and how to develop and apply leadership skills.

GLBL 228 Terrorism, Past and Present credit: 3 Hours.

Same as HIST 257. See HIST 257.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

GLBL 240 Global Health credit: 3 Hours.

Introduction to issues and problems in global health. As the world becomes more and more interconnected it is important for students to be aware of health issues from a global perspective. We will consider a variety of issues that influence the health of different population and countries. The topics to be discussed include: the environment, nutrition, education, the medical system, culture, and agency involvement in health. Case studies will be used to demonstrate some successes at addressing these issues and problems that were encountered.

GLBL 250 Development credit: 3 Hours.

An interdisciplinary introduction to the theory and practice of international development. Topics include: defining development, how ideas have changed over time, and the interventions used in development work and their impacts.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West

GLBL 251 Warfare Milit Insts & Soc credit: 3 Hours.

Same as HIST 251. See HIST 251.

GLBL 260 Global Human Rights credit: 3 Hours.

Examines how ideas about human rights are defined and how they are differentially deployed. Looks at human rights claims and crises, and examines how governmental and non-governmental individuals and organizations have sought to deal with human rights violations in order to address problems of justice, retribution, and reconciliation at personal, national, and international levels.

GLBL 270 Introduction to Global Markets and Society credit: 3 Hours.

Introduction to global markets and economic systems and their evolving relationship with societies in the global North and South. Presents interdisciplinary perspectives on business structures and conduct with emphasis on (1) the philosophical foundations of economic systems; (2) international business networks and technological innovation; (3) business environments in non-Western settings; (4) global workforce composition and divisions of labor; (5) the relationships between business, development and the environment; and (6) international organizations that support the spread of global business.

GLBL 280 Nuclear Weapons & Arms Control credit: 3 Hours.

Same as PHYS 280. See PHYS 280.

This course satisfies the General Education Criteria for: Advanced Composition

GLBL 283 Intro to Intl Security credit: 3 Hours.

Same as PS 283. See PS 283.

GLBL 296 Global St Foundation Seminar credit: 1 Hour.

Examination of current controversies and larger ethical issues in today's global society. Topics could include: immigration, global environmental debates, and population issues. May be repeated in the same or separate terms to a maximum of 3 hours if topics vary.

GLBL 298 Global Studies Seminar Abroad credit: 3 or 6 Hours.

Seminars introduce students to aspects of globalization through a case study of a particular location abroad. On campus, students explore historical and contemporary aspects of the location abroad to prepare for their field visit. Abroad, students engage with local resources and people to better understand how the local site contributes to and is impacted by relevant global processes under focus. Course activities will include a field site visit abroad, discussions, lectures, short essays, student presentation, and final projects. Topics vary according to site location and instructor expertise. May be repeated in separate terms to a maximum of 6 hours.

GLBL 328 First Person Global credit: 1 Hour.

A writing workshop for students who have studied abroad and want to deepen their understanding of globalization and improve their nonfiction prose by writing about their own experiences. Writing in the first person raises fundamental questions about identity, power, cultural understanding, and representation. Students will read and discuss first person literary nonfiction by contemporary writers and chronicle their own global encounters in ethical, insightful, and creative ways. Prerequisite: A study abroad experience.

GLBL 340 Global Health: Policy & Governance credit: 3 Hours.

Identifies central and emerging global health issues and analyzes them through the lenses of governance, policy and gender. Focuses on structural, policy, and institutional perspectives on global health, with emphasis on how decisions are influenced and made. Prerequisite: GLBL 240.

GLBL 350 Poverty in a Global Context credit: 3 Hours.

Examines global poverty in the context of international development debates and practice. Despite global commitments (for example, the Millennium Development Goals), decades of research, and new and innovative policies, the "solution" to widespread and lasting poverty alleviation remains elusive. Class will define poverty and how it is measured, considered who is poor and why some people are more vulnerable to the negative effects of poverty than others, and examine what causes some countries to remain poor. Prerequisite: GLBL 250 or consent of instructor.

GLBL 356 Comparative Political Economy credit: 3 Hours.

Same as PS 356. See PS 356.

GLBL 357 Ethnic Conflict credit: 3 Hours.

Same as PS 357. See PS 357.

This course satisfies the General Education Criteria for: Advanced Composition

GLBL 386 Arctic Environmt & Society credit: 6 Hours.

Interdisciplinary study of the European Arctic for science and non-science students, providing an historical survey of the relationship between its environment and societies with the goal of understanding current and possible future conditions, in light of climate change. The course takes place in Scandinavia and includes a field site component in the Arctic.

GLBL 392 Int Diplomacy and Negotiation credit: 3 Hours.

Examines the complexities of international diplomacy and negotiations among states and other actors. Focuses on three main subject areas: negotiation analysis, applied negotiation, and the interaction of practical considerations that affect negotiations. Utilizes theoretical, case-based, and active-learning approaches during the semester as topics are explored in detail. Issues and topics include security, public health, economic development, human rights, and the environment. This course satisfies the General Education Criteria for: Advanced Composition

GLBL 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GWS 403, HIST 434, REL 403, and SAME 403. See REL 403.

GLBL 440 Global Health: Interventions & Evaluations credit: 3 Hours.

Focuses on the process of crafting a solution and evaluation plan related to a specific global health problem identified by students. Requires students to work in teams to integrate content learning on global health with applied project design skills developed in this course. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 340. Junior standing or higher required.

GLBL 450 Poverty Interventions and Evaluation credit: 3 Hours.

Over the last few decades a wide range of strategies and initiatives have been applied to alleviate poverty in developing countries. The record of these initiatives is mixed. While millions of people may have moved out of poverty, over a billion remain persistently impoverished. We will examine a range of anti-poverty approaches that have been implemented and evaluates their effectiveness. Students will gain a familiarity with the interventions and an understanding of the techniques used to evaluate them. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 250 and 350 or consent of instructor.

GLBL 480 Energy and Security credit: 3 Hours.

Same as NPRE 480 and PS 480. See NPRE 480.

GLBL 481 Writing on Technol & Security credit: 3 or 4 Hours.

Same as NPRE 481. See NPRE 481.

This course satisfies the General Education Criteria for:
Advanced Composition

GLBL 483 Seminar on Security credit: 1 Hour.

Same as NPRE 483. See NPRE 483.

GLBL 492 UG Research Assistance credit: 0 to 3 Hours.

Assist Global Studies and program-affiliated faculty in ongoing research. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. No more than 6 hours may be counted toward completion of the Global Studies major from any combination of GLBL 492 and other independent study, internship, or research assistance coursework. This includes coursework from other departments on campus or during study abroad. Prerequisite: GLBL 200; evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of Global Studies program. Global Studies majors only. Not available to freshman. Instructor approval required.

GLBL 494 Research Methods I credit: 3 Hours.

Optional Capstone experience for Global Studies students. Students will develop research, communication and presentation skills and develop a proposal for an independent research project, goals and timeline. The proposal will include a literature review and methods section for their final project. Topics include: research approaches, design and implementation, as well as methods, analysis and ethics of data collection. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 200.

GLBL 495 Research Methods II credit: 1 Hour.

Second semester of the optional Capstone experience for International/Global Studies students. Designed to guide the interpretation of the data, development of conclusions and implications. In addition to the final project, students will learn how to write a paper abstract and conference proposal, as well as acquire presentation skills. 1 undergraduate hour. No graduate credit. Prerequisite: GLBL 494.

GLBL 499 Special Topics credit: 3 Hours.

Selected reading and research in Global Studies. See schedule for current topics. 3 undergraduate hours. 1 to 4 graduate hours. May be repeated, if topics vary, in the same or separate terms to a maximum of 6 undergraduate or 8 graduate hours. Prerequisite: GLBL 100 or six hours of global studies, anthropology, social geography, political science, sociology, or economics; consent of instructor.

Global Markets and Society Minor

The LAS **Global Markets and Society** Minor enables students at the University of Illinois to gain interdisciplinary knowledge of global market-society relations through historical and global perspectives that emphasize the social, political, and economic forces that shape market institutions and practices. The minor requires 18-21 hours of coursework completed through six courses, with a minimum of six hours at the advanced level (300- or 400-level). A professional development capstone experience course is optional and can be met by completing an internship or participating in a research experience and/or written project. The LAS Global Markets and Society Minor is open to undergraduate students in any major at the University of Illinois at Urbana-Champaign campus.

Applications Requirements and Procedures

Completion of 30 hours of undergraduate coursework by the end of the Spring semester of application.

Students are admitted by application into the LAS Global Markets and Society Minor. Interested students will be asked to demonstrate a commitment to the program through (a) completing an application to the program, including a written statement of goals for participation in the program and/or evidence of or commitment to participation in activities designed to enhance leadership, and (b) developing a program plan with the program coordinator and/or their academic advisor prior to admission.

Only students officially admitted into the LAS Global Markets and Society Minor may earn the minor.

Code	Title	Hours
GLBL 270	Introduction to Global Markets and Society	3

Core Courses 6

Choose 2 from the following list (Courses used in the core cannot be used again in your Specialization Track)

CMN 211	Business Communication
CS 105	Intro Computing: Non-Tech
ECON 102	Microeconomic Principles
GEOG 205	Business Location Decisions
HIST 259	20thC World from Midcentury
PS 220	Intro to Public Policy
PSYC 245	Industrial Org Psych
SOC 160	Global Ineq and Social Change

Specialization Track 9

Choose three courses in your track. At least 2 of the 3 courses must be at the 300- or 400-level. Alternate courses may be considered on a case-by-case basis.

Students choose courses from a list maintained by LAS Global Studies, and reviewed annually by the Global Markets and Society Advisory Committee. (<http://www.globalstudies.illinois.edu/current/academics/globalmarket>)

Global Markets and Governance. The economy is intricately connected to institutions at the local, national, and international levels that affect market practices and outcomes. This track focuses on the institutions and social relations that govern global market practices.

Science, Technology, and Markets. Technological innovations in transportation and communications are driving business location decision-making and operations at the global scale. This track is aimed at science and technology majors with entrepreneurial ambitions as well as students in the social sciences and humanities investigating the interface between science, technology, and society.

Global Encounters. Participation in the global economy requires firms to be geographically dispersed and capable of partnering with a global audience of stakeholders. This track is focused on the historical and cross-cultural understanding necessary to engage in global markets.

Markets, Development, and the Environment. Global markets can create positive environmental outcomes in the locations where they operate. This track focuses on the challenges in designing, building, and evaluating sustainable environmental and development outcomes, including ecological modernization, market environmentalism, and political ecology.

The Global Workforce. Global production systems depend on the effective organization and participation of workers in the global workforce. This track focuses on human resources, organizational structures, and group communication in the contexts of working class history and global labor markets.

Analytical Approaches & Languages. Investigating global market-society relations requires a basic level of competence in communication skills, research methods, and analytical techniques. This track offers students a range of market language, methods, and skills oriented courses that build such competency.

OPTIONAL Professional Development Capstone Experience (3 hours)

Choose one option in consultation with the Global Markets and Society minor advisor:

Internship or Field Experience in a market-focused organization

Research Experience with a Faculty Member

Analytical/Research Paper with Faculty Guidance

Credit is awarded for each of these three options on the basis of an analytical/research paper written by the student under the supervision of a faculty adviser

Total Minimum Hours 18

Global Studies Minor

The Global Studies Minor provides a multidisciplinary study of a global theme with the requirement of advanced language training to promote the development of intercultural skills. In consultation with an advisor, students select 21 hours of thematically-related courses from a variety of departments to form a coherent program of study suited to individual interests, educational and/or career aspirations. The Global Studies Minor can complement any major.

E-mail: globalstudies@illinois.edu

Code	Title	Hours
	Global Studies. Three courses must be selected from the approved course list; they must include no more than one course each from three of the following departments: Anthropology, Economics, Geography, History, Political Science, and Sociology.	9
	Language and Culture. Select courses from the approved course list in a language other than your primary language. These various courses represent the 5th level of study or above.	3
	Thematic Area: Students choose an approved thematic area and, in consultation with a Global Studies advisor, construct an appropriate customized curriculum. Students must choose 200- to 400-level courses and at least 6 hours must be at the 300- or 400-level.	9
Total Hours		21

A minimum of 6 hours of 300- and 400-level course work must be completed.

History

Clare Crowston, Chair of Department
309 Gregory Hall, 810 South Wright, Urbana
PH: (217) 333-1155
<http://history.illinois.edu>

Administered by the Department of History, students in the history concentration should acquire a broad background from the study of the human experience in different cultures and time periods. A wide distribution of courses is therefore advisable. This is especially true for those who wish to enter government service, or professional schools for law, social work, museum and library science, business administration, or labor and industrial relations. The Social Science: History Teaching Concentration (p. 465) prepares students to teach social studies in Secondary School. The department also offers an undergraduate minor.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students must select one concentration.

- History Concentration (p. 465)
- Social Science: History Teaching Concentration (p. 465)

Minor in History

A history minor is designed for students who desire to understand the historical background of their major field and to provide an evolutionary or developmental perspective on the study and practice of their major field. Selection of courses will depend on the major and on the interests of the student.

E-mail: history@illinois.edu

Web address for department: www.history.illinois.edu (<http://www.history.illinois.edu>)

Students must have at least 9 hours in one of the following fields: US, European, or Nonwestern and 6 hours in a second of those fields.

Code	Title	Hours
	Six hours of coursework in History at any level ¹	6
	A minimum of 9 hours of 300- or 400-level History courses taken on the Champaign-Urbana campus, with permission, 3 hours may be study abroad hours	9
	A minimum of 6 hours of history courses above the 100 level	6
Total Hours		21

¹ A maximum of 6 hours at the 100 level may be used in the minor.

HIST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HIST>)

Courses

HIST 100 Global History credit: 3 Hours.

Broad introduction to global history, by exploring the global structures and transnational forces that have shaped human history, from the emergence of agriculture and urban centers to our contemporary global village.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 101 History Now! credit: 3 Hours.

Teaches students how to apply historical thinking to present day problems. Each version starts with contemporary headlines about a current issue, moves to an investigation of its historical roots and legacies, and pivots back to the present to assess the impact of past history on present reality and to capture those relationships in a collaborative student project. It aims to show, in short, how and why history matters NOW.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 104 Black Music credit: 3 Hours.

What is black music, and how do we know what we think we know about it? Together, we will examine musical creations pioneered by Africans and individuals of African descent over several centuries and across hemispheres. Doing so will allow us to consider the unity of the African Diaspora and its music, and also examine internal differences and diversity. Special focus is given to Latin America and the U.S., but, depending on the semester, we will also read about, listen to, and talk about music and musicians in Asia, Africa, and Europe. Most course assignments are multi-media and interactive.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

HIST 105 Latin America to Independence credit: 3 Hours.

Survey of Latin American history from the discovery of America to 1824.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 106 Modern Latin America credit: 3 Hours.

History of the Latin American republics from their independence to the present; emphasis on Argentina, Brazil, Chile, Colombia, Cuba, and Mexico.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 110 History of Africa credit: 3 Hours.

Survey of the early history of the continent, nineteenth century developments, and the period of colonial occupation and independence, with particular focus on case studies from East Africa, South Africa and West Africa at the conclusion of the term.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 120 East Asian Civilizations credit: 3 Hours.

Surveys the three major East Asian civilizations from ancient and classical times, through the period of Western influence, political revolution, and modernization, to the contemporary age and the emergence of East Asian superpowers. Same as EALC 120. Credit is not given for both HIST 120 and EALC 135.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 130 History of South Asia credit: 3 Hours.

Multidisciplinary introduction to the history of modern South Asia from the consolidation of early modern state formations, the negotiation of religious, cultural and linguistic formations, European colonial interactions, and the rise of the modern nation states of Bangladesh, India, Pakistan and Sri Lanka. Same as ANTH 130.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 135 History of Islamic Middle East credit: 3 Hours.

Introduction to fourteen centuries of Middle East history from the rise of Islam to modern times. Examines the development of Islamic thought, and of religious, social, and political institutions; as well as the transformations of the 19th and 20th centuries in the area consisting of Egypt, the Fertile Crescent, Arabia, Turkey, and Iran.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 140 Western Civ to 1660-ACP credit: 4 Hours.

Course is identical to HIST 141 except for the additional writing component. See HIST 141. Credit is not given for both HIST 140 and HIST 141. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 141 Western Civ to 1660 credit: 3 Hours.

Fundamental developments in the history of Western societies from antiquity to early modern Europe; includes the Greek and Roman worlds, the influence of Christianity and Islam, the emergence of medieval monarchies, the rise of cities, the commercial and intellectual revolutions of the Middle Ages, the birth of the university, the conquest and colonization of the Atlantic world, the Renaissance and Reformation, the political and religious upheavals of the sixteenth and seventeenth centuries. Credit is not given for both HIST 141 and HIST 140.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

HIST 142 Western Civ Since 1660 credit: 3 Hours.

Fundamental developments - social, economic, cultural, intellectual, and political - in the history of mankind and Western society since 1660; includes the rise of modern science, the French and Industrial revolutions, the Romantic movement, the growth of nationalism and socialism, imperialism, urbanization, the Russian Revolution, Nazi Germany, the world wars, and the West and the developing world. Credit is not given for both HIST 142 and HIST 143.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

HIST 143 Western Civ Since 1660-ACP credit: 4 Hours.

Course is identical to HIST 142 except for the additional writing component. Credit is not given for both HIST 143 and HIST 142. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 164 The Automobile credit: 3 Hours.

Interdisciplinary examination of the automobile industry, its production systems, its marketing strategies, and the way automobiles reflect the changing landscapes of consumer tastes and value over time.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 168 A History of Judaism credit: 3 Hours.

Same as REL 120. See REL 120.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

HIST 170 US Hist to 1877-ACP credit: 4 Hours.

Course is identical to HIST 171 except for the additional writing component. Credit is not given for both HIST 170 and HIST 171. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 171 US Hist to 1877 credit: 3 Hours.

Colonial foundations, movement for independence, and early years of the Republic. Credit is not given for both HIST 171 and HIST 170.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 172 US Hist Since 1877 credit: 3 Hours.

Evolution of an industrial, urbanized, and pluralistic society, grappling with domestic and global problems. Credit is not given for both HIST 172 and HIST 173.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 173 US Hist Since 1877-ACP credit: 4 Hours.

Course is identical to HIST 172 except for the additional writing component. Credit is not given for both HIST 173 and HIST 172. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 174 Black America, 1619-Present credit: 3 Hours.

Same as AFRO 101. See AFRO 101.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

HIST 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated once. Prerequisite: Consent of departmental honors advisor.

HIST 198 Freshman Seminar credit: 3 to 4 Hours.

Through research, reports, and discussion in a selected field of historical study, the seminar provides a thorough understanding of the problems of that field and of the methods of history as a discipline. May be repeated to a maximum of 6 hours. Prerequisite: James Scholar standing or other designation as a superior student; consent of instructor.

HIST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HIST 200 Intro Hist Interpretation credit: 3 Hours.

Through the careful examination of a specific topic or theme, this course provides a thorough introduction to historical interpretation. Particular attention will be devoted to research strategies, writing practices, handling primary and secondary sources, and the analysis of historiography. May be repeated to a maximum of 6 hours with permission of the Director of Undergraduate Studies.

HIST 202 American Environmental History credit: 3 Hours.

Introduction to the historical study of Americans' relationship with the natural world. Examination of the ways that "natural" forces have helped to shape American history; the ways that human beings have shaped, altered, and interacted with nature over time; and the ways that cultural, philosophical, scientific, and political attitudes toward the environment have changed from pre-history to the present. Same as ESE 202 and NRES 202.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 203 Reacting to the Past credit: 3 Hours.

An introduction to history through participation in role-playing games set in the past. Topics will vary each time the course is taught. Students will take on the roles of historical figures (famous or obscure) engaged in difficult and complicated situations, and will be obliged to adhere to the beliefs and circumstances of those figures while attempting to pursue a course of action that will help them win the game – and possibly alter the course of history.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 205 LatAm Hist: Primary Accounts credit: 3 Hours.

Examining the history through the primary texts written by Latin Americans, this course introduces students to theories, contents and methods of historical inquiry, as well as the nuances and the complexities of Latin American history. Reading primary texts written by all strata of society, students will look through the eyes of the diverse populations in Latin America. Students will analyze the traditional narrative of Latin America and gain insight into the lived experience of Latin Americans. Together we will advance our individual and collective understanding of Latin America's rich and complex past.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 207 Publishing the Past credit: 3 Hours.

Introduction to the craft of publishing historical materials, with a special focus on how to publish the past in the digital age. Assignments will include historical and methodological readings, as well as hands-on instruction in digital publishing techniques. Skills taught include historical research, content development, project management, and copyright analysis.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 211 History of Southern Africa credit: 3 Hours.

Survey of major themes and events in Southern African history, with emphasis on the period after World War II: the inception and development of apartheid in South Africa, the growth of contests over African nationalism in the subcontinent, wars of liberation and the demise of white domination.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 212 History of Eastern Africa credit: 3 Hours.

Introduction to the history of Eastern Africa from the nineteenth century to the present. Attention to the region's pre-colonial history and institutions is stressed, in order to understand both the transformations brought by European colonialism as well as its limits. The final weeks of the course will examine the differing political, economic, and religious trajectories of the new nation-states since independence in the 1960s.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 213 African Muslim Cultures credit: 3 Hours.

Focuses on the history and historiography of Muslim societies in Africa. Investigates the dynamics of the spread of Islam in Africa, and explores differences in Islam in Africa from other areas of the Islamic world, with attention to the image in Western scholarship of Islam in Africa. Provides students with the knowledge and skills they need to understand this central phenomenon in modern world history. Same as AFST 213 and REL 215.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 219 History of the Prison credit: 3 Hours.

Same as AFRO 221 and LA 221. See LA 221.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 220 Traditional China credit: 3 Hours.

Historical background to the modern age, tracing the Chinese state and empire from the earliest times until 1644 A.D. Basic political, social, and economic patterns; cultural, intellectual, and technological achievements; and China's impact on Asia and the world. Same as EALC 220.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 221 Modern China credit: 3 Hours.

General introduction to the major themes of the Chinese Revolution from 1840 to the present, emphasizing the interplay between politics, ideas, and culture. Themes include the tension between cultural integrity and Western ideologies, between democratic participation and the tradition of centralized control, and the representation of cultural identity in high and mass cultures. Same as EALC 221.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

HIST 222 Chinese Thought Confucius to Mao credit: 3 Hours.

Same as EALC 222 and REL 224. See EALC 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 225 Southeast Asian Civilizations credit: 3 Hours.

Same as ANTH 286 and ASST 286. See ANTH 286.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 226 Premodern Japanese History credit: 3 Hours.

Introduction to the history of the Japanese people, their social and cultural systems, politics, and economy, from the earliest times to the sixteenth century. Same as EALC 226.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 227 Modern Japanese History credit: 3 Hours.

Introduction to the history of the Japanese people, their social and cultural systems, politics, and economy, from the mid-sixteenth century to the mid-twentieth century. Same as EALC 227.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 240 Ancient Greek Civilization credit: 3 Hours.

The history of ancient Greece and neighboring civilizations from the Archaic Period to the conquests of Alexander.

HIST 241 History of Ancient Rome credit: 3 Hours.

Survey of the political, social, economic, military, institutional, religious and cultural development of Rome from 753 BCE until 480 CE.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Examines the history of women and the evolution of concepts of gender in western Europe from roughly 400 to 1700. Topics include the interactions of class and ethnicity with women's experiences, the social construction of sexuality and gender, the misogynist tradition, and women's self-images. Same as GWS 245 and MDVL 245.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 247 Medieval Europe credit: 3 Hours.

From the fragmentation of the Roman Empire to the formation of territorial monarchies, this course surveys the events, innovations, crises, and movements that shaped western Europe in a pivotal era known as "the Middle Ages." Topics will include the spread of Christianity, the migration of peoples, fundamental changes in economic and social structures, the development of political institutions, the role of women, and the cultural achievements of different communities (the monastery, the town, the court). Same as MDVL 247.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 251 Warfare Milit Insts & Soc credit: 3 Hours.

History of warfare and its relationship to changing technologies, tactics, and political structures, with an emphasis on the ways that military institutions are integrated with society as a whole. Same as GLBL 251.

HIST 252 The Holocaust credit: 3 Hours.

Exploration of the Holocaust in historical perspective by examining European anti-Semitism, political developments in Germany, the rise to power of the Nazis, and the origins of the Holocaust with first-hand accounts, films, and historical texts, concluding with the legacy of the Holocaust in the contemporary world. Same as JS 252.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 253 Enlightenment to Existentialism credit: 3 Hours.

Survey of the major authors, ideas, events, and styles in the cultural and intellectual history of Europe from the seventeenth to the mid-twentieth centuries, focusing on the intellectual traditions of France, Germany, and Great Britain.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 254 Vikings to Volvos: Scandinavia credit: 3 Hours.

Same as SCAN 225. See SCAN 225.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

HIST 255 British Isles to 1688 credit: 3 Hours.

Survey of the political, social and economic, religious, and cultural history of the British people from the "prehistoric" era through the revolution of 1688. Same as MDVL 255.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 256 Britain and World Since 1688 credit: 3 Hours.

Historical survey of the British Isles and the British Empire since the late seventeenth century.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 257 Terrorism, Past and Present credit: 3 Hours.

Explores the history of terrorism, its goals and practices. We recognize that it is not specific to any one ideology, religion, or people. Terrorism is political violence, psychological warfare meant to manipulate a large target audience. Same as GLBL 228.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 258 20thC World to Midcentury credit: 3 Hours.

Economic, social, political, and cultural developments in twentieth-century world history from late nineteenth-century to Second World War era.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 259 20thC World from Midcentury credit: 3 Hours.

Economic, social, political, and cultural developments in twentieth-century world history from Second World War era to the present.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 260 History of Russia credit: 3 Hours.

Main themes and problems of Russian history from earliest times to the present.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 261 Intro Russian-Jewish Culture credit: 3 Hours.

Same as RUSS 261. See RUSS 261.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 263 US History of Medicine credit: 3 Hours.

Medicine and public health from the colonial period through the twentieth century; health care providers, patients, and public policy; incorporates issues of race and sex. Same as GWS 263.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 264 Technology in Western Society credit: 3 Hours.

Explores the role of technology as a transforming social force; examines innovations from the stirrup and heavy plow to the airplane and computer, that restructured economic and political life and realigned values; examines cultural representations of technology.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 265 Science in Western Civ credit: 3 Hours.

Topics in the intellectual and social history of science in the West.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 268 The Darwinian Revolution credit: 3 Hours.

The ideas of Charles Darwin initiated one of the most profound and provocative transformation in human thought, science, and culture. This course examines the intellectual origins, scientific content, and social, cultural, and religious impacts of Darwinian evolutionary theory in the 19th and 20th centuries, provides students with a historical case study in the development and diffusion of radical scientific ideas, and explores the origins of the most successful and comprehensive theory in the modern life sciences.

HIST 269 Jewish History Since 1700 credit: 3 Hours.

Explores how life was lived by Jewish women and men through the past three centuries. Will also focus on wider place of the Jews in European society, and the achievements and tragedies of the modern Jewish-non-Jewish relationship. Same as REL 269.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 270 United States History to 1815 credit: 3 Hours.

Social, economic, and political survey of the region and its relation to the evolving Atlantic community.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 271 Nineteenth Century America credit: 3 Hours.

History of the United States from 1815 to 1900.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 272 Twentieth Century America credit: 3 Hours.

One major emphasis on foreign policy, including the emergence of the United States as a great power after 1898; a second emphasis on the Progressive movement and recurrent attempts at the reform of American society; and racial and urban problems and the conservation of natural resources included.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 273 Illinois History credit: 3 Hours.

History of Chicago and Illinois from prehistoric times to the present, illustrating the jarring conflicts and great achievements of peoples from all over the world. Politics, economics, popular and high culture, education, mass media, racial problems, and ethnic diversity are especially featured. There is an emphasis on the relation of city, state, and region to one another.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 274 US & World Since 1917 credit: 3 Hours.

Over the course of the twentieth century the United States rose to superpower status, in the process profoundly shaping world affairs. Students will study the connections between U.S. and global history in this pivotal period. Explores the impact of the United States on world affairs from roughly 1917 through the end of the Cold War. Attention given to the perspectives of people affected by U.S. policies and the limits of U.S. power in the face of developments such as anticolonial nationalism and great power rivalries.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 275 Afro-American History to 1877 credit: 3 Hours.

History of Africans in the Americas, surveying the African slave trade, slavery in the European colonies of the Americas, early United States slavery, and the Afro-American in the Civil War and Reconstruction. Same as AFRO 275.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 276 Afro-American Hist Since 1877 credit: 3 Hours.

History of Afro-Americans in the age of white supremacy; the rise of modern protest organizations; the era of integration; and the black power movement. Same as AFRO 276.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 277 Encounters in Native America credit: 3 Hours.

An examination of pivotal events in the history of Native peoples in North America. Students will explore the complexity of encounters between American Indians and others through a focus on key moments. These will include religious encounters, military confrontations, and legal struggles as well as social and artistic interactions. Same as AIS 277.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 278 Native American History credit: 3 Hours.

A survey of the Native American experience in North America from the time of first contact to the present. The course will examine the dynamics and consequences of Native dispossession as well as the continuities in American Indian life and culture. Course materials will include writing and testimony by Native people as well as historical narratives, court decisions and government documents. Same as AIS 278.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 279 Mexican-American History credit: 3 Hours.

Same as LLS 279. See LLS 279.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 280 Caribbean Latina/o Migration credit: 3 Hours.

Study of the economic, political, and social forces which shaped migration, settlement, and community formation of Puerto Ricans, Cubans, and Dominicans living in the United States. Same as LLS 280.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 281 Constructing Race in America credit: 3 Hours.

Interdisciplinary examination of the historical, cultural, and social dimensions of race and ethnicity in the United States. Explores the complex and intricate pursuit of multiracial and multicultural democracy. Same as AAS 281, AFRO 281, and LLS 281.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 282 Nature and American Culture credit: 3 Hours.

Same as LA 242, NRES 242, and RST 242. See RST 242.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

HIST 283 Asian American History credit: 3 Hours.

Exploration of the migrations of peoples from the Asian continent into the United States, their attempts to build family and community, and their subsequent impact on American history. Same as AAS 283.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 284 Af Am Urban Hist Since 1917 credit: 3 Hours.

Same as AFRO 290. See AFRO 290.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 285 US Gender History to 1877 credit: 3 Hours.

Traces the experiences of North American women and men from the earliest encounters between Europeans and Native Americans; examines gender systems in the colonies, under slavery, during industrialization and westward expansion; assesses impact of the Civil War and Reconstruction on gender roles; considers gendered division of labor in factories and domestic environments and construction of gender ideologies. Same as GWS 285.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 286 US Gender History Since 1877 credit: 3 Hours.

Examines the experiences of women and men in modern America, focusing on variations according to class, race, ethnicity, religion, region, and sexual preference; considers the impact of social movements on gender politics; gender and the wars of the 20th century; gender, reform, and social welfare policy; and the place of popular culture in the production of gender ideologies. Same as GWS 286.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 287 African-American Women credit: 3 Hours.

Examines the history of African American women, beginning with the West African background during the transatlantic slave trading era, emphasizing the experiences of black women in the United States during slavery and their political, civic, community and reform activities from slavery to the present, analyzed within the context of racism, sexism, and economic deprivation. African women in the diaspora, and the impact of feminism/womanism, Afrocentrism, and multicultural diversity on the African American woman are considered. Same as AFRO 287 and GWS 287.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

HIST 288 American Indians of Illinois credit: 3 Hours.

Same as ANTH 288 and AIS 288. See ANTH 288.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 289 History of Religion in America credit: 3 Hours.

Same as REL 235. See REL 235.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 290 Religion, Violence & America credit: 3 Hours.

Same as REL 236. See REL 236.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

HIST 291 History of the Bible credit: 3 Hours.

Same as REL 203. See REL 203.

HIST 292 Latina/o Social Movements credit: 3 Hours.

Same as LLS 238. See LLS 238.

HIST 295 Honors Colloquium credit: 3 Hours.

Topics will vary. May be repeated. Prerequisite: Chancellor's Scholar or consent of department and director of Campus Honors Program.

HIST 300 Topics in Film and History credit: 3 Hours.

Examines films as a significant medium of commentary on society and history. Explores the motives and careers of moviemakers, the ways in which films are influenced by their audiences, and how audiences' perception of historical processes are affected by films. Topics will vary. Same as MACS 300. May be repeated to a maximum of 6 hours if topics vary. Students may register in more than one section per term. May be repeated to a maximum of 6 hours.

HIST 305 Andean Countries of S America credit: 3 Hours.

The history of Colombia, Ecuador, Peru, Bolivia, and Chile; emphasizes common problems and diverse responses, from European conquest in the sixteenth century to the struggles for development in the twentieth.

HIST 306 History of Central America credit: 3 Hours.

Major themes of Central American history since conquest: the colonial regimes, ethnic diversity, the independence movement, fragmentation in the nineteenth century, export economies and imperialism, 1880-1932, social movements and populism in the twentieth century, revolution and intervention since the 1950s.

HIST 310 Global Capitalism in History credit: 3 Hours.

Explores the historical relations between multinational corporations and host countries focusing on political and economic issues.

HIST 311 Global History of Intelligence credit: 3 Hours.

Examines the role of both diplomatic and military intelligence in the political history of major global events and developments from the nineteenth century to the present day. Studies the histories of several major intelligence organizations, as well as the roles played by smaller and non-institutional actors in the global production of intelligence. Focuses on the interplay between intelligence, state policy, and information environments to understand not only the role intelligence played in major events, but also how intelligence practices shaped and reflected political cultures across the world.

HIST 314 Material Culture credit: 3 Hours.

Historical and theoretical investigation of everyday objects, artifacts, structures, landscapes, built environments. Students will learn to question existing perceptions of material phenomena, will engage in the work of historicizing and contextualizing them, and will arrive at a more informed understanding of the ways that they influence, shape, and reflect human history.

HIST 315 Discovery, Tourism and Travel credit: 3 Hours.

History of discovery, travel and tourism in Western history from classical antiquity to the present. Focus on two themes: first is the history of discovery, Greek adventures in the Mediterranean, European missionary trips to China, or modern European expansion into the Americas and the Pacific; second is the psychological and spiritual transformations that may accompany travel to foreign places. Pays special attention to how people from different cultures are able to communicate with each other and how travel writings document globalization in the nineteenth and twentieth century. Readings include original source material by travelers, fictional travel accounts, and narratives by recent historians. Also makes use of visual materials, cultural artifacts, and music as sources with much to teach us about travel encounters between cultures. Same as RST 312.

HIST 325 History of Korea credit: 3 Hours.

Same as EALC 367. See EALC 367.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

HIST 334 Modern Palestinian History credit: 3 Hours.

Examines the main themes of Palestinian history since 1800. The Israeli-Palestinian conflict frames the latter part of this history, but it is not the central issue. The focus of the course is Palestinian political, social, and cultural history.

HIST 335 Middle East 1566-1914 credit: 3 Hours.

Political, social, cultural, and ideological developments in Egypt, Arabia, the Fertile Crescent, Iran and Turkey from the mid 16th century to the eve of World War I. Premodern society and institutions, the question of "decline" and "awakening", encounters with Europe and self-strengthening reforms, relations between Muslims, Christians, and Jews, the role of women and the family, class formation, and religion and nationalism. Same as JS 335.

HIST 337 Middle East Since World War I credit: 3 Hours.

Political-economic, social and ideological developments in Egypt, Arabia, and Fertile Crescent (including Israel), Iran and Turkey since 1918 to the present, including U.S. involvement.

HIST 339 The Early Russian Empire credit: 3 Hours.

Introduction to one of the most transformative events in early modern world history: the creation of the Russian Empire. We will study how Moscow, a modest medieval kingdom, suddenly expanded into the world's largest state, fated to play an outsized role in world politics and culture. Chronologically, the course extends from 1500-1750, and considers topics ranging from religion and rebellion to material culture and everyday life.

HIST 342 Cultural Hist of Technoscience credit: 3 Hours.

Addresses the myriad ways American culture interacts with scientific and technological artifacts, practices, and knowledge. Some of the issues addressed are: how science and technology are deployed and used for cultural ends; how cultural beliefs and ideologies are "built" into science and technology; how the interaction of cultural experience, science, and technology shapes the built environment; how science and technology privilege certain cultural communities in America. Course requirements include participation, leadership in class discussions, as well as a research project.

HIST 343 Technology & Sport credit: 3 Hours.

Traditionally sport has been a competition between humans or humans and nature. Recent technological developments have altered this arrangement. Now technology is a continuative component of sport and has changed modes of play. Examines the history of the evolving relationships between contemporary sport, emerging technology, and cultural experience. The fundamental question this course will address is: how has technology, in its multiple forms, reshaped sport? Same as RST 357.

HIST 345 Medieval Civilization credit: 3 Hours.

The architectural, artistic, philosophical, political, and religious components of medieval culture, thought, and patterns of behavior; includes monasticism and society and the individual. Same as MDVL 345 and REL 345.

HIST 346 The Age of the Renaissance credit: 3 Hours.

An introduction to the cultural history of Europe in the fifteenth and sixteenth centuries, embracing the Renaissance movements in Italy and in Northern Europe. Same as MDVL 346 and REL 346.

HIST 347 Protestant & Catholic Refs credit: 3 Hours.

New sources of secular power and spiritual authority define the age of the Protestant and Catholic Reformations. In this advanced European history course students expand their knowledge of the people, events, and ideas of the fifteenth and sixteenth centuries while deepening their understanding of a wide range of primary sources created by theologians and peasants, nuns and monarchs, and artists and rebels. Key works by Luther, Calvin, and Loyola are placed in their intellectual and social contexts. Same as REL 347.

HIST 348 Early Euro Absolut & Expansion credit: 3 Hours.

In the seventeenth and eighteenth centuries Europeans transformed political relations within Europe and their economic relationships with the wider world. This course examines continuities and change from 1600 to 1789, following the themes of authority and power. Topics include the rise of "absolute monarchy" and its alternatives in countries like, England and the Netherlands, as well as European trade and consumption, popular culture, the family, food, clothing, sexuality, and labor.

HIST 349 Age of Revolution, 1775-1815 credit: 3 Hours.

Comparative survey of domestic upheavals in the North Atlantic world: America, Haiti, England, Prussia, and France; the rise of Napoleon and the response of Europe; and the fate of innovation and reform in the immediate aftermath.

HIST 350 19thC Romanticism & Politics credit: 3 Hours.

Among the topics of this course will be Romanticism, which is still the basic form of modern culture today, with its emphasis on feeling, imagination, and self-expression; the nation-state, a new form of political organization; and the creation of a globalized world for the first time in human history.

HIST 352 Europe in the World credit: 3 Hours.

Colonial encounters between Europe and today's Third World viewed in comparative historical perspective. Equal emphasis placed on (colonizing) Europe and colonial experience of Asia, Africa, and South America.

HIST 353 European History 1918 to 1939 credit: 3 Hours.

Survey of European society from 1918 to 1939, with emphasis on the impact of World War I, the Russian Revolution, fascism, and the intellectual trends of the twenties and thirties.

HIST 354 Twentieth Century Europe credit: 3 Hours.

Cultural history of Europe in an age of global warfare and political, social, and economic upheaval.

HIST 355 Soviet Jewish History credit: 3 Hours.

An examination of how Jewish life and culture contributed to the creation of the world's first socialist society. Makes use of primary sources, scholarly essays and monographs, archival documents, literature, memoirs, film, and visual culture as a way of introducing students to Soviet Jewish History, from the reign of the last tsar, Nicholas II, to the dissolution of the Soviet Union in 1991. Special topics to be examined include: the breakup of the Pale of Settlement during the Great War; the role of Jews in revolution and revolutionary culture; Soviet nationality policy; shtetl culture; antisemitism; everyday life; the purges of the 1930s; the Jewish experience in World War II; the Holocaust; and mass emigration.

HIST 357 Modern France credit: 3 Hours.

The development of modern France, with special attention to social and cultural phenomena.

HIST 360 European Culture in a Global Context credit: 3 Hours.

Railways, steamships, telegraph, quinine, machine guns: these were some of the European innovations that created a unified world between 1850 and 1914. The transforming force of new technologies, global commerce and Western imperialism also had a profound impact on the arts. We will study this globalization of culture in world spectacles, the visual arts, music, and literature.

HIST 361 Euro Thght & Soc Since 1789 credit: 3 Hours.

Examines the reciprocal relationship between thought and society in western Europe from the French Revolution to the present.

HIST 362 Spain and Portugal to 1808 credit: 3 Hours.

Introduction to the history of the Iberian peninsula to 1808. After a brief overview of Roman and Visigoth Iberia, the course will study the cultural, technological, and intellectual accomplishments of Moorish Iberia and the imperial expansion of Christian Spain and Portugal in the early modern period.

HIST 365 Fict & Historical Imagination credit: 3 Hours.

Explores the relationship between history and fiction by focusing on specific cultural locations.

HIST 367 History of Western Medicine credit: 3 Hours.

Rise and development of medicine in the West since the sixteenth century; interrelations of physiology, pathology, and social demands with the theory and practice of medicine; pattern of professionalization; social role of the physician; conflict among ideas of medicine as an art, a science, and a social service; and problems of mental illness, medical ethics, and nontraditional forms of practice.

HIST 369 Spain and Portugal from 1808 credit: 3 Hours.

A modern history of Spain and Portugal.

HIST 370 Colonial America credit: 3 Hours.

An interpretive survey of American colonial history from 1492 through 1763. Themes include encounters between Natives and Europeans in the New World, contests for colonization, settler societies and the development of various colonial social patterns in North America and the Caribbean, the beginnings of slavery, and the gradual emergence of distinctive provincial cultures in the North American colonies of the British Empire. Throughout all of this, there is an examination of colonial American history as part of the larger Atlantic World, understanding early American history as a process of exchange and interaction which included Europe, Africa, the Caribbean, and North America.

HIST 371 The American Revolution credit: 3 Hours.

Examines the momentous founding age of United States history. Explores the growing estrangement of the American colonies from Great Britain and the culmination of this process in the Declaration of Independence. It then examines the controversial process of creating a new nation, and the government of the United States. Intense focus on primary source materials from the period.

HIST 372 America's Republic, 1780-1880 credit: 3 Hours.

A study of political life in the U.S. during the century following the Revolution. The course covers the appearance and evolution of republican government, the Constitution, the expansion of voting rights, the rise and fall of political parties, and the relationship of all these things to the development of economic and social relationships.

HIST 373 Origins of the Civil War credit: 3 Hours.

Examination of changes in economic, social, cultural, and political life in the United State that ultimately plunged the national into the bloodiest and most important war in its history. Particular attention is paid to the way in which diverse segments of the country's population - North and South, urban and rural, rich and poor, slave and free, black and white, male and female - affected and were affected by these changes.

HIST 374 Civil War and Reconstruction credit: 3 Hours.

The United States' civil war (1861-1865) and the years of postwar "reconstruction" (conventionally dated as 1865-1877). During this period as a whole, the nation underwent its second revolution -- a revolution more radical in its impact than the one that freed it from the British Empire. Much about U.S. history for the next century and more was decided during these critical years.

HIST 375 Soc History Indus Am to 1918 credit: 3 Hours.

The impact of industrialization, immigration, and urbanization on American society to the end of World War I.

HIST 376 Soc History Indus Am from 1918 credit: 3 Hours.

Study of the impact of industrial technology, business enterprise, immigration, and urbanization on American society.

HIST 377 United States since 1932 credit: 3 Hours.

Discusses the New Deal, the Cold War, Franklin D. Roosevelt and subsequent presidents, the structure of American imperialism, and America's role in world politics.

HIST 379 Latina/os and the City credit: 3 Hours.

Same as LLS 379. See LLS 379.

HIST 380 US in an Age of Empire credit: 3 Hours.

Study of the imperial dimensions of U.S. history from about 1877 to 1920. This was an era marked by an imperial world system, unprecedented levels of international trade and investments, massive labor migrations, significant missionary endeavors, and consolidation of U.S. power over Native Americans, and growing U.S. political and military assertion in the international arena. Considers how the United States and its peoples positioned themselves in an international context by investigating not only government policies but also commercial endeavors and cultural practices.

HIST 381 Urban History credit: 3 Hours.

Examines the history of urban centers, paying special attention to the relationship between the city and its surrounding territory, the impact of migration and immigration, the delineation of space and the transformation of the built environment, and the role of a city's inhabitants in creating social networks, political structures, and cultural institutions. May be repeated in separate terms to a maximum of 6 hours if topics vary.

HIST 382 Race and Migration in Chicago credit: 3 Hours.

Same as LLS 382. See LLS 382.

HIST 383 Hist of Blk Women's Activism credit: 3 Hours.

Same as AFRO 383 and GWS 383. See AFRO 383.

HIST 384 Class Politics & Blk Community credit: 3 Hours.

Same as AFRO 372. See AFRO 372.

This course satisfies the General Education Criteria for: Advanced Composition

HIST 385 Transnational Sexualities credit: 3 Hours.

Same as GWS 385. See GWS 385.

HIST 386 Public History credit: 3 Hours.

An examination of major genres historians have employed to present history in the public arena, including documentary films, public memorials, legal testimony and museum exhibits. Students will explore both the social dynamics of public commemoration and the techniques historians employ when communicating complex ideas and events to a general audience.

HIST 387 History of Sexuality in U.S. credit: 3 Hours.

Same as GWS 387. See GWS 387.

HIST 389 Race and Revolutions credit: 3 Hours.

Same as AFRO 378. See AFRO 378.

HIST 390 Sport and Society credit: 3 Hours.

In various societies, organized sport has operated as site of nation-building, the struggle for inclusion, and indicator of societal advancement. Examines the history of the roles that sport has played in society through a series of topical foci, as selected by the professor each semester. Course readings revisit popular and scholarly debates about sport and discuss the different actors and social forces that shaped those discussions. Same as KIN 345. May be repeated in separate terms to a maximum of 6 hours if topics vary.

HIST 391 Oral History Methods credit: 3 Hours.

Introduces students to the ethical discourses and practical methods in oral history. Its primary purpose is to prepare students with oral and archival research skills that are crucial for the examination of the history and memory of communities. Among the questions that the class will consider are: what is the connection between the historical record and the remembered past? How reliable are these memories and does reliability matter? How do people mobilize and manipulate accounts of the past for purposes of community building, historic preservation, and political development? Same as LLS 391.

HIST 392 The 1960s in the U.S. credit: 3 Hours.

A study of the history of the 1960s, a tumultuous decade in the social and political history of the United States. The class has two main goals: 1) Provide a solid knowledge of the history of this period and its social and economic developments. 2) Develop skills as an analytic reader and writer in U.S. history.

HIST 393 The World of Jewish Sepharad credit: 3 Hours.

Same as ANTH 393 and REL 393. See ANTH 393.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 395 Topics in Law and Society credit: 3 Hours.

Topics and problems in the history of laws, legal institutions, jurisprudence, concepts of justice, and their role(s) in shaping societies over time. Specific readings and foci will vary. May be repeated in the same or separate terms for a maximum of 6 hours if topics vary.

HIST 396 Special Topics credit: 3 Hours.

Topics are given on an experimental one-time-only basis. May be repeated if topics vary.

HIST 397 Sexuality in Modern Europe credit: 3 Hours.

What is sexuality? How is it practiced, policed, represented, liberated and controlled? How do religion, the state, the law and the media influence sexual identities and practices? Focusing on modern Europe, we will examine the history of sexuality from the late eighteenth century to the present in order to explore how historians have answered these questions. We will investigate topics from pornography, prostitution, sex and totalitarianism, queer sexualities, sex and colonialism, and masturbation, to sex education, sexual revolutions, hermaphroditism, sex surveys and AIDS. Same as GWS 397.

HIST 398 Internship in Public History credit: 1 to 3 Hours.

With a faculty sponsor, a qualified student will develop a program of study or research related to an internship or other relevant employment opportunity. Consult departmental undergraduate advisor or Director of Undergraduate Studies. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of faculty sponsor and Director of Undergraduate Studies required.

HIST 399 Independent Study credit: 1 to 3 Hours.

Readings in selected fields in consultation with the instructor resulting in a 20-30 page paper. May be repeated with permission of the Director of Undergraduate Studies. Prerequisite: Junior or senior standing pursuing a History major; written consent of instructor and History undergraduate advisor required.

HIST 400 War, Soc, Politics, & Culture credit: 2 to 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. 3 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours in the same or subsequent terms if topics vary.

HIST 401 History of Terrorism credit: 3 or 4 Hours.

Historical examination of strategies of terror, their relationship to conventional warfare, and their political, social, cultural, and religious contexts. 3 undergraduate hours. 4 graduate hours.

HIST 405 History of Brazil from 1808 credit: 2 to 4 Hours.

Problems of a neocolonial society; themes include family structure, slavery, imperialism, modernization, and the crisis of traditional institutions. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 406 History of Mexico from 1519 credit: 2 to 4 Hours.

Development of Mexico from the conquest to the postrevolutionary present. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 407 Slavery & Race in Latin Am credit: 2 to 4 Hours.

Selected topics on Indians and Spaniards, whites and blacks, emphasizing Mexico, the Caribbean, and Brazil. Same as AFRO 407. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 410 Decolonization in Africa credit: 3 or 4 Hours.

Almost all African countries fell under European colonial rule by the beginning of the 20th century, but formal colonialism did not last the century. Surveys the crucial ideological, political, social, and military strategies enlisted by African people and movements to shed colonial rule. Also examines the paradox of the coupling of "flag independence" with continuing economic dependence on Europe. 3 undergraduate hours. 4 graduate hours.

HIST 411 20thC Africa Intellectual Hist credit: 2 to 4 Hours.

The development of influential political and cultural ideas on the African continent over the course of the long 20th century, highlighting the interactions of individuals (as members of educated elites and of rural societies) and institutions (such as universities) in developing trademark African intellectualism. These concepts include: Pan-Africanism, the need for political independence, Negritude, feminism/womanism, calls for the promotion of indigenous languages and ubuntu; as well as the contested justifications for one-party rule. Students will gain an appreciation of the breadth, depth and creativity of African thought and activism. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 412 Southern Africa Race & Power credit: 3 or 4 Hours.

Interdisciplinary survey of both the internal and international dimensions of the changing situation in Africa south of the Zambezi; focuses on the historical background - and a political, economic, and social analysis of - current events in the Republic of South Africa, Mozambique, Namibia, and Zimbabwe, emphasizing the central significance of race and power in this region. Same as AFST 425. 3 undergraduate hours. 4 graduate hours.

HIST 420 China Under the Qing Dynasty credit: 2 to 4 Hours.

The period of Manchu domination in China (1644-1912); emphasis on Chinese reactions to Western influences during the nineteenth century. Same as EALC 420. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 422 Soc-Econ Hist Modern China credit: 2 to 4 Hours.

Disintegration of traditional social and economic systems during the nineteenth and twentieth centuries, and the political effects of that disintegration; examines changes in the agricultural economy, changing rural elites, urbanization, and emergence of new social classes. It is recommended that students take HIST 420 before registration in HIST 422. Same as EALC 421. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 425 Classical Chinese Thought credit: 3 or 4 Hours.

Same as CWL 478 and EALC 476. See EALC 476.

HIST 426 Early Modern Japan credit: 3 or 4 Hours.

Study of the people, culture, and society from 1600 to 1868. Traces the rise of Japan's first truly national culture. Same as EALC 426. 3 undergraduate hours. 4 graduate hours.

HIST 427 Twentieth-Century Japan credit: 3 or 4 Hours.

Study of the people, culture, and society of Japan from 1868 to the present. Traces Japan's transformation from an insular bastion of "centralized feudalism" into a cross-cultural crucible of post-industrial democracy. Same as EALC 427. 3 undergraduate hours. 4 graduate hours.

HIST 430 India from Colony to Nation credit: 2 to 4 Hours.

Mughal Empire and British Raj, Indian national awakening, and struggle for independence under Gandhi and Nehru. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 432 History of Early Judaism credit: 3 Hours.

Same as JS 442 and REL 442. See REL 442.

HIST 433 History of Jews in Diaspora credit: 3 or 4 Hours.

Deals with the history of the Jewish people from the destruction of the Jewish state by Rome to the reestablishment of a Jewish state in 1948. The emphasis is on the interaction between the Jewish and non-Jewish worlds as well as changes internal to the Jewish communities. Same as REL 434. 3 undergraduate hours. 4 graduate hours.

HIST 434 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLBL 403, GWS 403, REL 403, and SAME 403. See REL 403.

HIST 436 Jewish Life-Writing credit: 3 or 4 Hours.

Same as CWL 421, REL 420, SLAV 420, and YDSH 420. See YDSH 420.

HIST 438 Egypt Since World War I credit: 2 to 4 Hours.

Examines the twentieth-century history of Egypt, emphasizing the internal social, political, economic, and ideological developments, with attention to Egypt's role in regional and international politics. Readings include novels and short stories to introduce students to modern Egyptian culture. Same as AFST 437. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 439 The Ottoman Empire credit: 2 to 4 Hours.

Economy, society, law, and government; the Ottomans and Mediterranean society; Ottoman culture and Islamic tradition; minorities; trade, diplomacy, and capitulations; "decline" and dismemberment; and traditional and westernizing attempts at revival. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 440 Roman Republic to 44 B C credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of Rome from 753 BCE until 14 CE. Same as CLCV 440. 3 undergraduate hours. 4 graduate hours.

HIST 441 The Roman Empire credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of the Roman Empire from the reign of Augustus (27 BCE - 14 CE) through the fall of the Western Roman Empire ca. 480 CE. 3 undergraduate hours. 4 graduate hours.

HIST 442 Roman Law and Legal Trad credit: 3 or 4 Hours.

Examines Roman law and legal tradition in the context of historical, political, and social developments; origins of law in primitive and ancient classical societies; surveys development of precedent, codification, and preservation of Roman law, and the impact of Roman law on western legal traditions. 3 undergraduate hours. 4 graduate hours.

HIST 443 Byzantine Empire AD 284-717 credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of the early Byzantine Empire from the reign of Diocletian (AD 284-305) through the Heraclian Dynasty (AD 610-717). Same as MDVL 443. 3 undergraduate hours. 4 graduate hours.

HIST 444 European Education to 1600 credit: 2 to 4 Hours.

Same as EPS 403 and MDVL 403. See EPS 403.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

HIST 445 Medieval England credit: 2 to 4 Hours.

Key sources and topics of English history, from the end of Roman rule in Britain (c. 410) to the fifteenth century. Recurrent themes include the development of law, the role of women, the status of commoners, intellectual trends, and the importance of public media for the dissemination of ideas (writing, performance). Same as MDVL 444. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 446 Early Modern British Isles credit: 2 to 4 Hours.

Social, economic, cultural and political history of the "four Kingdoms" of England, Scotland, Wales, and Ireland between 1450 and 1800. Covers the Tudor and Stuart dynasties, Shakespeare, the English Civil War, the development of British colonial holdings across the globe, and the effects of empire at home. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 448 Modern Britain credit: 2 to 4 Hours.

History of modern Britain's social, economic, cultural and political life with a special emphasis on the role of empire in shaping its career as a global power and its "domestic" national culture at home. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 449 British Imperialism credit: 2 to 4 Hours.

Thematic approach to Britain's role as an imperial power, its impact on global issues and affairs, and the effect of colonies and colonial peoples on the history of its development as a Western "nation". 3 undergraduate hours. 2 or 4 graduate hours.

HIST 450 European Working Class History credit: 2 to 4 Hours.

Comparative study of the rise of the working class in European countries; formation, culture, and daily life; stratification within the working class; workers in organized labor and revolutionary movements. Same as LER 450 and SOC 422. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 456 Twentieth-Century Germany credit: 3 or 4 Hours.

Political upheavals of twentieth-century Germany; topics include the First World War's impact on German society, the war's revolutionary aftermath, the political struggles and cultural achievements of the Weimar Republic, the rise of Hitler, the Third Reich, the Holocaust, the Second World War, and the divided postwar Germanies; novels and films complement readings. 3 undergraduate hours. 4 graduate hours.

HIST 457 European Education since 1600 credit: 2 to 4 Hours.

Same as EPS 404. See EPS 404.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

HIST 458 Christians and Jews 1099-1789 credit: 3 or 4 Hours.

Same as REL 458. See REL 458.

HIST 459 Postcolonial/Queer credit: 3 or 4 Hours.

Same as GWS 459. See GWS 459.

HIST 461 Russia- Peter the Great to Rev credit: 2 to 4 Hours.

Culture, society, and politics in Imperial Russia, focusing on power and resistance, the lives and culture of ordinary Russians, and competing ideas about the state, the individual, community, nation, religion, and morality. 3 undergraduate hours. 2 or 4 graduate hours. For higher credit, graduate students will be required to do more reading and to write an additional paper.

HIST 462 Soviet Union Since 1917 credit: 2 to 4 Hours.

Political, social, and economic development of the USSR since the 1917 revolutions that brought the Bolsheviks to power; social change and social engineering; political struggles among Stalin and his rivals; the "Stalin revolution" from above and economic modernization; the USSR's emergence through World War II and the Cold War as a world power; "developed socialist" society. 3 undergraduate hours. 2 or 4 graduate hours. Graduate students will write an additional substantial paper and engage in special discussion sections.

HIST 463 The Modern Balkans through Literature and Film credit: 3 or 4 Hours.

History of the creation and development of the independent Balkan states during the 19th and 20th centuries. Special attention is given to Balkan nationalism, its roots, evolution and various manifestations. Other topics cover the modernization of the rural societies, ethnic conflict and/or accommodation, inter-Balkan relations, and the role of the great powers. Finally, a close look will be taken on contemporary developments in the Balkans, especially the Yugoslav crisis, the fall of communism and post-communist development. By discussing fictional work and films by Balkan authors, students will be introduced to the intellectual production of the region. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior or Senior standing, or consent of instructor.

HIST 466 The Balkans credit: 3 or 4 Hours.

The political, economic, and cultural history of this region's peoples, including the Rumanians, South Slavs, Greeks, and Albanians; the impact of Ottoman rule; the rise of nationalism and the formation of national states; and the Orthodox Church. 3 undergraduate hours. 4 graduate hours.

HIST 467 Eastern Europe credit: 3 or 4 Hours.

The political, economic, and cultural history of Poland, Czechoslovakia, Hungary, Rumania, Yugoslavia, Bulgaria, Greece, and Albania; particular emphasis upon the post-World War II era. 3 undergraduate hours. 4 graduate hours.

HIST 468 Locating Queer Culture credit: 3 Hours.

Same as GWS 467. See GWS 467.

HIST 470 Plantation Soc in Americas credit: 3 or 4 Hours.

Same as AFRO 453. See AFRO 453.

HIST 472 Immigrant America credit: 3 or 4 Hours.

History of immigration and immigrant groups in the United States from 1830 to 1980. Covers major waves of immigration and focuses on the diverse cultural heritage, social structure, and political activism of immigrants from Europe, the Americas, and Asia. 3 undergraduate hours. 4 graduate hours.

HIST 473 Crises of Political Tolerance credit: 2 to 4 Hours.

Investigates the character of American political tolerance and freedom in times of crisis, through a series of case studies: images of the American "enemy"; the Red Scare after World War I; the internment of Japanese-Americans in World War II; McCarthyism; and the resentments generated by protest movements in the late 1960's. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 475 Formation of US Public Health credit: 3 or 4 Hours.

Introduction to the history of American public health and health policy. Emergence of modern public-health institutions in America; relation of public health to conceptions of disease, social order, and the role of government; emergence and development of public policy issues in public health and medical care, of the environment for the formulation of policy, and the relation of policy to broader issues of social development, incidence of disease, and assumptions about the proper distribution of public and private responsibility. 3 undergraduate hours. 4 graduate hours.

HIST 476 History of the American West credit: 3 or 4 Hours.

Examines the changing image of the American West by focusing on the process of conquest and resistance present within the region's history. Same as LLS 475. 3 undergraduate hours. 4 graduate hours.

HIST 478 Black Freed Move, 1955-Present credit: 3 or 4 Hours.

Same as AFRO 474. See AFRO 474.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 479 19thC US Intel & Cultr Hist credit: 2 to 4 Hours.

Examines diverse strains of cultural and intellectual life in the US from the early Republic through the 1890s. Emphasizes popular culture, religious revivalism, educational institutions, reform movements, art, science, and literature and the roles of cultural elites, women, working-classes, African Americans, Native Americans and immigrants in shaping national, regional and local cultures. Same as REL 478. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 480 US Work Class Hist Since 1780 credit: 2 to 4 Hours.

Focuses on working class formation, culture, ideas, and organization; examines daily experience of work and community life; special emphasis on race, ethnicity, and gender in the process of class formation; labor relations and the changing patterns of working class protest and accommodation. Same as LER 480. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 481 20th Century US Culture Wars credit: 2 to 4 Hours.

What ideas does "American Culture" include? How does it incorporate diverse religious traditions as well as new scientific perspectives? How are ethnicity, gender and race important? Topics of current "cultural wars", these and other questions about cultural conflict in the US have been hotly debated for over a century. This course explores such culture wars in the 20th century US and helps students evaluate contested cultural concepts they have produced, including pragmatism, pluralism, religious diversity, scientific objectivity, economic equality, as well as "popular," "high" and "democratic" culture. Same as REL 479. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 482 Slavery in the United States credit: 3 or 4 Hours.

Same as AFRO 460. See AFRO 460.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 483 Race, Science, and Medicine credit: 3 or 4 Hours.

Same as AFRO 466. See AFRO 466.

HIST 486 Revivalism and Evangelicalism credit: 3 or 4 Hours.

Same as REL 435. See REL 435.

HIST 487 Great Books in History credit: 3 or 4 Hours.

An approach to History through a selection of prize-winning, influential, and lasting books, the point being to consider the role of the book in History and its relation to other forms of historical interpretation, including essays, web sites, films, lectures, and exhibits. It will hone students' composition abilities through careful attention to writing, craft, and genre. Each iteration of this course will focus on a particular theme. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary to a maximum of 6 undergraduate hours or 8 graduate hours.

HIST 490 Honors Independent Study credit: 3 Hours.

Independent reading, research, and writing under the supervision of an individual instructor. Seniors in the History Honors Program taking this course in place of the Honors Senior Thesis must complete a substantive research paper (25-30 pages). No graduate credit. May be repeated to a maximum of 6 hours. Each 3-hour class must be taken with a different instructor. Prerequisite: Admission to the History Honors Program; or junior or senior of high standing with the consent of the Director of Undergraduate Studies.

HIST 491 Directed Research in Digital History credit: 1 to 4 Hours.

Advanced projects in Digital History undertaken with a faculty supervisor. 1 to 3 undergraduate hours. 1 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: Consent of sponsoring faculty supervisor and Director of Undergraduate Studies or Director of Graduate Studies required for all students.

HIST 492 Historiography and Methodology credit: 3 Hours.

A seminar for all students in the History Honors Program, to be taken no later than the spring of the Junior year. Students will study the development of the historian's craft and will be exposed to new research methods and techniques. The course will culminate in the preparation of a research proposal for the Honors Senior Thesis, developed in consultation with an individual faculty advisor. The instructor of HIST 492 and the Director of Undergraduate Studies will assist students in the selection of an appropriate mentor. Even those students who may not be planning to write the Honors Senior Thesis must enroll in this course and prepare a research proposal. 3 undergraduate hours. No graduate credit. Prerequisite: Admission to the History Honors Program or consent of the Director of Undergraduate Studies.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 493 Honors Senior Thesis credit: 3 Hours.

Two-term independent research and writing project under the supervision of a faculty advisor. Students enrolled in this course must submit a completed Honors Senior Thesis at the end of the second term, for evaluation by the faculty advisor and a second reader. 3 undergraduate hours. No graduate credit. Must be repeated for a total of 6 hours. Students will receive separate grades for each semester's work. Prerequisite: Admission to the History Honors Program and consent of supervising professor; HIST 492 and HIST 495; concurrent enrollment in HIST 499 is required.

HIST 495 Honors Research & Writing Sem credit: 3 Hours.

A topic-specific course required of all students in the History Honors Program, and meeting with HIST 498. Each student's work will be evaluated and graded by the instructor of the HIST 498. In addition, students will complete a self-assessment exercise supervised by the Director of Undergraduate Studies. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: HIST 200 and admission to the History Honors Program.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 497 History of Historiography credit: 2 to 4 Hours.

An exploration of the different approaches to the conceptualization and narration of history in various times and places, with special emphasis on the social, cultural, and political role(s) of the historian. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 498 Research and Writing Seminar credit: 3 Hours.

Capstone course required of all majors. Students will make history by researching and writing a work of original scholarship. Several of these seminars are offered each term and each focuses on a special topic, thus allowing students with similar interests to work through the process of gathering, interpreting, and organizing historical evidence under the direction of an expert in the field. The topics on offer each semester will be listed in the Class Schedule and described in the department's course guide at <http://www.history.illinois.edu>. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 499 Thesis Seminar credit: 1 to 2 Hours.

A required seminar for all seniors writing Honor Theses in history, this course will meet throughout the year and will supplement individual students' meetings with their primary advisors. Provides an intellectually supportive environment in which students work together on common methodological problems, share the results of their research, and critique developing projects. 1 to 2 undergraduate hours. 1 to 2 graduate hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 3 hours. Prerequisite: Admission to the History Honors Program; HIST 492; and HIST 495. Concurrent enrollment in HIST 493 is required.

History Concentration

E-mail: history@illinois.edu

Minimum required major course work normally equates to 36 hours of History courses.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Departmental distinction:

To be eligible for distinction, a student must be admitted to the Honors Program in History and complete its required coursework. Those admitted (ideally before the beginning of the junior year) must have earned at least a 3.5 GPA in History and a 3.25 GPA overall. They will then pursue a sequence consisting of HIST 495, HIST 492 and successful completion of either:

1. HIST 493 and HIST 499 in two consecutive semesters (in which case, the level of distinction awarded to student will be decided by the examining committee) OR
2. the completion of two approved independent research projects under the supervision of two different advisors (HIST 490). (in which case, students will be eligible for an award of distinction only (not high or highest distinction).

Code	Title	Hours
Minimum of 36 hours of History courses including:		
	Two introductory History courses at the 100 level (preliminary coursework)	6
	African, Asian, Global, Latin American, Middle Eastern History courses at the 200-level or above, at least 3 hours at the 300 level or above ¹	6
	European History courses at the 200-level or above, at least 3 hours at the 300 level or above ¹	6
	U.S. History courses at the 200-level or above, at least 3 hours at the 300 level or above. 3 hours must be in U.S. Minority History. ¹	6
	Hours of history electives (at the 200-level or above). NOTE: HIST 200 and HIST 498 (or HIST 495) are required. HIST 200, HIST 495, and HIST 498 may count toward any of the area requirements or the 12 hours of History electives. For those students in the Honors Program, HIST 490 or HIST 493 may count toward any of the area requirements or the 12 hours of History electives. HIST 492 and HIST 499 must be taken as part of the 12 hours of required History electives.	12

Of the 36 hours of History courses, students must take 6 hours in a pre-modern period, one defined as before 1600 and one defined as before 1800 (HIST 100 and HIST 142 may not be used to fulfill this requirement). ¹

Total Hours ²	36
---------------------------------	-----------

¹ Chosen from the list maintained in the Department of History

² Eighteen advanced hours (300- and 400-level) of History courses are required in the major. 12 of those 18 advanced hours must be taken on this campus.

Social Science: History Teaching Concentration

E-mail: history@illinois.edu

Web address for department: www.history.illinois.edu (<http://www.history.illinois.edu>)

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Students are required to take a minimum of 36 hours in History courses. Only one of the following Advanced Composition courses (HIST 140, HIST 143, HIST 170, HIST 173) will count toward the 36 hours required in History courses.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level History courses must be taken on this campus.

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school history (grades 9-12) through the AP/honors level and high school economics, geography, political science, psychology, and sociology/anthropology up to but not including the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters, but some students may require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental distinction: To be eligible for distinction, a student must be admitted to the Honors Program in History and complete its required coursework. Those admitted (ideally before the beginning of the junior year) must have earned at least a 3.5 GPA in History and a 3.25 GPA

overall. They will then pursue a sequence consisting of HIST 495, HIST 492 and successful completion of either

1. HIST 493 and HIST 499 in two consecutive semesters (in which case, the level of distinction awarded to student will be decided by the examining committee) OR
2. the completion of two approved independent research projects under the supervision of two different advisors (HIST 490) (in which case, students will be eligible for an award of distinction only [not high or highest distinction]).

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
PS 101	Intro to US Gov & Pol	3
PSYC 100	Intro Psych	4
SOC 100	Introduction to Sociology	4
STAT 100	Statistics	3
Select one of the following:		
ANTH 143	Biology of Human Behavior	
ECON 102	Microeconomic Principles	
ECON 103	Macroeconomic Principles	
HIST 141	Western Civ to 1660	3-4
or HIST 140	Western Civ to 1660-ACP	
HIST 142	Western Civ Since 1660	3-4
or HIST 143	Western Civ Since 1660-ACP	
Select one of the following:		
HIST 170	US Hist to 1877-ACP	
HIST 171	US Hist to 1877	
HIST 172	US Hist Since 1877	
HIST 173	US Hist Since 1877-ACP	
One additional History course (HIST 200 - Intro Hist Interpretation is required for the major and recommended for transfer into the program)		
Additional required coursework		
Teacher Education Minor in Secondary School Teaching (p. 139)		39
United States History (15 hours required)		
HIST 171	US Hist to 1877	3
or HIST 170	US Hist to 1877-ACP	
HIST 172	US Hist Since 1877	3
or HIST 173	US Hist Since 1877-ACP	
HIST 273	Illinois History	3
or HIST 288	American Indians of Illinois	
One 200-400 level course in 18th-19th century		3
One 200-400 level course in 20th-21st century		3
Nonwestern and Global History		
HIST 100	Global History	3
One 200-400 level course in global or nonwestern history		3
European History		
One 200-400 level course to 1700		3
One 200-400 level course since 1700		3
HIST 200	Intro Hist Interpretation	3

Students must take HIST 498 - Research and Writing Seminar or, for those students in the Honors Program, HIST 495 - Honors Research & Writing Sem. Students may count the 3 hours towards any of the history areas noted above: US, Nonwestern/Global, or European.

Social Science Requirement (many of these will also satisfy general education requirements):

PS 100	Intro to Political Science	3
PS 240	Intro to Comp Politics	3
or PS 241	Comp Politics in Dev Nations	
SOC 380	Social Research Methods	4
ANTH 143	Biology of Human Behavior	3
ANTH 230	Sociocultural Anthropology	3
ECON 102	Microeconomic Principles	3
ECON 103	Macroeconomic Principles	3
GEOG 103	Earth's Physical Systems	4
GEOG 104	Social and Cultural Geography	4

Integrative Biology, School of

Carla Caceres

286 Morrill Hall, 505 South Goodwin Avenue, Urbana

PH: (217) 333-3044

<http://sib.illinois.edu/>

Students in Integrative Biology (<http://sib.illinois.edu/undergraduate/programs>) focus on the disciplines of genetics, physiology, behavior, ecology and evolution. In Integrative Biology, the emphasis is on bringing multiple disciplines to bear on complex scientific questions. From genomics to global change, Integrative Biology seeks to discover the complex interrelationships between organisms and the physical and biological environment in which they live. This major prepares students for careers in medicine and the health professions, research, organisms, and the environment. The School of Integrative Biology also sponsors two minors. The Minor in Integrative Biology is designed for students intending to have a career for which a background in integrative biology is complementary, e.g. law, technology, bioinformatics, business, scientific writing, and engineering. The Minor in Ecology and Conservation Biology prepares students for diverse careers, including environmental lawyer, environmental consultant, conservation technician, environmental educator, and environmental engineer.

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students must select one concentration.

- Integrative Biology Concentration (p. 471)
- Integrative Biology Honors Concentration (p. 472)
- Minor in Integrative Biology (p. 473)
- Minor in Ecology and Conservation Biology (p. 473)

IB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IB>)

Courses

IB 100 Biology in Today's World credit: 3 Hours.

Introduction to biology for the non-major. In-depth focus on three contemporary problems-maintaining a livable environment, issues of human health, and evolution. Lecture and discussion.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 103 Introduction to Plant Biology credit: 4 Hours.

Basic principles of growth and form, physiology, genetics, evolution, and ecology in plant biology. Lecture and laboratory.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 104 Animal Biology credit: 4 Hours.

Introductory zoological concepts with emphasis on the diversity and comparative anatomy of animals and the fundamentals of physiology, genetics, evolution, and behavior. Lecture and laboratory. The laboratory includes vertebrate dissection.

IB 105 Environmental Biology credit: 3 Hours.

Introduction to ecological principles in relation to understanding environmental problems; lecture and discussion emphasize impacts upon ecosystems by human activities such as air and water pollution, usage of pesticides and pest control measures, expansion of agriculture in tropics and arid regions, harvesting the oceans, and development of energy sources.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 108 The Biology of Dinosaurs credit: 3 Hours.

The origin, diversity, and extinction of dinosaurs will serve as a conceptual framework to explore fundamental principles of biology. We will consider dinosaurs as animals, examining evidence for their physiology and behavior, and how evolution and speciation produced the diversity of dinosaurs. We will relate the influence of Earth's changing environments on dinosaurs to environmental change on human timescales. We will emphasize how scientists collect and evaluate fossil data through an understanding of living organisms.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 109 Insects and People credit: 3 Hours.

Fundamentals of insect biology as reflected in human culture; insect physiology, ecology, and behavior discussed in the context of art, literature, movies, medicine, sports, law, and history.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 150 Organismal & Evolutionary Biol credit: 4 Hours.

Introduction to physiology, genetics, and evolution of organisms, and their ecology and diversity.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 151 Organismal & Evol Biol Lab credit: 1 Hour.

Topics follow lecture topics in IB 150 and include labs in ecology, plant and animal function, and genetics and evolution. Designed for non-majors needing a year of biology with lab. Credit is not given for IB 151 for Integrative Biology or Molecular and Cellular Biology majors. Prerequisite: Credit or concurrent registration in IB 150.

IB 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated to a maximum of 5 hours.

IB 202 Physiology credit: 3 or 4 Hours.

How animals function in acquiring, processing, and allocating resources in the face of environmental constraints. The inquiry-based laboratory emphasizes testing of hypotheses related to functioning of physiological components of the basic systems of animals. Lecture only, 3 hours; with laboratory, 4 hours. Students must complete the laboratory portion of the course to receive 4 hours of credit. The laboratory includes vertebrate dissection. Prerequisite: IB 150 and MCB 150.

IB 203 Ecology credit: 4 Hours.

The links between evolution and ecology, population dynamics, community structure and function, and ecosystem function on local and global scales. Basic ecology needed to understand environmental problems and to conserve biodiversity. Investigations in both field and laboratory included. Prerequisite: IB 150 and MCB 150.

This course satisfies the General Education Criteria for:

Advanced Composition

IB 204 Genetics credit: 3 or 4 Hours.

The fundamentals of inheritance, with an emphasis on eukaryotes. Major topics include transmission genetics, quantitative genetics, cytogenetics, genomics, genetics of development and behavior, and population genetics. Laboratory emphasizes an experimental, inquiry-based approach to modern and classical genetics. Lecture only, 3 hours; with laboratory, 4 hours. Students must complete the laboratory portion of the course to receive 4 hours of credit. Prerequisite: IB 150 and MCB 150.

IB 220 Applied Entomology credit: 3 Hours.

Same as CPSC 270 and NRES 270. See CPSC 270.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

IB 270 Evolution of Molecules & Cells credit: 5 Hours.

The major evolutionary transitions of biomolecules and cells including: energy acquisition and metabolism; information inheritance, system regulation, and genomes; the origin of life and of the prokaryotic cell, eukaryotic cell, and multicellularity. Lecture and laboratory. Credit is not given for both IB 270 and either MCB 250 or MCB 252. Prerequisite: Admission to the IB honors biology option; credit or concurrent registration in organic chemistry.

IB 271 Organismal Biology credit: 5 Hours.

Integrated study of the diversity and structure and function of plants and animals in evolutionary and environmental contexts. Conceptual themes and techniques of molecular and cellular levels of biological organization will be integrated as well. Lecture and laboratory. The laboratory includes vertebrate dissection. Credit is not given for both IB 271 and IB 202. Prerequisite: IB 270; good standing in the honors biology option.

This course satisfies the General Education Criteria for:

Advanced Composition

IB 299 Undergraduate Special Course credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated in the same term; may be repeated in separate terms to a maximum of 6 hours.

IB 302 Evolution credit: 4 Hours.

Broad introduction to evolutionary biology, including natural selection and microevolution, phylogeny, speciation, molecular evolution, macroevolution and the fossil records. The laboratory emphasizes a survey of biodiversity and processes and patterns of evolution. Prerequisite: IB 204 or consent of instructor.

IB 303 Anatomy credit: 4 Hours.

An overview of the body structure of vertebrate animals, with a special focus on mammals including humans. Body structure will be investigated from evolutionary, developmental, and human health perspectives through lectures, in-class activities, and required laboratory dissections. Through this course, students will develop a better understanding of anatomy vocabulary, the anatomical design of vertebrates, vertebrate development, and how vertebrate anatomy and development are related to each other, to organismal function, and to human health. Prerequisite: IB 150.

IB 329 Animal Behavior credit: 3 Hours.

Introductory course emphasizing how patterns of behavior promote survival, change through evolution, and are modified by the environment. Same as ANSC 366 and ANTH 342. Credit is not given for both IB 329 and ANSC 363. Prerequisite: IB 150 and MCB 150; or consent of instructor.

IB 335 Systematics of Plants credit: 4 Hours.

Introduces the principles and methods of the identification, naming, classification, systematics, and evolution of flowering plants; includes a survey of selected flowering plant families with information on their interrelationships. Prerequisite: One of the following: IB 100, IB 101, IB 102, IB 103, or IB 150; consent of the instructor.

IB 348 Fish and Wildlife Ecology credit: 3 Hours.

Same as NRES 348. See NRES 348.

IB 360 Evolution and Human Health credit: 3 Hours.

Our health is inseparably tied to our evolutionary history. As a result, evolution is an important underpinning discipline for health professionals. This course first provides an overview of evolutionary processes, molecular evolution, human evolution, life history theory, and evolutionary-developmental biology. Second, it illustrates the application of these principles to our understanding of nutrition and metabolism, reproduction, disease and stress, and behavior. Third, it shows in practical terms how the principles of evolutionary medicine can be applied in medical practice and public health. Same as ANTH 360. Prerequisite: IB 302 or MCB 250 or MCB 244, or consent of instructor.

IB 361 Ecology and Human Health credit: 3 Hours.

Exploration of the emergence of infectious diseases and other human health issues from an ecological perspective, including vector-borne diseases, diseases spread from wildlife in terrestrial and aquatic ecosystems, and the role of pathogens and parasites in community and population ecology, food webs, and ecosystem functioning. Attention will be placed on how current and future global change and biodiversity loss will contribute to the increasing prevalence of human emerging diseases. Same as ANTH 361. Prerequisite: IB 203 or consent of instructor.

IB 364 Genomics and Human Health credit: 3 Hours.

Highlights advances in understanding the human genome, by utilizing the latest techniques in bioinformatics, i.e. acquiring, analyzing, storing, and displaying the information from the entire genome and protein sequences. The course describes the theory and practices behind modern sequencing techniques and explores the genome with a particular emphasis on the use of extensive online databases and software. Students will analyze one human disorder using bioinformatics software and databases in order to update older published literature about the genomics underpinning the disorder. Prerequisite: IB 204 or consent of instructor.

IB 368 Vertebrate Natural History credit: 4 Hours.

Introduction to the classification, life histories, adaptations, and ecology of fishes, amphibians, reptiles, birds, and mammals. Focus is on species of the Midwest region. Laboratory emphasizes identification and distribution of Illinois' vertebrate fauna. Some Saturday field trips are required. Same as NRES 368. Prerequisite: IB 203 or NRES 219 or consent of instructor.

IB 372 Ecology and Evolution credit: 5 Hours.

Integrated study of ecology, population genetics, and evolution. Conceptual themes and techniques from the molecular, cellular, and organismal levels of biology will be integrated as well. Lecture, laboratory, and field work. Credit is not given for both IB 372 and either IB 203 or IB 302. Prerequisite: IB 271; good standing in the IB honors biology option.

IB 390 Introductory Research credit: 1 to 5 Hours.

Laboratory and/or field research and/or reading supervised by faculty members in the School of Integrative Biology. Approved for S/U grading only. May be repeated. Credit is not given for more than a combined maximum of 10 hours of IB 390 or IB 490 towards graduation for IB majors. Prerequisite: Consent of instructor.

IB 401 Introduction to Entomology credit: 3 or 4 Hours.

Integrated studies of the principal morphological, physiological, ecological and behavioral relationships among insects. Lecture and laboratory. 3 or 4 undergraduate hours. 3 or 4 graduate hours. An insect collection will be required for 4 hours credit. Prerequisite: IB 150; or consent of instructor.

IB 405 Ecological Genetics credit: 3 Hours.

Study of the genetics of natural populations, stressing empirical observations and experiments. Emphasis on recent theories of genotype/environmental interactions and their relationship to evolutionary processes. Offered in alternate years. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 204; or consent of instructor.

IB 411 Bioinspiration credit: 3 Hours.

Focuses on how experts in biology and technological fields find inspiration in nature and use it as a model to make technological innovations and solve societal problems. In the future, our day-to-day living, health, and the environment will benefit from interdisciplinary teams using findings in basic biological research for technological innovation. Topics to be explored include human health, efficient architecture, cooperative control, robotics, swarm logic, and advanced biological materials. 3 undergraduate hours. 3 graduate hours.

IB 416 Population Genetics credit: 3 or 4 Hours.

Same as ANSC 446. See ANSC 446.

IB 420 Plant Physiology credit: 3 Hours.

General course concerned with plant functions, including water relations, mineral nutrition, metabolism, growth, and reproduction. Same as CPSC 484. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or IB 150 and MCB 150; CHEM 232; or consent of instructor.

IB 421 Photosynthesis credit: 3 Hours.

Comprehensive description of photosynthesis. Topics include: the photosynthetic membranes, light absorption, electron and proton transfer, photophosphorylation, water oxidation, RUBP carboxylase/oxygenase, photorespiration, whole plant photosynthesis, gas exchange and atmospheric interactions, and impacts of global environmental change. Same as BIOP 432 and CPSC 489. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 420, MCB 354, MCB 450, BIOP 401, or equivalent; or consent of instructor.

IB 426 Env and Evol Physl of Animals credit: 3 Hours.

Physiological adaptations of invertebrate and vertebrate animals to diverse aquatic and terrestrial environments and the extreme habitats embodied therein. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 150; IB 202; CHEM 232; or consent of instructor.

IB 427 Insect Physiology credit: 4 Hours.

The principal physiological and biochemical functions of insects. Lecture and laboratory. Offered in alternate years. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 202 and IB 401; or consent of instructor.

IB 430 Animal Behavior Lab credit: 3 Hours.

Inquiry-driven laboratory course in animal behavior. Students work in groups to generate hypotheses, design experiments, collect and analyze data, and write up their results. Experiments will be carried out in both the field and lab. Discussions emphasize the scientific process, including hypothesis testing, and experimental design and statistics. 3 undergraduate hours. No graduate credit. Prerequisite: IB 329. For majors only.

IB 431 Behavioral Ecology credit: 3 Hours.

In-depth examination of areas of current interest at the interface of behavior, ecology, and evolution; focuses on communication, foraging, and social behavior. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 329; or consent of instructor.

IB 432 Genes and Behavior credit: 3 Hours.

Concepts, methods, and problems in the analysis of the relationship between genes and behavior, the complex neurobiological processes that mediate action on behavior, in appropriate ecological and evolutionary contexts. Same as ANTH 432, NEUR 432, and PSYC 432. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 150 and IB 204; or consent of instructor.

IB 434 Physical Principles in Biology credit: 3 Hours.

Examines the interaction between biological processes and the fundamental laws of mechanics. Covers general topics, such as structural analyses of anatomy, kinematics of movement, the behavior of organisms in fluids, and the importance of scaling, as well as specific topics, such as bird flight, fluid flow in cardio-vascular systems, and high speed predation. Lab culminates in student-designed, group projects to collect novel biomechanical data to answer questions about the organism of the students' choice. 3 undergraduate hours. No graduate credit. Prerequisite: IB 202 or consent of instructor; Physics 101 is recommended.

IB 435 Critical Evaluation of Herbal Remedies credit: 3 Hours.

One-third of Americans use health care products derived from natural sources, particularly plants, but also animals, and fungi. This course examines the biological activity of natural products with respect to their ecological functions and their therapeutic uses. Principles of evidence-based medicine will be reviewed and students will evaluate natural remedies through lectures, in-class activities, discussions, and analyses of scientific papers. Overall, students develop skills useful for evaluating alternative remedies and for communicating their conclusions to the general public. 3 undergraduate hours. No graduate credit. Prerequisite: IB 202 or IB 203 or consent of instructor.

IB 439 Biogeography credit: 3 Hours.

Spatial and temporal patterns of biological diversity and the factors that govern the distribution and abundance of taxa. This course addresses two of its subfields: historical biogeography - the origin, dispersal, and extinction of taxa and biotas; and ecological biogeography - the role physical and biotic environments have played in determining taxonomic distributions. Also explores the ecological, evolutionary, climatological, and paleontological foundations for the distribution of species and biological communities. Includes a review of many of the field's classical papers, the current synthesis of biogeographic theory, and the relevance of biogeography to modern conservation goals. Offered in alternate years. Same as ANTH 436, ESE 439, GEOG 436, and NRES 441. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 150 or other introductory biology course, or consent of instructor.

IB 440 Plants and Global Change credit: 3 Hours.

Same as CPSC 431 and NRES 431. See CPSC 431.

IB 442 Evolution of Infectious Disease credit: 3 Hours.

Same as MCB 435. See MCB 435.

IB 443 Evolutionary Ecology credit: 3 Hours.

Emphasizes the evolution of life-history strategies in plants and animals (reproductive rates, life cycles, sex ratios, breeding and mating systems) and the coevolution of animals and plants (pollination, dispersal, and herbivory). 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 203 or equivalent; IB 302; or consent of instructor.

IB 444 Insect Ecology credit: 3 or 4 Hours.

Discussion of the practical and theoretical aspects of ecology in relation to insects as individuals, populations, and communities; emphasis on the role of insects in the environment. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Offered in alternate years. Lecture only, 3 hours; with laboratory, 4 hours. Prerequisite: IB 150 and MCB 150 or consent of instructor.

IB 447 Field Ecology credit: 1 Hour.

Study of habitats in various sections of North America during spring vacation or intersession. Outdoor cooking and camping; transportation in University cars. Additional fees may apply. See Class Schedule. 1 undergraduate hour. 1 graduate hour. May be repeated to a maximum of 3 hours. Prerequisite: IB 203; or consent of instructor.

IB 449 Limnology credit: 3 or 4 Hours.

Fresh water biology; study of the lake, pond, and river with emphasis on the physical environment as well as on the plants and animals which live in fresh water. Lectures, discussions, laboratory, and field work. Students must complete the laboratory portion of the course to receive 4 hours of credit. Offered in alternate years. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IB 203 or consent of instructor.

IB 450 Stream Ecology credit: 3 or 4 Hours.

Same as CEE 432. See CEE 432.

IB 451 Conservation Biology credit: 4 Hours.

Synthesis of conservation biology with an emphasis on the preservation of biological diversity and its evolutionary potential. Laboratory includes an introduction to the use of modern molecular techniques in conservation biology, computer simulation modeling, and field conservation problem solving. Same as CPSC 436 and ENVS 420. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 203 or consent of instructor.

IB 452 Ecosystem Ecology credit: 3 Hours.

Distribution and structure of ecosystems on earth; integration of multiple disciplines to gain a holistic view of ecosystem function; ecosystem concepts as they apply to understand natural and anthropogenic environmental change. Offered in alternate years. Same as ESE 452 and NRES 462. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102 and CHEM 104; or consent of instructor.

IB 453 Community Ecology credit: 3 Hours.

The direct and indirect interactions among species that determine the structure and composition of plant and animal communities. Emphasis will be on the maintenance of species diversity and its consequences at both local and regional scales. Offered in alternate years. Same as NRES 452. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 203 or consent of instructor.

IB 461 Ornithology credit: 4 Hours.

Structure, function, ecology, behavior, and evolution of the birds of the world; laboratory devoted to anatomy and identification; and field studies devoted to identification and behavior of birds. Independent research project and two optional weekend field trips. Same as NRES 461. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 203; or consent of instructor.

IB 462 Mammalogy credit: 4 Hours.

Classification, distribution, structure, function, life history, evolution and identification of mammals. Lecture/discussions, laboratory and field work. The laboratory includes vertebrate dissection. Same as NRES 442. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 202 and IB 203; or consent of instructor.

IB 463 Ichthyology credit: 4 Hours.

Classification, anatomy, ecology, behavior, distribution, and evolution of fishes of the world. Emphasis is on morphological, ecological, and behavioral diversification of fishes in a phylogenetic context. Laboratory devoted to anatomy and identification. Same as NRES 463. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 302; or consent of instructor.

IB 464 Herpetology credit: 4 Hours.

Classification, diversity, structure, function, ecology, behavior and evolution of amphibians and reptiles. Laboratory devoted to anatomy and identification. Offered in alternate years. Same as NRES 464. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 302; or consent of instructor.

IB 467 Principles of Systematics credit: 4 Hours.

Comprehensive survey of the theory and methodology of systematics as they are applied today to all groups of organisms, with a practical experience in the acquisition and analysis of systematic data. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 302 and IB 335 or IB 468; or consent of instructor.

IB 468 Insect Classification and Evol credit: 4 Hours.

Analytical survey of the classification and evolution of the orders and principal families of insects, with practical experience in the identification of insects at these taxonomic levels; field trips required. Lecture and laboratory. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 401 or consent of instructor.

IB 471 General Mycology credit: 4 Hours.

Structure, classification, and identification of fungi, including those of economic importance. Offered in alternate years. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 and MCB 150; IB 302 recommended; or consent of instructor.

IB 472 Plant Molecular Biology credit: 1 Hour.

The basic concepts and methodologies of measuring plant gene expression and gene product activity and constructing transgenic plants are presented and discussed. Serves as a gateway to specialized methodology approaches covered in IB 473, IB 474, and IB 475. Same as CPSC 462. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 150 and IB 204; or consent of instructor.

IB 473 Plant Genomics credit: 1 Hour.

Provides broad overview of structural and functional genomics, including genetic and physical mapping, whole genome sequencing, comparative genomic analysis, evolution of gene families and repetitive sequences, genome-wide expression analysis. Emphasis on structural and comparative genomics with brief introduction to functional genomics and bioinformatics. Same as CPSC 467. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 250; IB 472; or consent of instructor.

IB 474 Plant Proteomics- Metabolomics credit: 2 Hours.

Broad introduction to plant proteomics and metabolomics, including a survey of contemporary methods and their applications for protein and metabolite identifications. Proteomics will include the study of posttranslational modifications and protein-protein interactions. Metabolomics will introduce the complexities on pathway tracing and elucidation. The focus of the course is on the application of proteomic-metabolomic approaches to answer biological questions. Tours of proteomic and metabolomic facilities will occur. Same as CPSC 468. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 354; IB 472; or consent of instructor.

IB 477 Genomics for Plant Improvement credit: 2 Hours.

Same as CPSC 466. See CPSC 466.

IB 478 Advanced Plant Genetics credit: 3 Hours.

Same as CPSC 452. See CPSC 452.

IB 481 Vector-borne Diseases credit: 4 Hours.

Study of the major groups of arthropods and associated pathogens that affect the health and well-being of humans and other animals. Training will include ecology, evolutionary biology, and epidemiology of vector-borne diseases; taxonomy and identification of vector arthropods; practical skills in molecular and mathematical biology, spatial analysis and field research. Lecture will make use of technology-enhanced classroom for group-based active learning exercises to address critical challenges in vector-borne disease control. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 361 or IB 401 or consent of instructor.

IB 482 Insect Pest Management credit: 3 Hours.

The principles underlying the control of important insect pests of agriculture and of human and animal health; emphasis on integrated pest management involving a systems approach which combines biological, cultural, and chemical suppressive factors into ecologically sound and socially and economically acceptable technology. Lecture and laboratory. Same as CPSC 479. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 150 or equivalent; or consent of department.

IB 483 Insect Pathology credit: 3 Hours.

The general principles of pathology as they apply to insects; includes non-infectious and infectious diseases caused by viruses, bacteria, fungi, protozoa, and nematodes. Studies the epizootiology of naturally occurring insect disease and the use of insect pathogens as microbial control agents. Same as CPSC 475. 3 undergraduate hours. 3 graduate hours. Lecture in alternate years. Prerequisite: IB 150 and MCB 150 or consent of instructor.

IB 484 Paleoclimatology credit: 4 Hours.

Same as GEOL 484. See GEOL 484.

IB 485 Environ Toxicology & Health credit: 3 Hours.

Explores toxicological, environmental, public health, occupational and ecological aspects of the use and release of toxic substances in the environment; features case histories of environmental contamination that illustrate ecological, health, and social aspects of pollution; emphasizes biochemical mechanisms and ecosystem consequences. Same as CHLH 461 and ENVS 431. 3 undergraduate hours. 3 graduate hours. Prerequisite: A college chemistry course and a college biology course; or consent of instructor.

IB 486 Pesticide Toxicology credit: 3 or 4 Hours.

Examines the biological effects of major classes of insecticides and herbicides, and of selected individual fungicides, including: toxicity to nontarget organisms, persistence and fate in the environment, biotransformation, and ecological consequences. Current regulations on pesticide testing will also be presented. The mechanism of action on target species will be discussed only in relation to effects on nontarget organisms. Same as CB 434 and ENVS 433. 3 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: One year of college chemistry and one year of college biology; or consent of instructor.

IB 487 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Same as ANSC 448 and STAT 458. See ANSC 448.

IB 488 Environmental Stable Isotopes credit: 3 Hours.

Stable isotopes are powerful tools for studying environmental processes, acting as tracers of resource origin, fate, and flux and integrators of system processes. The goal of this course is to provide a fundamental knowledge base and hands-on training for students to become practitioners of natural abundance and enriched stable isotope techniques. The course will focus on stable isotopes of biologically-relevant light elements (C, H, N, O, S). We will also review case studies demonstrating application of these techniques to disciplines including anthropology, animal, insect, and plant biology, biogeochemistry, biometeorology, ecosystem ecology, forensics, microbial ecology, paleoclimatology, and paleoecology. Offered in alternate years. Same as ATMS 422, GEOL 488, and NRES 478. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CHEM 104 or equivalent; or consent of instructor.

IB 489 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under University of Illinois faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of UI faculty member supervising the work (who will have examined the proposed research plan); and approval of the school. Not available to freshman.

IB 490 Independent Study credit: 1 to 5 Hours.

Laboratory and/or field research supervised by faculty members in the School of Integrative Biology. A written report is required. 1 to 5 undergraduate hours. No graduate credit. May be repeated. Credit is not given for more than a combined maximum of 10 hours of IB 390 or IB 490 towards graduation for IB majors. Prerequisite: Consent of instructor.

IB 491 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, CPSC 448, and GEOG 468. See GEOG 468.

IB 492 Science Communication Skills credit: 2 Hours.

A successful career in scientific research, teaching and service requires tools and skills for communicating research. Students interested in going into science careers need to know how to write a competitive graduate school or job application, a thesis proposal for graduate research, a fellowship or grant proposal, and how to give a good scientific presentation. This course is designed to teach students these skills with targeted in and out of class exercises. 2 undergraduate hours. No graduate credit. Prerequisite: IB 203 or IB 271; AND one of the following: IB 299, IB 390, IB 490, or consent of instructor. Junior IB majors only.

IB 494 Theoretical Biology + Models credit: 4 Hours.

Biologists are increasingly using mathematical and computer-based models to complement fieldwork and experimental data. These models provide a context in which to understand and answer existing questions, and also lead us to new questions and new insights. Students will encode biological mechanisms into mathematical models, develop the skills to find solutions to these models and relate them to biological data, and analyze and discuss relevant primary literature. Examples will be drawn largely from ecology and evolutionary biology. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or MATH 221; Introductory courses in Ecology and Evolution.

IB 496 Special Courses credit: 1 to 5 Hours.

Experimental and temporary courses. Additional fees may apply. See Class Schedule. 1 to 5 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated as topics vary. Prerequisite: Consent of instructor.

Integrative Biology Concentration

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: sib@illinois.edu

The Integrative Biology Concentration provides students with a solid preparation in genetics, evolution, anatomy, physiology, ecology, and molecular biology. After completion of the foundational 100- and core 200-300-level courses in IB, students complete the required advanced coursework by taking a variety of IB and other courses or focusing on a limited area of IB. Plans for the student's combination of advanced courses are developed in consultation with an adviser.

All undergraduates in this field are required to have a strong background in the biological and physical sciences. Students who do not begin mathematics, chemistry, and biology in their freshman year generally will be at a disadvantage.

Students pursuing a degree in Integrative Biology will be allowed to earn a second degree in the Specialized Curriculum in Biochemistry. Students pursuing a degree in Integrative Biology will not be allowed to double major in Molecular and Cellular Biology.

Minimum Required Courses normally equate to 66-76 hours.

General Education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum Hours Required for Graduation: 120 hours

Integrative Biology Distinction: To be eligible for distinction a student must graduate with a grade-point average of at least 3.25 and submit a report of an independent student project (IB 490) about two months prior to graduation for approval by the Integrative Biology Distinction Committee. For additional information visit: <http://sib.illinois.edu/undergraduate/distinction>

Code	Title	Hours
MATH 220 or MATH 221	Calculus ¹ Calculus I	4-5
STAT 212	Biostatistics	3
Select one group of courses:		8-10
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
or		
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
Select one group of courses:		5-6
CHEM 232 & CHEM 233	Elementary Organic Chemistry I and Elementary Organic Chem Lab I	
CHEM 236 & CHEM 237	Fundamental Organic Chem I and Structure and Synthesis	
Select one group of courses:		8-10
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	
PHYS 211 & PHYS 212	University Physics: Mechanics and University Physics: Elec & Mag	
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
IB 202	Physiology ²	4
IB 203	Ecology	4
IB 204	Genetics ³	4
IB 302	Evolution	4
At least 14 hours of coursework from the Approve List of Advanced Courses for IB majors, including:		14
At least one course from two of the following three areas:		
Area I: Organismal and Evolutionary Biology		
Area II: Behavior, Ecology, and the Environment		
Area III: Integrative Anatomy, Physiology, and Molecular Biology		
One advanced course with a laboratory and/or field component.		

¹ The Biocalculus section of MATH 220 is strongly recommended for IB Majors.

² IB 202 requires animal dissection and no equivalent alternative is available. IB majors are required to enroll in the 4-hour version of this course.

³ IB majors are required to enroll in the 4-hour version of IB 204.

Integrative Biology Honors Concentration

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Integrative Biology Honors is designed for superior students wishing to pursue an intensive program in integrative biology and, concurrently, to gain a strong background in the physical sciences and mathematics. Admission is by interview in spring of the freshman year prior to registration for fall. An overall 3.0 GPA is required to apply for admission. Integrative Biology Honors provides preparation suitable for graduate and professional training in biology, as well as for biology careers in the private and public sectors.

E-mail: honors@sib.illinois.edu (ibhonors@life.illinois.edu)

Minimum required courses normally equate to 80-91 hours.

Students earning the Integrative Biology Honors Concentration will also earn the Chemistry minor.

Students pursuing a degree in Integrative Biology Honors will be allowed to earn a second degree in the Specialized Curriculum in Biochemistry. Students pursuing a degree in Integrative Biology Honors will not be allowed to double major in Molecular and Cellular Biology.

General education: Students must complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

No more than 8 hours of credit in 100-level courses in IB or MCB may be counted toward graduation.

Students may count toward graduation no more than a combined maximum of 10 hours of IB 390 and IB 490 credit offered for independent study.

Substitutions or other changes in the requirements below may be made only by petition to and approval of the director of the Integrative Biology Honors Concentration.

Minimum hours required for graduation: 120 hours

Departmental distinction: Candidates for distinction must:

1. Consult with an IB Honors adviser no later than the beginning of their junior year to discuss their proposed research plan.
2. Have a minimum GPA of 3.25 when applying for distinction.
3. Present an acceptable written report on the research to the Integrative Biology Distinction Committee about two months prior to graduation. The research must have been an in-depth experience and produced substantial results to be considered eligible for distinction. Additional details on requirements, procedures, and deadlines are available at sib.illinois.edu/undergraduate/distinction (<http://sib.illinois.edu/undergraduate/distinction>).

Students must consult with their Integrative Biology honors adviser at least once each semester.

Code	Title	Hours
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
IB 270	Evolution of Molecules & Cells	5
IB 271	Organismal Biology	5
IB 372	Ecology and Evolution ¹	5
MATH 220 or MATH 221	Calculus (Biocalculus section) Calculus I	4-5
MATH 231 or IB 494	Calculus II ² Theoretical Biology + Models	3-4
Select one group of courses:		8-10
CHEM 202	Accelerated Chemistry I	
CHEM 203	Accelerated Chemistry Lab I	
CHEM 204	Accelerated Chemistry II	
CHEM 205	Accelerated Chemistry Lab II	
OR		
CHEM 102	General Chemistry I ³	
CHEM 103	General Chemistry Lab I	
CHEM 104	General Chemistry II	
CHEM 105	General Chemistry Lab II	
Select one group of courses:		6
CHEM 236	Fundamental Organic Chem I	
CHEM 237	Structure and Synthesis	
OR		
CHEM 232	Elementary Organic Chemistry I	
CHEM 233	Elementary Organic Chem Lab I	
At least six hours of advanced courses in Chemistry ⁴		6-8
MCB 450	Introductory Biochemistry	3
Select one group of courses		8-14
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
OR		
PHYS 101	College Physics: Mech & Heat	
PHYS 102	College Physics: E&M & Modern	
An approved 300- or 400-level course that includes physical/math principles ⁵		
An approved 300- or 400- level course in statistics ⁶		3
IB 490	Independent Study (2 semesters) ⁷	6
300- or 400- level courses in the biological sciences		10

¹ Continuation in the Integrative Biology Honors Concentration requires a grade of B or better in each of IB 270, IB 271, and IB 372 and a 3.0 overall cumulative GPA.

² If IB 494 is taken instead of MATH 231, it will not count towards the requirement of 10 hours of 300- or 400-level courses in the biological sciences.

³ Introductory chemistry should be completed prior to enrolling in IB 270.

⁴ Recommended courses are: CHEM 312, CHEM 332, CHEM 360, CHEM 437, CHEM 440. Students should discuss alternate choices with the IB advising office. To earn the Chemistry minor students must choose 3 or 4 hour Chemistry courses, excluding research or independent study.

⁵ Recommended courses are: ATMS 421, ANSC 448, MCB 432 or IBH Director approved.

⁶ NRES 421 is recommended. Other suitable courses are CPSC 440 or STAT 400.

⁷ Independent study equivalent to IB 490 in non-IB programs must first be approved by Director of IBH Concentration.

Minor in Ecology and Conservation Biology

The minor, administered by the School of Integrative Biology, is designed for students interested in gaining strength in this subdiscipline of biology. Preparation for many careers is advanced by coursework in ecology and conservation, e.g. environmental lawyer, environmental consultant, conservation technician, environmental educator, and environmental engineer.

Students must contact an SIB advisor for acceptance into the minor.

Web address for School advising information: sib.illinois.edu/undergraduate/advising/ (<http://sib.illinois.edu/undergraduate/advising/>)

Code	Title	Hours
IB 150	Organismal & Evolutionary Biol	4
IB 203	Ecology	4
IB 204	Genetics	3-4
Select two of the following:		6-8
NRES/IB 348	Fish and Wildlife Ecology	
IB 431	Behavioral Ecology	
CPSC 431/IB 440	Plants and Global Change	
IB 443	Evolutionary Ecology	
IB 444	Insect Ecology	
IB 449	Limnology	
IB 451	Conservation Biology	
IB 452	Ecosystem Ecology	
IB 453	Community Ecology	
Total Hours		17-20

Minor in Integrative Biology

The minor, administered by the School of Integrative Biology, is designed for students intending to have a career in a field other than biology, but for whom a background in biology is nevertheless complementary, e.g. law, technology, bioinformatics, business, scientific writing, and engineering. A minor in integrative biology provides an understanding of fundamental principles for one major subdiscipline of biology, whether this be organismal and evolutionary biology; behavior, ecology and the environment; or integrative anatomy, physiology, and molecular biology.

Students must contact an SIB advisor for acceptance into the minor.

Web address for School advising information: sib.illinois.edu/undergraduate/advising/ (<http://sib.illinois.edu/undergraduate/advising/>)

Code	Title	Hours
Select one of the following:		4
IB 150	Organismal & Evolutionary Biol	
IB 103	Introduction to Plant Biology	
IB 104	Animal Biology	
Select two of the following:		6-8
IB 202	Physiology	

IB 203	Ecology	
IB 204	Genetics	
IB 302	Evolution	
Two additional courses at the 300 or 400 level (3-4 hours, some 5 hours) selected from the IB Area Courses. The prerequisite course(s) must be taken if specified by an advanced course. (http://sib.illinois.edu/courses/area)		6-8
Total Hours		16-20

Other possible combinations of courses are possible for the Integrative Biology minor, if an SIB advisor approves the combination.

Interdisciplinary Studies

College of Liberal Arts and Sciences
202 Lincoln Hall, 702 South Wright Street, Urbana

Interdisciplinary Studies Majors

Departments in the College of Liberal Arts and Sciences, in addition to their own disciplinary majors, have developed and sponsor an interdisciplinary program of study, which encompasses several distinct programs designed to acquaint students in a coherent manner with topics that cross disciplinary boundaries. Administered by the College of Liberal Arts and Sciences, the interdisciplinary studies major includes program concentrations in Jewish Studies and Medieval Studies. Although it is not possible to offer concentrations in all specialties or topics of humanistic study, students whose interests do not coincide with one of the specific concentrations are encouraged to consider developing their own programs through the Individual Plans of Study (IPS) major. Enrollment in the major in interdisciplinary studies requires election of one of the concentrations. The College of Liberal Arts and Sciences also sponsors an Interdisciplinary Minor in Science and Technology in Society.

Each concentration of the major in interdisciplinary studies is supervised by faculty members whose own scholarship and educational interests have involved them in interdisciplinary teaching and research. An advisor for students is available in each concentration and is responsible for approving students' plans of study.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Minimum required major and supporting course work equates to 45-51 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for graduation with distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.5, completion of HUM 498 with a grade of A, and completion of a semester paper in HUM 498 that is judged to be deserving of "distinction" by a committee of at least two faculty members.

High distinction. To be eligible for graduation with high distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.7, and must have completed HUM 492 (instead of HUM 498) with a grade of A and a thesis in HUM 492 that is judged to be deserving of "high distinction" by a committee of at least two faculty members.

Requirements for the Major

Elect one of the concentrations offered within the major and file a concentration declaration with the LAS Student Academic Affairs Office no later than the end of the first semester of the junior year. Students who do not begin work on concentration requirements by the junior year will be at a disadvantage.

Select specific courses counted toward completion of a concentration with the advice and approval of the concentration advisor, subject to specific concentration requirements. Students are strongly encouraged also to enroll in 6-7 hours of Western civilization (HIST 140 or HIST 141 and HIST 142 or HIST 143, or CWL 241 and CWL 242).

For the elected concentration, complete the stated minimum number of hours in courses applicable toward the major and in accord with the distribution requirements listed below; at least 25 hours must be at the 200,300 or 400 level.

- Jewish Studies Concentration (p. 476)
- Medieval Studies Concentration (p. 476)

Minor in Science and Technology in Society

The Interdisciplinary Minor in Science and Technology in Society requires students to integrate and synthesize a wide variety of materials. Students will enrich their experiences in diverse disciplines with a substantive engagement with science studies. Required courses in the minor emphasize critical and creative thinking and many courses require substantial writing and research. This minor is administered by the LAS Student Academic Affairs Office.

All courses must be selected in consultation with the adviser from the list of courses approved for the minor. No more than 3 hours of course work may be 100-level. Students must maintain a 3.0 GPA in course work in the minor.

Code	Title	Hours
Select one of the following:		3
HIST 490	Honors Independent Study	
PHIL 390	Individual Study	
SOC 390	Individual Study	
300- and 400-level courses		6
History course selected in consultation with adviser		3
Philosophy course selected in consultation with adviser		3
Sociology course selected in consultation with adviser		3
Select a course from the approved list in consultation with adviser		3
Total Hours		21

Recommended courses to fulfill the requirements of the minor

Code	Title	Hours
History		
HIST 265	Science in Western Civ	3
HIST 367	History of Western Medicine	3
HIST 498	Research and Writing Seminar (when appropriate)	3
HIST 475	Formation of US Public Health	3
Philosophy		
PHIL 214	Biomedical Ethics	3
PHIL 270	Philosophy of Science	3
PHYS/PHIL 419	Space, Time, and Matter-ACP	3
PHIL 439	Philosophy of Mathematics	3
PHIL 471	Contemporary Phil of Science	3
PHIL 477	Philosophy of Psychology	3
Sociology		
SOC 350	Technology and Society	3
SOC 476	Organization of Health Care	2-4
SOC 496	Advanced Topics in Sociology (when appropriate)	3
Other		
GWS 490	Individual Study (when appropriate)	2-4

LAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAS>)

Courses

LAS 100 Success in LAS for International Students credit: 2 Hours.

Prepares international students for their transition to campus by examining expectations and focusing on the purpose and value of the higher education experience from a US perspective. Introduces critical concepts to know about academic programs, and engages students in planning their program of study as well as their personal and professional development. Serves as a complement to LAS 101/LAS 102/LAS 122 for students new to the US education system.

LAS 101 Freshman Seminar credit: 1 Hour.

Orientation seminar for first-year students enrolled in LAS curricula. Prepares students for collaborative learning environments through campus orientation, study skills, and project-based assignments. Introduces students to the multiple perspectives represented by the Humanities, the Social Sciences, and the Physical and Life Sciences, and helps them appreciate the strengths and weaknesses of both qualitative and quantitative data in addressing real world problems. Prerequisite: Restricted to first-year students in LAS.

LAS 102 Transfer Advantage credit: 1 Hour.

Introduction for first-term transfer students to the college and campus. Familiarizes transfer student with the resources available to them and helps them connect with other students and form a bond with the college. Prerequisite: For first-term LAS transfer students only.

LAS 110 Workshop-Tutorial credit: 0 to 4 Hours.

Independent study and experimental seminars open to Unit One students and to others; specific offerings vary each term. Approved for letter and S/U grading. May be repeated if topics vary. Credit toward college or departmental requirements is contingent upon approval by the appropriate unit. A total of 12 hours of LAS 110 credit may be applied toward graduation in the College of Liberal Arts and Sciences. Prerequisite: Unit One students or consent of Unit One Director.

LAS 122 Leadership and Society credit: 1 Hour.

Engages first-year LAS honors students in the realms of citizenship, stewardship and leadership for the 21st century. En route to becoming competent and agile learners, first-year honors students experience an orientation to Illinois that fosters greater awareness and knowledge of campus resources and an examination of scholarly and personal leadership, global issues, and civic engagement. The course serves as a means for students to enhance their independence, cultural awareness and connection to community. Students work with a small cohort of peer scholars in a one-hour weekly graded session led by an upper-level LAS James Scholar peer mentor. Students are expected to work together and individually on projects involving community partners and campus groups. Assignments will incorporate the concept of service in connection with civic engagement.

LAS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Topics will vary. See class schedule. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated.

LAS 289 Internship Experience credit: 0 Hours.

Students follow a program of study and research through an approved internship. Written work report required. Approved for S/U grading only. May be repeated in separate semesters. Prerequisite: Consent of course instructor required. Restricted to students enrolled in the College of Liberal Arts and Sciences.

LAS 290 FLAS Seminar credit: 0 to 12 Hours.

Foreign Language and Area Studies Off-Campus Studies provides campus credit for off-campus study by undergraduate Foreign Language and Area Studies Fellows. Final determination of appropriate credit is made by a faculty review committee upon completion of the student's approved foreign language program. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Junior standing; intermediate or advanced study of a less-commonly taught language; awarding of FLAS fellowship by campus Title VI National Resource Center; prior review and approval of the student's program by Center's FLAS Fellowship Coordinator.

LAS 291 Global Perspectives for Intercultural Learning credit: 0 Hours.

Prepares students who are going abroad for a semester or academic year for their transition through a) examining expectations, b) focusing on the purpose and value of the abroad experience, c) preparing students culturally and logistically, d) addressing issues of culture shock, e) helping students with articulating their experience for future personal and professional goals, f) enhancing intercultural communication and global understanding, and g) assisting with re-entry planning. Approved for S/U grading only. May be repeated in separate terms.

LAS 292 Global Perspectives in Cross-Cultural Contexts credit: 1 Hour.

Provides an opportunity for students studying abroad to consider how their journey might be articulated as a global learning experience. Requires students to discuss what they are learning, reflect upon it, and discern ways to apply the knowledge gained through their experiences. May be repeated in separate terms. Prerequisite: LAS 291.

LAS 299 LAS Study Abroad credit: 0 to 18 Hours.

Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made upon the student's completion of the work. Approved for letter and S/U grading. (Summer session, 0 to 8 hours). May be repeated to a maximum of 36 term hours per academic year or to a total of 44 term hours, all of which must be earned within one calendar year. Prerequisite: One year of residence at UIUC, good academic standing, and prior approval of the major department and the College of Liberal Arts and Sciences.

LAS 399 Leadership & Professional Development credit: 1 to 3 Hours.

Leadership and professional development seminar for student interns. Interns will learn teaching, mentoring, leadership and professional skills that will enable them to lead a section of an LAS transition course or experience and share their successful academic experiences with undergraduate students who are new to the University. Interns will help their students develop the skills necessary to succeed at the U of I. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Instructor approval required.

LAS 490 LAS Advanced Seminar credit: 1 to 6 Hours.

See Class Schedule for current topics. 1 to 6 undergraduate hours. 1 to 6 graduate hours. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours.

LAS 494 Senior Project credit: 2 or 4 Hours.

For students seeking graduation with distinction in IPS. 2 or 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Consent of instructor and IPS Advisory Committee; open only to students whose major is IPS and who have a cumulative grade point average of at least 3.25.

Jewish Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Minimum required major and supporting course work equates to 45-51 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

All substitutions must be approved by the Advisor in the Program in Jewish Culture and Society Office (<http://www.jewishculture.illinois.edu/academics/major>). Substitution for specific courses listed will be approved by the concentration advisor only in exceptional cases.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for graduation with distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.5, completion of HUM 498 with a grade of A, and completion of a semester paper in HUM 498 that is

judged to be deserving of "distinction" by a committee of at least two faculty members.

High distinction. To be eligible for graduation with high distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.7, and must have completed HUM 492 (instead of HUM 498) with a grade of A and a thesis in HUM 492 that is judged to be deserving of "high distinction" by a committee of at least two faculty members.

The Program in Jewish Culture & Society (<http://www.jewishculture.illinois.edu/academics/major>) sponsors this concentration.

This concentration provides the student with knowledge of the Hebrew language, the opportunity to begin a study of Yiddish, and a broad appreciation of Jewish religion, culture, and history.

Code	Title	Hours
JS 199	Undergraduate Open Seminar (An Independent Study experience to be arranged with a Jewish Studies affiliated faculty member)	3
Hebrew and/or Yiddish language courses, including:		26-29
HEBR 201	Elementary Modern Hebrew I	
HEBR 202	Elementary Modern Hebrew II	
HEBR 403	Intermediate Modern Hebrew I	
HEBR 404	Intermediate Modern Hebrew II	
HEBR 405	Advanced Modern Hebrew I	
or YDSH 101	Beginning Yiddish I	
REL 205	Intensive Biblical Hebrew	
or HEBR 406	Advanced Modern Hebrew II	
or YDSH 102	Beginning Yiddish II	

One course at the 100 or 200 level from each of the following clusters in the Jewish Studies Minor: Religion, Culture, and History. List maintained by the Advisor in the Program in Jewish Culture and Society Office. 9

Three courses at the 300 level or above from any of the four clusters in the Jewish Studies Minor: Religion, Culture, History, and Language. List maintained by the Advisor in the Program in Jewish Culture and Society Office. 9

Medieval Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Minimum required major and supporting course work equates to 45-51 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Substitution for specific courses listed above will be approved by the concentration advisor only in exceptional cases.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction. To be eligible for graduation with distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.5, completion of HUM 498 with a grade of A, and completion of a semester paper in HUM 498 that is judged to be deserving of "distinction" by a committee of at least two faculty members.

High distinction. To be eligible for graduation with high distinction, a student must have a college grade point average of 3.5, a major concentration grade point average of 3.7, and must have completed HUM 492 (instead of HUM 498) with a grade of A and a thesis in HUM 492 that is judged to be deserving of "high distinction" by a committee of at least two faculty members.

The Program in Medieval Studies (<http://www.medieval.illinois.edu/education/undergrad>) sponsors this concentration.

This concentration introduces students to medieval (ca. 500- ca. 1500 CE) cultures across the world, providing them with an understanding of periods and movements, institutions, material culture, ideas, beliefs, and values of the diverse cultures that comprise the medieval globe. The coursework spans both geographic regions and disciplines to introduce students to the breadth of medieval cultures as well as to the diversity of methods and perspectives for their study.

The concentration includes a minimum of 45 hours, divided into (I) an introductory course in global medieval literatures and cultures; (II) geographical distribution coursework as specified below; (III) advanced medieval coursework selected by the student in consultation with a Medieval Studies faculty advisor; and (IV) a capstone experience involving an intensive writing and research project. Because Medieval Studies is an interdisciplinary field of study, students are urged to consult with a Medieval Studies faculty advisor to ensure that they take a diverse range of courses providing some exposure to the fields of History and Anthropology; Literature; the Arts; and Philosophy or Religion. Although study of medieval languages is not a requirement, students who intend to pursue graduate study in Medieval Studies should complete at least two courses in an appropriate language; up to twelve hours of appropriate language study can be applied to the Additional Medieval Studies Coursework.

Code	Title	Hours
Introduction to Medieval Studies ¹		
ENGL 202/MDVL 201	Medieval Lit and Culture	3
Geographical Distribution Coursework ²		
Select two of the following (Medieval Europe):		6
ARTH 111/ MDVL 222	Ancient to Medieval Art	
ARTH/MDVL 222	Medieval Art	
ARTH/MDVL 231	Northern Renaissance Art	
ITAL/MDVL 240	Italy Middle Ages & Renaiss	
HIST/MDVL 245	Women & Gender Pre-Mod Europe	
HIST/MDVL 247	Medieval Europe	
SCAN/MDVL 251	Viking Mythology	
SCAN/MDVL 252	Viking Sagas in Translation	

HIST/MDVL 255	British Isles to 1688	
ARCH/MDVL 412	Medieval Architecture	
Select two of the following (Classical and medieval East Asia):		6
HIST 220	Traditional China	
HIST 226	Premodern Japanese History	
EALC 240	Chinese Civilization	
EALC 275	Masterpieces of East Asian Lit	
REL 287	Introduction to Buddhism	
Select two of the following (Medieval Central Asia, South Asia, or the Middle East):		6
HIST 130	History of South Asia	
HIST 135	History of Islamic Middle East	
LA 218	S Asian Cultural Landscapes	
LA 222	Islamic Gardens & Architecture	
REL 213	Intro to Islam - ACP	
or REL 214	Introduction to Islam	
REL 223	The Qur'an (Koran)	
REL 260	Mystics and Saints in Islam	
REL 283	Jewish Sacred Literature	
CWL 208	Cultures & Literatures of South Asia	

Additional Medieval Studies Coursework

Medieval-related coursework from participating departments selected in consultation with the concentration advisor. At least 12 hours must be at the 300- or 400-level. A list of courses in Medieval Studies is maintained on the Medieval Studies Program website. Up to 12 hours of appropriate language study can be applied to meet this requirement with approval of a Medieval Studies faculty advisor. ³	21
---	----

Capstone Experience

A capstone experience (normally in the student's senior year) involving intensive interdisciplinary research and writing on a medieval topic. Any 400-level MDVL course (or medieval-related course not cross-listed with MDVL, with the approval of a Medieval Studies faculty advisor) can be designated as a capstone experience with approval of the instructor. For the course to qualify as a capstone experience, the student must undertake a substantial research project that supplements the standard course requirements, in the form either of an additional project or of a longer and more research-intensive version of an existing course project. The project must involve both primary and secondary research using advanced disciplinary methodologies and resources. ⁴	3
--	---

Total Hours	45
-------------	----

¹ A student may substitute the "Medieval World" section of HIST 100, by petition to a Medieval Studies faculty advisor. Only the section of HIST 100 devoted to the Middle Ages may be substituted.

² A student may substitute up to 6 hours in geographical distribution coursework with courses on the medieval civilizations of the Americas: ANTH 277, ANTH 278, or both. However, at least one course must still be taken from each of the three regional areas.

³ List of courses to fulfill Additional Medieval Studies Coursework. (<http://www.medieval.illinois.edu/education/undergrad>)

⁴ A student may also petition to satisfy the capstone experience by enrolling in MDVL 500, Seminar in Medieval Studies. Enrollment requires approval of the instructor and Director of the Program in Medieval Studies.

Jewish Culture and Society, Program in

Brett Kaplan, Interim Director

608 South Wright Street, Urbana, Illinois 61801

PH: 217-333-7978

<http://jewishculture.illinois.edu>

Interdisciplinary Minor in Jewish Culture and Society

The Program in Jewish Culture and Society offers an interdisciplinary minor and a concentration in Jewish Studies (through the LAS Interdisciplinary Studies Major (p. 476)).

E-mail: jewishculture@illinois.edu

Code	Title	Hours
	One course in the cluster of Religion, chosen from a list of courses maintained by the Advisor in the Program in Jewish Culture and Society Office.	3
	One course in the cluster of Culture, chosen from a list of courses maintained by the Advisor in the Program in Jewish Culture and Society Office.	3
	One course in the cluster of History, chosen from a list of courses maintained by the Advisor in the Program in Jewish Culture and Society Office.	3
	Electives within the minor. Students may choose additional courses from any of the three clusters or can choose from the following language courses:	9
HEBR 199	Undergraduate Open Seminar	
HEBR 205	Intensive Biblical Hebrew	
HEBR 403	Intermediate Modern Hebrew I ¹	
HEBR 404	Intermediate Modern Hebrew II ¹	
HEBR 405	Advanced Modern Hebrew I	
HEBR 406	Advanced Modern Hebrew II	
HEBR 407	Topics Hebrew Lang & Lit I	
HEBR 408	Topics Hebrew Lang & Lit II	
YDSH 103	Intermediate Yiddish I	
YDSH 104	Intermediate Yiddish II	
Total Hours		18

Of the 18 required hours, two courses (6 hours) must be 300- or 400-level courses. HEBR 403 and HEBR 404 cannot be used to satisfy this requirement.

¹ HEBR 403 and HEBR 404 cannot be used to satisfy LAS Advanced Hours requirement (<http://www.las.illinois.edu/students/requirements/> minimum) or the 6 hours of 300- or 400-level courses for the Jewish Culture and Society Interdisciplinary Minor.

No more than 6 hours (two courses) may be at the 100 level.

The 18 hours selected by students for a minor in Jewish Culture and Society should form a coherent program and must be approved by the undergraduate advisor for the Program in Jewish Culture and Society.

A list of courses, regularly updated by the Program in Jewish Culture and Society, is available from the Program Office, 109 English Bldg., 608 South Wright Street, Urbana, Illinois, 61801.

JS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JS>)

Courses

JS 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, PHIL 108, REL 108, and SOC 108. See REL 108.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

JS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Faculty offer seminars in a range of areas that provide an opportunity for undergraduates to be exposed to key dimensions of Jewish Studies. May be repeated in the same or separate terms to a maximum of 10 hours.

JS 201 History of Antisemitism credit: 3 Hours.

Studies the negative representations of Judaism and Jews from antiquity to the modern world. Topics include: Greco-Roman concepts of the Jewish religion; medieval Christian symbolization of the demonic Jew; Jews and negative attitudes to capitalism; blood purity and blood libel; the rise of racial prejudice in the modern nation state; totalitarianism and genocide; antisemitism and anti-Zionism. Same as REL 212.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

JS 209 Jewish American Literature credit: 3 Hours.

Using a combination of careful reading with historical contextualization we will discuss how the field of Jewish American literature emerged, and get a sense of where it might be heading. We will address topics such as what makes a literary work Jewish American other than the Jewishness of its author; in what ways the field of Jewish American literature has changed over time; and what might be the underlying trends/themes of this field of literature. Same as CWL 209 and ENGL 222.

JS 211 War & Peace in Israeli Lit credit: 3 Hours.

Same as CWL 211 and SAME 211. See CWL 211.

JS 220 Jewish Storytelling credit: 3 Hours.

Same as CWL 221, ENGL 223, REL 220, and YDSH 220. See YDSH 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

JS 252 The Holocaust credit: 3 Hours.

Same as HIST 252. See HIST 252.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

JS 300 Jewish Chicago credit: 3 Hours.

The history of Jewish Chicago from 1820 to the present will be taught in Chicago during Summer I. The class includes excursions all over the city as well as class time at the Newberry Library. Topics of study include immigration, Jews in the labor movement, Jewish political activism, Jewish religious practice, Jewish art, literature, and Yiddish theater. The course will contextualize our study of Jewish Chicago in terms of American history, urban history, gender history, and labor history.

JS 320 Lit Responses to the Holocaust credit: 3 Hours.

Same as CWL 320, ENGL 359, REL 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

JS 335 Middle East 1566-1914 credit: 3 Hours.

Same as HIST 335. See HIST 335.

JS 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Same as CWL 341, REL 340 and SAME 341. See CWL 341.

JS 399 Special Topics credit: 3 Hours.

Faculty offer special topics in their areas of expertise that provide an opportunity for undergraduates to be exposed to some of the most current developments in faculty research. May be repeated in the same or separate term to a maximum of 9 hours.

JS 442 History of Early Judaism credit: 3 Hours.

Same as HIST 432 and REL 442. See REL 442.

JS 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.

Same as CWL 454 and SAME 454. See CWL 454.

JS 495 Independent Study credit: 2 to 4 Hours.

Readings in selected fields in consultation with the instructor along with the completion of a specified writing assignment. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated in the same term to a maximum of 4 undergraduate hours or 8 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours and 16 graduate hours. Prerequisite: Consent of instructor.

JS 496 Topics in History of Judaism credit: 3 or 4 Hours.

Same as REL 496. See REL 496.

Latin American and Caribbean Studies, Center for

Anna Maria Escobar, Director of Center

201 International Studies Building, 910 South Fifth Street, Champaign
PH: (217) 333-3182

<http://www.clacs.illinois.edu>

A major in Latin American Studies, which is administered by the Center for Latin American and Caribbean Studies, provides an integrated exploration of a major world area. Depending upon the student's interests and career aspirations, individual programs of study are designed in close consultation with the Associate Director of the Center, who also serves as the academic adviser. Consultation revolves around the career goals of the student. The undergraduate program reflects an integrative, cross-disciplinary approach, and courses must be taken in at least three of these five areas or perspectives:

1. anthropological and geographical;
2. historical;
3. humanistic;
4. social, political, and economic;
5. ecological and environmental.

Courses for the major must be selected in consultation with the Associate Director of the Center.

Students are also expected to demonstrate a substantial command of a Latin American language (Spanish, Portuguese, Quechua or other Native American language indigenous to Middle or South America), either by

passing a proficiency examination or through advanced courses of Latin American language(s) beyond the general Liberal Arts and Sciences language requirement.

Major in Latin American Studies Major in Sciences and Letters Curriculum

E-mail: clacs@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting course work equates to 45 hours

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours¹

Departmental distinction: To be eligible, a student must achieve at least a 3.5 grade point average in the major, complete a senior thesis, and receive the approval of the center's research committee.

Code	Title	Hours
LAST 170	Introduction to Latin America ²	3
LAST 490	Individual Study ³	3

Approved courses with Latin American content including courses in the following perspectives:⁴

Anthropological and Geographical Perspective. Normally courses in anthropology and geography.

Historical Perspective. Normally courses in history.

Humanistic Perspective. Normally courses in Spanish and Portuguese literature, comparative literature, linguistics, art history, and music.

Social, Political, and Economic Perspective. Normally courses in sociology, rural sociology, political science, economics, and agricultural economics.

Ecological and Environmental Perspective. Normally courses in biology, forestry, and physical anthropology (primatology).

When appropriate, approved courses with Latin American content in other scientific and professional areas may be substituted for courses in the five perspectives listed above with the consent of the Associate Director of the Center for Latin American and Caribbean Studies.

Latina/Latino Studies

Jonathan Inda, Chair

Office: 1207 W. Oregon Street, Room 127A, Urbana

PH: (217) 265-0370

<http://www.lls.illinois.edu>

Email: lls-studies@illinois.edu

The Undergraduate Major in Latina/Latino Studies explores the experiences and lives of Latinas/os in the context of the United States. The major provides a broad and deep approach to theory, research, and multidisciplinary study of the Latina/o experience. Students will complete 34 hours of required and elective courses, and a minimum of 18 hours of supporting course work or a minor in an area outside of the major. Students majoring in Latina/Latino Studies receive excellent preparation for graduate study or careers in education, social and welfare policy, counseling, law, public policy, and other fields that address Latino issues.

Major in Latina/Latino Studies Major in Sciences and Letters Curriculum

E-mail: aprodrig@illinois.edu

www.lls.illinois.edu (<http://www.lls.illinois.edu>)

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required hours: 52 hours required, including 34 hours in Latina/Latino Studies courses

General education: The LAS General Education requirements will fulfill the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level Latina/Latino Studies courses must be taken on this campus.

Minimum hours required for graduation: 120 hours

Advising: The Department of Latina/Latino Studies provides advising for students. Students will also be assigned a faculty advisor to help plan a coherent program in their selected area of study.

Departmental distinction: To graduate with distinction in Latina/Latino Studies, a student must have at least a 3.25 overall GPA, a minimum 3.5 GPA in the major, and complete a senior honors thesis. To complete the honors thesis requires a student to enroll in four hours of LLS 495, normally distributed evenly across two consecutive semesters. Students graduating with at least a 3.5 GPA in the major (and meeting the other conditions) will be awarded Distinction; those with at least a 3.7 GPA in the major will be given High Distinction.

Code	Title	Hours
LLS 100	Intro Latina/Latino Studies	3
LLS 385	Theory and Methods in LLS	3

Thematic Areas

Students must take two courses in each of the following three areas. A list of courses is maintained in the Department's office.

A. Literature, Media and Culture	6
B. Race, Gender, and Sexuality	6

C. History, Politics, and Society	6	
LLS 490	Senior Research Project	4
or LLS 495	Senior Honors Thesis	
LLS Electives selected from the list of all LLS and cross-listed LLS classes	6	
Supporting coursework chosen in consultation with an advisor; may be a campus approved minor	18	
Total Hours	52	

Interdisciplinary Minor in Latina/Latino Studies

The Interdisciplinary Minor in Latina/Latino Studies will allow students following any major plan of study to gain extensive knowledge in Latina/Latino Studies by completing seven courses (at least 21 credit hours) chosen in consultation with the Department of Latina/Latino advisor. The courses must form a coherent program of study and be approved by the Department of Latina/Latino Studies.

Code	Title	Hours
LLS 100	Intro Latina/Latino Studies	3
LLS 385	Theory and Methods in LLS	3

Thematic Areas

Students must take one course in each of the following three areas. A list of courses is maintained in the Department's office.

A. Literature, Media, and Culture	3
B. Race, Gender, and Sexuality	3
C. History, Politics, and Society	3
2 elective courses selected from the list of all LLS and cross-listed LLS classes	6
Total Hours	21

No more than 3 hours may be at the 100 level and at least 6 hours must be 300 and 400-level courses.

Students must officially declare their minor by registering with the Latina/Latino Studies advisor.

Completion of the program requires a minimum grade point average of 2.75 (A+ = 4.0) in Latina/Latino Studies courses.

LLS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LLS>)

Courses

LLS 100 Intro Latina/Latino Studies credit: 3 Hours.

Interdisciplinary introduction to the basis for a Latina/Latino ethnicity in the United States. Topics include immigration and acculturation experiences and their commonalities and differences, comparison of Latina/Latino experiences to those of other racial, ethnic and immigrant groups, and the potential for a pan-ethnic identity.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

LLS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LLS 200 U.S. Race and Empire credit: 3 Hours.

Same as AAS 200. See AAS 200.

LLS 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AAS 201, AFRO 201, and PS 201. See PS 201.
This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

LLS 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AFRO 215, AIS 295, and GWS 215. See AAS 215.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

LLS 220 Mexican & Latin Am Migration credit: 3 Hours.

General overview of international migration to the United States, using Latin American migration to the U.S., especially the Midwest, as the focal point. Topics discussed include the history of international migration to the United States, the relationship between history and the contemporary context, the development of U.S. immigration policy, the incorporation of Latino immigrants in U.S. society, and immigrant and community responses to migration. Same as SOC 221.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

LLS 227 Latina/Latinos in the Contemporary United States credit: 3 Hours.

Same as SOC 227. See SOC 227.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

LLS 230 Latina/o Genders & Sexualities credit: 3 Hours.

Survey of major theories and debates surrounding the gendered and sexualized dimensions of the Latina/o experience in the United States. The course is comprised of three major units: Gender, Sexuality, and Sex. In these units, students will read about and discuss issues pertaining to femininity/marianismo, masculinity/machismo, family/familism, desire, sexual behavior, sex work, sexual and gendered violence, and gendered and sexualized representations in pop culture. Same as GWS 230.

LLS 238 Latina/o Social Movements credit: 3 Hours.

Focuses on the history and theory of Latina/o social movements. Topics include immigrant mobilizations, transnational organizing, agrarian and farm worker movements, political representation, feminisms and reproductive rights, environmental justice, labor and educational struggles, and urban social movements. Same as HIST 292.

LLS 240 Latina/o Popular Culture credit: 3 Hours.

Provides an introduction to Latina/o popular culture in the United States. Specific modes of popular culture might include mass media, music, film, video, performance, and other expressive forms. Lecture and readings are in English. Same as ENGL 224 and SPAN 240.

LLS 242 Intro to Latina/o Literature credit: 3 Hours.

Survey of literature by and about people of Mexican, Puerto Rican, Cuban, and other Latina/o descent in the United States. Taught in English. Same as ENGL 225 and SPAN 242.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

LLS 246 Gender & Sexuality in Latina/o Literature credit: 3 Hours.

Same as SPAN 246. See SPAN 246.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

LLS 250 Latina/os on the Bronze Screen credit: 3 Hours.

Critical, historical, and theoretical exploration of Latina/o representations in U.S. film from the 1900s to the present. Examination of cinematic representations as well as the social, political, and cultural context in which those representations are produced. The focus is on Mexican American and Puerto Rican images, but Hollywood's treatment of other Latina/o communities and ethnic groups will be discussed. Students will be required to attend weekly movie screenings. Same as MACS 250.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

LLS 258 Muslims in America credit: 3 Hours.

Same as AAS 258 and REL 258. See AAS 258.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

LLS 259 Latina/o Cultures credit: 3 Hours.

Same as ANTH 259. See ANTH 259.

LLS 260 Graffiti and Murals credit: 3 Hours.

Same as ARTH 260. See ARTH 260.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

LLS 265 Politics of Hip Hop credit: 3 Hours.

Examines hip hop as politics, culture, and commodity. Emphasis given to hip hop's relation to urban spaces deeply impacted by state surveillance, cuts in social welfare programs, immigration, and the global restructuring of capital. Also considers the viability of a "politics of hip hop" in the wake of the music's rising value as a global commodity and analyzes hip hop as a transnational site in which gendered and sexual identities are created, contested, and rearticulated. Same as AAS 265.

LLS 278 Mapping Latina/o Inequalities credit: 3 Hours.

Explores contemporary structural forces that contribute to the concentration of Latinas/os in segregated neighborhoods, and the detrimental effects of housing inequality on Latina/o communities. Focuses on the influence of geographic context in creation and maintenance of racial inequalities as they affect urban, suburban, and small town locals. Further examines the role of space and place in the development and persistence of community identities. Same as SOC 278.

LLS 279 Mexican-American History credit: 3 Hours.

Examination of the history of Mexican Americans living within the United States from the Spanish Conquest to the twentieth century. Explores the process of migration, settlement, assimilation, and discrimination with emphasis on continuity and change in Mexican cultural development. Same as HIST 279.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

LLS 280 Caribbean Latina/o Migration credit: 3 Hours.

Same as HIST 280. See HIST 280.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

LLS 281 Constructing Race in America credit: 3 Hours.

Same as AAS 281, AFRO 281, and HIST 281. See HIST 281.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

LLS 296 Topics Latina/o Studies credit: 3 Hours.

Course examines specific topics in Latina/Latino Studies not addressed in regularly offered courses. Examples include theories of ethnic identity, historical foundations, cultural expression, and relevant topics in public policy studies of Latina/Latino communities. May be repeated in same or separate terms to a maximum of 6 hours.

LLS 301 19thC US Latina/o Lit-ACP credit: 4 Hours.

Focuses on the fiction (historical novels and poetry) as well as the critical essays of the 1848 Mexican-American War and the 1898 Spanish-American War, the two key 19th century events that determined the status of the people of the Caribbean and Mexican descent in the United States. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - US Minority

LLS 305 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Same as AAS 300 and GWS 305. See AAS 300.

This course satisfies the General Education Criteria for:

Advanced Composition

LLS 308 Spanish in the United States credit: 3 Hours.

Same as SPAN 308. See SPAN 308.

LLS 310 Race and Cultural Diversity credit: 4 Hours.

Same as AAS 310, AFRO 310, and EPS 310. See EPS 310.

This course satisfies the General Education Criteria for:

Advanced Composition

Cultural Studies - US Minority

LLS 316 Latina/Latino Politics credit: 3 Hours.

Same as PS 316. See PS 316.

LLS 320 Gender & Latina/o Migration credit: 3 Hours.

Study of the gendered social process of international immigration, focusing on Latin American migration to the United States. Established theories of migration, the history of international immigration to the U.S., and historical and contemporary Mexico, Caribbean and Central American migration flows will be discussed in great detail. Primary focus on how gender shapes the migration experiences of immigrants and the gendered impact of migration on the economic, political, and social status of individuals. Same as SOC 321 and GWS 320. Prerequisite: LLS 100 or SOC 100.

LLS 322 US Latina and Latino Families credit: 3 Hours.

Same as HDFS 322. See HDFS 322.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

LLS 355 Race and Mixed Race credit: 3 Hours.

Explores the history of racial classification in the U.S. with special attention to the census and the role of the state more generally in defining race. Emphasis on how race-mixing has been understood in American culture, and on the current literature on "multiracials" and the future of "race" in the U.S. Readings are drawn from interdisciplinary sources, but examined from a sociological perspective. Same as AAS 355 and SOC 355. Prerequisite: Any lower division LLS or SOC or AAS course.

LLS 360 Contemporary US Latina/o Lit credit: 3 Hours.

Focuses on the major U.S. Latina/Latino writers and texts and their depictions of the events that have shaped 20th and 21st-Century U.S. Latina/Latino cultures.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

LLS 368 Latinas/os & Public Policy credit: 3 Hours.

Examines the effectiveness of current U.S. public policies in addressing the social, economic, and political problems affecting Latina/o individuals and communities. Specifically, it evaluates current policy in the areas of public assistance, fair housing, criminal justice, immigration enforcement, and reproductive health. Although this interdisciplinary course primarily focuses on national policies and programs, it also addresses, as necessary, the particulars of public policy in the state of Illinois.

LLS 370 Latina/o Ethnography credit: 3 Hours.

Addresses the theoretical, methodological, and ultimately political implications and questions generated by a range of ethnographic materials on Latina/os. Specifically explores culture and power (e.g., racism, sexism, and activism) through ethnographic methods and modes of representation, including literature. Fundamental to the course is the requirement that students engage in ethnographic practice, producing ethnographic research on Latina/os at the University of Illinois. Same as ANTH 370. Prerequisite: Any lower division course in LLS or ANTH.

LLS 372 Immigration, Law, and Rights credit: 3 Hours.

Same as AAS 370. See AAS 370.

LLS 375 Latina/o Media in the US credit: 3 Hours.

Same as MACS 375. See MACS 375.

LLS 377 Prisons, Race, and Terror credit: 3 Hours.

Same as AAS 375. See AAS 375.

LLS 379 Latina/os and the City credit: 3 Hours.

Examination of the migration and settlement of Latina/o populations (Mexicans, Puerto Ricans, Cubans, Dominicans, and Central and South Americans) in U.S. cities. Focus on the historic, economic, social and political factors that influenced these migrations and the choices migrants made to come to the United States and to urban areas in particular. Study of the regional variation among Latina/o groups, and coalition building and collaborative ventures between Latina/os and other communities of color in urban areas. Same as HIST 379.

LLS 382 Race and Migration in Chicago credit: 3 Hours.

As the "Second City" located in the heartland of America, Chicago is central to many debates on urban space, race, and nation. Specifically, it is an influential site in which Latina/os, African-Americans, Asian-Americans, and ethnic whites have come to understand meanings of race in a highly segregated setting. This course takes an interdisciplinary approach to the study of racial and ethnic groups in this city, examining issues of migration, gender, segregation, labor, and education from the late nineteenth century to the present. Same as HIST 382. Prerequisite: One course in either LLS or HIST.

LLS 385 Theory and Methods in LLS credit: 3 Hours.

Introduction to the interdisciplinary theories and methods of Latina/Latino Studies. Traditional approaches to the study of ethnicity and race will be interrogated through critical scholarship produced by Latina/Latino Studies scholars across a variety of approaches (anthropology, communications, literature, history, sociology, among others). By learning about a variety of methodological approaches, students will become proficient in conducting ethnic studies research projects about U.S. Latina/o populations. Prerequisite: LLS 100.

This course satisfies the General Education Criteria for:
Advanced Composition

LLS 387 Race, Gender and the Body credit: 3 Hours.

Focuses generally on the relation between power and the body. In western culture, the body is typically thought of as a natural, biological entity. However, as a number of social theorists have pointed out, the body can never be reduced to mere biology. It is also always a product of culture and therefore necessarily implicated in relations of dominance and subordination. Using this framework, the class is specifically concerned with how raced, gendered, and sexed bodies have been imagined in US culture (as abnormal, diseased, criminal, etc.) and with how such bodies have been rendered objects of surveillance, discipline, and regulation. Same as SOC 387. Prerequisite: LLS 100.

LLS 390 Independent Study credit: 0 to 3 Hours.

Special topics not treated in regularly scheduled courses; designed especially for advanced Undergraduates. Approved for letter and S/U grading. May be repeated in the same or subsequent terms as topics vary to a maximum of 6 hours. Prerequisite: One course in Latina/Latino Studies and consent of instructor.

LLS 391 Oral History Methods credit: 3 Hours.

Same as HIST 391. See HIST 391.

LLS 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Explores the experiences of Chicanas and Latinas through the lens of contemporary sociological research. Topics to be discussed include: community formation and activism, Chicana/Latina feminisms, sexuality, religion, health, family, immigration, education, work, media, and artistic expression. Readings emphasize the link between the structural inequalities of society, and the day-to-day lived experiences of Chicana/Latinas. Same as GWS 392 and SOC 392. Prerequisite: Any 100, 200, or 300-level LLS, GWS, or SOC course.

This course satisfies the General Education Criteria for:
Advanced Composition

LLS 396 Adv Topics Latina/o Studies credit: 3 Hours.

Examines specific topics in Latina/Latino Studies not addressed in regularly offered courses. Examples include theories of ethnic identity, historical foundations, cultural expression, and relevant topics in public policy studies of Latina/Latino communities. May be repeated in the same or separate terms to a maximum of 6 hours.

LLS 410 Writing Latina/o Chicago credit: 3 or 4 Hours.

Examination of novels, poetry, film and memoirs by Latinas and Latinos writing from and/or about Chicago. Through these texts, the course will simultaneously track a Chicago-based Latina/o literary history and analyze articulations of Latina/o everyday life and politics grounded in the city's distinct topographical and social contexts. Issues of migration, gentrification, segregation, youth culture, gender, sexuality, race, violence, poverty, class consciousness, and struggles for social justice will figure prominently in lectures and class discussions. 3 undergraduate hours. 4 graduate hours. Prerequisite: LLS 100.

LLS 412 Hispanics in the U.S. credit: 3 or 4 Hours.

Same as SOCW 412. See SOCW 412.

LLS 433 Found of Bilingual Educ credit: 2 to 4 Hours.

Same as CI 433. See CI 433.

LLS 435 Commodifying Difference credit: 3 or 4 Hours.

An interdisciplinary examination of how racial, ethnic and gender difference is negotiated through media and popular culture, and how racial, ethnic and gendered communities use cultural forms to express identity and difference. Among the theoretical questions explored are the politics of representation, ethnic/racial authenticity, cultural commodification and transnational popular culture. Some of the cultural forms examined are cultural festivals/parades, ethnic/race-based beauty pageants, cinematic and televisual texts and musical forms, such as Hip-Hop and Salsa. Same as AAS 435, AFRO 435, GWS 435, and MACS 432. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any combination of 6 hours from Latina/o Studies, Asian American Studies, Afro-American Studies, Gender and Women Studies or Media and Cinema Studies; graduate standing, or consent of instructor.

LLS 442 Latina Literature credit: 3 or 4 Hours.

Examines literary productions by and about women of Mexican, Puerto Rican, Cuban, and other Latina/o descent in the United States. Taught in English. Same as GWS 445 and SPAN 442. 3 undergraduate hours. 4 graduate hours. Prerequisite: At least one previous course in U.S. Latina/Latino Studies or Gender and Women's Studies, or consent of instructor.

LLS 449 Issues in Latina/o Educ credit: 2 to 4 Hours.

Same as CI 449. See CI 449.

LLS 458 Latina/o Performance credit: 3 or 4 Hours.

Focuses on Latina/o performances to underscore the relationship between practices of everyday life and acts on stage. Pays particular attention to the material (human) body and bodies of work. Students will critically engage with performance theory and scripts, media works of performances, and theorizations of Latinidad and the body. Same as ENGL 458. 3 undergraduate hours. 4 graduate hours.

LLS 460 Critical Ethnic Studies credit: 3 or 4 Hours.

Same as AAS 400. See AAS 400.

LLS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Explores how racial stereotypes rely on sexual stereotypes by examining the intersections of ethnic studies, gender and women's studies, and queer studies. Interdisciplinary course that draws from critical legal studies, sociology, anthropology, literary criticism, and history. Same as AAS 465, AFRO 465, and GWS 465. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any lower division course in LLS, AAS, AFRO, or GWS.

LLS 468 Latinas/os & the Law credit: 3 or 4 Hours.

Examines the Latina/Latino experience in the U.S. how and when the law, through the courts, has most often operated as an instrument of subordination and oppression, but has also at times been leveraged for positive social transformation. Students will come to understand that the law is a deeply contested social space that is central to U.S. social hierarchies based upon race, ethnicity, sexuality, gender, class, immigration status, and religion. 3 undergraduate hours. 4 graduate hours.

LLS 472 Border Latina, Latino Cultures credit: 3 or 4 Hours.

Same as ANTH 472. See ANTH 472.

LLS 473 Immigration, Health & Society credit: 3 or 4 Hours.

This interdisciplinary seminar examines the social determinants of US racial and ethnic health inequalities through the lens of (im)migration. Topics to be addressed include: conceptualizations of race and ethnicity, immigrant-adaptation theories, discrimination, place, and the intersections of race, ethnicity, poverty, immigration, gender and health. Same as CHLH 473, SOC 473, and SOCW 473. 3 undergraduate hours. 4 graduate hours.

LLS 475 History of the American West credit: 3 or 4 Hours.

Same as HIST 476. See HIST 476.

LLS 479 Race, Medicine, and Society credit: 3 or 4 Hours.

The idea of race has historically been central to how Western cultures conceptualize and think about human difference. This course examines the historical significance of race through one domain of knowledge: medicine. Specifically, it will be concerned with "race" as a central category in the medical construction and management of individuals and populations. Case studies might focus on colonial medicine, race and public health, sexuality and reproduction, global health disparities, and genetics and genomics. Same as AAS 479 and ANTH 479. 3 undergraduate hours. 4 graduate hours. Prerequisite: LLS 100 or consent of instructor.

LLS 490 Senior Research Project credit: 2 or 4 Hours.

Research project leading to a senior paper. 2 or 4 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 4 undergraduate hours. Prerequisite: Senior standing; enrollment as a major in Latina/Latino Studies; and consent of instructor.

LLS 495 Senior Honors Thesis credit: 2 or 4 Hours.

Research project leading to a thesis. 2 or 4 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 4 undergraduate hours. May be taken by honors students in partial fulfillment of department honors requirement. Prerequisite: Senior standing; enrollment as a major in Latina/Latino Studies; a cumulative grade point average of at least 3.25; a minimum 3.5 grade point average in the major; and consent of supervising professor.

LLS 496 Seminar in Latina/o Studies credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 12 graduate hours.

Linguistics

James Yoon

4080 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 333-3563

<http://linguistics.illinois.edu>

The Department of Linguistics offers undergraduate instruction of four types: courses in linguistics, in English as an International Language, English as a Second Language, and in non-Western languages.

Linguistics courses focus on empirical and theoretical issues connected with how languages are structured, how they are used, and how they change through time. These courses are of interest not only to linguistics majors, but to students in any field where the analysis of languages is important: anthropology, speech and hearing science, psychology, philosophy, computer science, foreign languages, and others.

English as an International Language courses are concerned with the teaching of English to speakers of other languages, and are useful to any students planning a career in language teaching.

English as a Second Language courses are for students whose first language is not English, to build up skills in speaking, understanding, reading, and writing English.

Non-Western Language courses build up skills in speaking, listening, reading and writing a specific language; familiarize students with literatures and cultures connected with the language; and examine linguistic issues peculiar to the language itself. These courses are of interest to students planning international careers, or simply desiring to broaden their perspective and learn about a different language and culture.

Undergraduate Major offered by the Department of Linguistics

- Linguistics

In addition, students may pursue linguistics as part of the LAS Major in Computer Science and Linguistics (p. 588).

Undergraduate Minors offered by the Department of Linguistics

- Arabic Studies
- English as a Second Language
- Hindi Studies
- Linguistics
- Sub-Saharan African Languages
- Teacher Education Minor in English as a Second Language

Languages Offered by the Department of Linguistics

- African Languages (Bamana, Lingala, Swahili, Wolof, and Zulu)
- Arabic
- Hindi
- Modern Greek
- Persian
- Sanskrit
- Turkish

Major in Linguistics

Major in Sciences and Letters Curriculum

For advising information please visit the Linguistics advising page.

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum major and supporting course work normally equates to 50-52 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Students must complete 21 hours of coursework at the 300- or 400-level, including at least 12 hours of 300- or 400-level linguistics courses on this campus. These courses may be included in the core courses or electives.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students are strongly encouraged to fulfill the requirements for completing their program with distinction. Candidates for the degree with distinction must register their candidacy with their advisers no later than the end of the second semester of the junior year. They must achieve a grade point average of at least 3.4 for the required 36 hours in linguistics, and register for at least 4 hours of LING 391 - Honors Individual Study, plus submit a senior honors thesis to the Department of Linguistics by the first day of the month preceding the month of graduation.

Code	Title	Hours
Major core courses:		18
LING 100	Intro to Language Science	
LING 210	Language History	
LING 301	Elements of Syntax	
LING 302	Elements of Phonology	
LING 307	Elmnts Semantics & Pragmatics	
LING 401	Intro to General Phonetics	
Select one of the following:		3
LING 225	Language, Mind, and Brain	
LING 250	Language Diversity in the USA	
Major electives: 15 hours of Linguistics courses at the 200- to 400-level, chosen in consultation with the student's advisor		15
Students must fulfill the LAS foreign language requirement, and in addition, complete at least 8 hours in a second foreign language. One of these languages must be a non-Western language chosen from the following list or approved in consultation with the student's advisor: American Sign Language, Arabic, Bamana, Basque, Chinese, Hebrew, Hindi/Urdu, Japanese, Korean, Lingala, Persian, Quechua, Sanskrit, Swahili, Turkish, Wolof, Zulu. Courses used to complete this requirement may also be used to meet the requirement of "Courses in linguistically relevant areas," below.		8-10
Courses in linguistically relevant areas chosen in consultation with the student's advisor. There are two ways of meeting this requirement:		14
A. The courses may come from any of the following disciplines: any foreign language, anthropology, classics, computer science, English, English as an international language, philosophy, psychology, speech and hearing science, communication.		
B. Students desiring to specialize in the linguistics of a particular language should complete at least four semesters of instruction in that language beyond the elementary level, and a linguistics course or independent study focusing on the selected language or its language family.		
<ul style="list-style-type: none"> • Minor in Arabic Studies (p. 494) • Minor in English as a Second Language (p. 495) • Minor in Hindi Studies (p. 495) • Minor in Linguistics (p. 495) 		

- Minor in Sub-Saharan African Languages (p. 495)
- Teacher Education Minor in English as a Second Language (p. 496)

ARAB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARAB>)

Arabic Courses

ARAB 150 Lang&Culture of Arab World credit: 3 Hours.

Interdisciplinary overview of the major aspects of the contemporary Arab culture. Based on scholarly research, textual resources, media, and literature from both the Arab World and elsewhere, examines the Arab people's historical background; language varieties; literary traditions; and representative social institutions. Same as SAME 150. This course satisfies the General Education Criteria for: Cultural Studies - Non-West

ARAB 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ARAB 201 Elementary Standard Arabic I credit: 5 Hours.

Mastery of the Arabic alphabet and phonetics; elementary formal grammar and the development of reading and writing skills; and conversation in the formal noncolloquial style. Participation in the language laboratory is required.

ARAB 202 Elementary Standard Arabic II credit: 5 Hours.

Continuation of ARAB 201. Participation in the language laboratory is required. Prerequisite: ARAB 201.

ARAB 210 Colloquial Arabic I credit: 4 Hours.

Development of conversational fluency in one of the major colloquial dialects; see Class Schedule for dialect to be taught each term.

ARAB 211 Colloquial Arabic II credit: 4 Hours.

Continuation of ARAB 210. Prerequisite: ARAB 210.

ARAB 403 Intermediate Stand Arabic I credit: 4 Hours.

Survey of more advanced grammar; emphasis on increasing conversational fluency in the formal noncolloquial style; and reading of prose texts reflecting aspects of Arabic culture. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 202.

ARAB 404 Intermediate Stand Arabic II credit: 4 Hours.

Continuation of ARAB 403. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 403.

ARAB 405 Advanced Standard Arabic I credit: 3 Hours.

Practice to attain conversational fluency in the formal noncolloquial style; introduction to Arabic literature; and readings in social, political, and historic writings. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 404.

ARAB 406 Advanced Standard Arabic II credit: 3 Hours.

Continuation of ARAB 405. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 405.

ARAB 407 Topics Stand Arabic Lang&Lit I credit: 3 Hours.

Selected readings from Modern Standard Arabic authors, with a focus on novels, plays, and basic poetry illustrative of Arab cultural issues and advanced level MSA grammar, as well as development of expository writing skills. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 406.

ARAB 408 Topics Stand Arabic LangLit II credit: 3 Hours.

Continuation of ARAB 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 407.

ARAB 409 Adv Top Stand Arabic LangLit I credit: 3 or 4 Hours.

Introduction to Modern Standard Arabic in the professions as documented in selected newspapers, educational radio and TV programs, works of fiction, biographies, anthologies, and professional journals. Students will be introduced to argumentative writing in MSA, expected to make oral presentations, and to write a research paper in their field. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 408.

ARAB 410 AdvTop Stand Arabic LangLit II credit: 3 or 4 Hours.

Continuation of ARAB 409 with increased emphasis on the development of comprehension and writing of professional language. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 409.

ARAB 412 Business Arabic credit: 3 or 4 Hours.

Introduction to Arabic business language as used in basic business settings, including commercial advertisement and business correspondence. Emphasizes language skills that will enable students to conduct job searches and locate job vacancies that match their fields of study and their interests. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms if topics vary to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: ARAB 405 or consent of instructor.

ARAB 413 Arabic-English Translation credit: 3 or 4 Hours.

Introduction to translation methodology and the profession of translation, with particular emphasis on the development of Arabic-to-English translation techniques and the acquisition of related knowledge above and beyond language skills. Students will be exposed to a variety of text types from different Arabic-speaking countries and learn to produce quality, professional translations and apply effective strategies to deal with the challenges of fully preserving the meaning of the original text while conveying the appropriate tone (style/register) and paying attention to grammar, mechanics, and audience-specific needs. Same as TRST 413. 3 undergraduate hours. 4 graduate hours. Prerequisite: Advanced standing in Arabic.

ARAB 490 Readings in Advanced Arabic credit: 3 or 4 Hours.

Directed reading course intended to develop an advanced student's facility with the Arabic language through various readings (authors, genres, themes, or other topical studies) and is conducted entirely in the Arabic language. Topics may vary from term to term. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms up to 6 undergraduate hours or 8 graduate hours, if topics vary. Prerequisite: ARAB 410 or consent of instructor.

BMNA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BMNA>)

Bamana Courses**BMNA 201 Elementary Bamana I credit: 5 Hours.**

Introduction to Bamana (Bambara), a West African language spoken from Mauritania to Benin; emphasis on grammar, pronunciation, reading and conversation in standard Bamana. Participation in the language laboratory required. Same as AFST 201.

BMNA 202 Elementary Bamana II credit: 5 Hours.

Continuation of BMNA 201, with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Bamana. Participation in the language laboratory required. Same as AFST 202. Prerequisite: BMNA 201.

BMNA 403 Intermediate Bamana I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, compositional skills, study of written texts in standard Bamana, and discussion of grammatical variations. Same as AFST 403. 4 undergraduate hours. 4 graduate hours. Prerequisite: BMNA 202.

BMNA 404 Intermediate Bamana II credit: 4 Hours.

Continuation of BMNA 403; emphasis on ability to engage in reasonably fluent discourse in Bamana and comprehensive knowledge of formal grammar, and ability to read ordinary texts in standard Bamana. Same as AFST 404. 4 undergraduate hours. 4 graduate hours. Prerequisite: BMNA 403.

BMNA 405 Advanced Bamana I credit: 3 Hours.

Third year Bamana with emphasis on conversational fluency and on increased facility in reading, comprehension, writing in response to authentic Bamana texts such as those documented in selected newspapers, magazines, and other Bamana-speaking communities' cultural materials. Same as AFST 431. 3 undergraduate hours. 3 graduate hours. Prerequisite: BMNA 404.

BMNA 406 Advanced Bamana II credit: 3 Hours.

Continuation of BMNA 405 with increased emphasis on conversational fluency and on increased facility in reading, comprehending authentic Bamana literary texts, including prose and cultural materials from Bamana-speaking communities in West Africa (i.e., Burkina Faso, Cote d'Ivoire, and Mali.) Same as AFST 432. 3 undergraduate hours. 3 graduate hours. Prerequisite: BMNA 405.

EIL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EIL>)

English as an Intl Language Courses**EIL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

May be repeated.

EIL 214 TESL in the Elementary School credit: 3 Hours.

On-site practical experience in an elementary school, involving at least 100 hours of classroom observations, consultations, teaching, tutoring, and assisting, to acquaint students with the many facets of ESL/bilingual education in a public school setting. Hours to be arranged with the cooperating teacher. Satisfies one requirement for those who wish to obtain an Illinois ESL endorsement on an Illinois teaching certificate.

EIL 215 TESL in the Secondary School credit: 3 Hours.

On-site practical experience in a secondary school, involving at least 100 hours of classroom observations, consultations, teaching, tutoring, and assisting, to acquaint students with the many facets of ESL/bilingual education in a public school setting. Hours to be arranged with the cooperating teacher. Satisfies one requirement for those who wish to obtain an Illinois ESL endorsement on an Illinois teaching certificate.

EIL 411 Intro to TESL Methodology credit: 3 or 4 Hours.

Introduction to TESL/TEFL, including the concept of "communicative competence" and its components; teaching contexts; current research on teaching second language skills; syllabus, lesson, and materials design; and classroom techniques. 3 undergraduate hours. 4 graduate hours.

EIL 422 Engl Grammar for ESL Teachers credit: 3 or 4 Hours.

Adaptation of modern English grammar to meet the needs of the ESL/EFL teacher, with special emphasis on the development of knowledge and skills that can be used in the analysis of the syntax, lexis and pragmatics of English. Same as ENGL 404. 3 undergraduate hours. 4 graduate hours.

EIL 445 Second Lang Reading & Writing credit: 3 or 4 Hours.

Introduces students to second language reading and writing, including theory, research, and practical application. 3 undergraduate hours. 4 graduate hours. May be taken concurrently with EIL 489 with consent of instructor. Prerequisite: Consent of instructor.

EIL 456 Lang and Social Interaction I credit: 3 or 4 Hours.

The course goals are to develop an understanding of the characteristics of naturally-occurring talk; several methodologies for collecting and studying it; the relationship of talk to human conduct, society and culture, including cross-cultural (mis)understanding; and to relate these insights to language learning, language teaching methodologies, and materials design. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

EIL 460 Principles of Language Testing credit: 3 or 4 Hours.

Studies theoretical and practical aspects of language testing. Examines purposes and types of language tests in relation to theories of language use and language teaching goals; discusses testing practices and procedures related to language teaching and language research; and includes the planning, writing, and administration of tests, basic descriptive statistics, and test analysis. A project is required. Same as EPSY 487, FR 460, GER 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: EIL 489 or consent of instructor.

EIL 486 Ling for Language Teachers credit: 3 or 4 Hours.

Introduction to linguistics for language teachers. Examines history and scope of linguistics, and introduces key elements of linguistic analysis with accompanying theoretical analyses of syntax, morphology, phonology, the lexicon, and pragmatics. Also covers the role of non-linguistic factors in communication and prioritizes the application of linguistics to instructed language learning settings. 3 undergraduate hours. 4 graduate hours.

EIL 487 Topics in Second Lang Studies credit: 2 or 4 Hours.

Topics on practical applications of second language studies for classroom practice. 2 or 4 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

EIL 488 English Phon & Morph for TESL credit: 3 or 4 Hours.

Applications of linguistics to language learning with special emphasis on learning the sound system of English. The course involves face-to-face and online instruction. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

ESL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ESL>)

English as a Second Language Courses**ESL 109 Academic Conversation Skills for International Students credit: 0 Hours.**

Introduction for international students to improve academic English speaking skills in class discussions and informal conversations with colleagues and instructors. Topics include participating in small group discussions, advising sessions, and small talk with colleagues. We will discuss and practice American English norms for agreeing and disagreeing, making requests and suggestions, apologizing, complaining, and complimenting within an academic setting. Approved for S/U grading only. May be repeated in separate terms.

ESL 110 English Pronunciation & Oral Fluency credit: 0 Hours.

Designed to improve the international student's ability to speak and understand English at normal conversational speed and to give the student the ability to continue improving pronunciation and oral fluency skills after the course is finished. Focus on the rhythm, stress, intonation, and sounds of natural speech and on fluency building strategies. Approved for S/U grading only. May be repeated in separate terms. Credit is not given toward an undergraduate degree. Prerequisite: Placement based on the speaking section score on the TOEFL or Placement based on English as a Second Language Placement Test (EPT) for undergraduate students without TOEFL or IELTS scores.

ESL 111 Intro to Academic Writing I credit: 3 Hours.

Introduction to the process of writing: fundamentals of paragraph development: analysis of rhetorical patterns: development of oral skills. This course is the first term of a two-term sequence (ESL 111-ESL 112) that fulfills the campus Composition I general education requirement. Credit is not given for both ESL 111 and ESL 115. Prerequisites: 111 placement result on the English Placement Test. This course satisfies the General Education Criteria for: Composition I

ESL 112 Intro to Academic Writing II credit: 3 Hours.

Continued instruction of the fundamentals of the multi-paragraph essay and introduction to research writing; instruction on basics of library research, synthesizing sources, and elements of style. This is the second term of a two-term sequence (ESL 111-ESL 112) that satisfies the campus Composition I general education requirement. Credit is not given for both ESL 112 and ESL 115. Prerequisite: Completion of ESL 111. This course satisfies the General Education Criteria for: Composition I

ESL 115 Principles of Academic Writing credit: 4 Hours.

Introduction to the research paper, including the writing process: pre-research, academic style and organization, and a variety of writing and skill-building tasks; development of peer and self-editing skills. ESL 115 fulfills the campus Composition I requirement for non-native speakers of English. Credit is not given for both ESL 115 and any other Comp I courses: RHET 101, RHET 102, RHET 103, RHET 104, RHET 105, CMN 111, CMN 112, ESL 111, ESL 112. Prerequisite: 115 placement result on the English Placement Test.

This course satisfies the General Education Criteria for: Composition I

HNDI Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HNDI>)

Hindi Courses**HNDI 115 Language and Culture in India credit: 3 Hours.**

Same as LING 115 and REL 115. See REL 115.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West

HNDI 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HNDI 201 Elementary Hindi-Urdu I credit: 5 Hours.

Introduction to the Hindi/Urdu language; includes conversation with a native Hindi/Urdu-speaking tutor under the direction of a linguist instructor, and a minimum of formal grammar and Devanagari writing; introduction to Arabic-Persian script by arrangement. Participation in the language laboratory is required.

HNDI 202 Elementary Hindi-Urdu II credit: 5 Hours.

Second term of spoken Hindi/Urdu; includes conversation with a native Hindi/Urdu-speaking tutor under the direction of a linguist instructor, formal grammar based on conversational materials, and work on written Hindi; concentration on written Urdu by arrangement. Participation in the language laboratory is required. Prerequisite: HNDI 201.

HNDI 403 Intermediate Hindi I credit: 4 Hours.

First term of second year of the Hindi language, including drill for more advanced conversational fluency; introduction to a greater variety of styles and levels of discourse and usage; and increasing study of the written language and more formal grammar. 4 undergraduate hours. 4 graduate hours. Prerequisite: HNDI 202 or equivalent.

HNDI 404 Intermediate Hindi II credit: 4 Hours.

Concentration on ability to engage in reasonably fluent discourse in Hindi, on comprehensive knowledge of formal grammar, and on ability to read ordinary texts in Hindi. 4 undergraduate hours. 4 graduate hours. Prerequisite: HNDI 403 or equivalent.

HNDI 405 Advanced Hindi I credit: 3 Hours.

Course for advanced knowledge of spoken and written Hindi. Participation in the language laboratory is required. 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 404 or consent of instructor.

HNDI 406 Advanced Hindi II credit: 3 Hours.

Course for advanced knowledge of spoken and written Hindi with emphasis on modern Hindi literature and language. Participation in the language laboratory is required. 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 405 or consent of instructor.

HNDI 408 Intro to South Asian Lit credit: 3 Hours.

Introduces selected literatures of South Asia in a cross-cultural and comparative perspective: emphasizes relating literary texts and trends to the historical, sociocultural, political, and literary contexts of the subcontinent. Texts for South Asian languages are offered in English translation; in addition, there will be texts by South Asian authors written in English. Knowledge of a South Asian language not required. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of course coordinator.

HNDI 412 Business Hindi credit: 3 Hours.

Study and analysis of Business Hindi in a wide variety of contexts and settings (from Metropolitan to rural). 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 403 or higher or consent of instructor.

LGLA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LGLA>)

Lingala Courses

LGLA 201 Elementary Lingala I credit: 5 Hours.

Introduction to Lingala; emphasizes grammar, pronunciation, reading and conversation in standard Lingala. Participation in language laboratory required. Same as AFST 211.

LGLA 202 Elementary Lingala II credit: 5 Hours.

Continuation of elementary Lingala, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Lingala. Same as AFST 212. Participation in language laboratory required. Prerequisite: LGLA 201.

LGLA 403 Intermediate Lingala I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, composition skills, study of written texts in the standard and spoken Lingala dialects, and discussion of grammatical variations. Same as AFST 413. 4 undergraduate hours. 4 graduate hours. Prerequisite: LGLA 202.

LGLA 404 Intermediate Lingala II credit: 4 Hours.

Continuation of LGLA 403. Emphasizes ability to engage in reasonably fluent discourse in Lingala, comprehensive knowledge of formal grammar, and ability to read ordinary texts in various Lingala dialects. Same as AFST 414. 4 undergraduate hours. 4 graduate hours. Prerequisite: LGLA 403.

LGLA 405 Advanced Lingala I credit: 3 Hours.

Third-year Lingala with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and Central African cultural materials, in at least two Lingala varieties. Course will also deal with the advanced level grammar found in such texts. Same as AFST 415. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 404 or equivalent.

LGLA 406 Advanced Lingala II credit: 3 Hours.

Continuation of LGLA 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. Same as AFST 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 405 or equivalent.

LGLA 407 Topics Lingala Lang & Lit I credit: 3 Hours.

Selected readings from modern Lingala authors and composers, with a focus on novels, plays, music, and basic poetry illustrative of Central African cultural issues and advanced level Lingala grammar, as well as development of expository writing skills. Same as AFST 417. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 406.

LGLA 408 Topics Lingala Lang & Lit II credit: 3 Hours.

Continuation of LGLA 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 418. Prerequisite: LGLA 407.

LING Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LING>)

Linguistics Courses

LING 100 Intro to Language Science credit: 3 Hours.

Introduction to the theory and methodology of general linguistics; includes the various branches and applications of linguistics. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 104 Talking Culture credit: 3 Hours.

Same as ANTH 104. See ANTH 104. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 105 Language in Daily Life credit: 3 Hours.

Analysis of what constitutes knowledge of language, how it is used in daily life, and how speakers are perceived by others. Emphasis on discovering what makes language function as it does through an examination of its forms and functions in real life. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 110 Cultural Experiences of the Muslim World credit: 0 Hours.
Explores the languages and cultures of the Muslim world through different co-curricular activities. Students will acquire a higher proficiency of the target language and exposure to other languages that are spoken within this region. They will expand their knowledge and gain a better understanding of the target culture as well as of those in the Muslim world. Only offered in conjunction with the Summer Institute for Languages of the Muslim World. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated if SILMW language course varies.

LING 111 Language in Globalization credit: 3 Hours.
Introduction to the role of language in globalization by examining communication issues concerning language use across cultural, political and geographic boundaries. Explores the interaction of language and other cultural forms in the global context. Among the topics discussed are issues of identity, spread of English and its acculturation to local contexts of use, creativity in language mixing, language in global pop cultures, language in cyberspace, as well as minority language experiences, and loss of indigenous languages. This course can be used to fulfill either Western or Nonwestern general education categories, but not both.
This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Cultural Studies - Western

LING 115 Language and Culture in India credit: 3 Hours.
Examines the relationship between language and culture in the multilingual and multicultural context of India. Special topics of focus are: linguistic and cultural diversity in India, impact of the language and cultural contact on the structure and function of languages (convergence, diglossia, code-mixing, pidgins and creoles), language and identity, language of religion, language and gender, language in the media, literature and culture, language and power, language and globalization. Same as HNDI 115 and REL 115.
This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

LING 191 Freshman Honors Tutorial credit: 1 to 3 Hours.
Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated once. Prerequisite: Consent of departmental honors advisor.

LING 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

LING 210 Language History credit: 3 Hours.
Addresses the question "Why does language change?" Specific topics include: the history and origin of writing; why pronunciation changes; change in vocabulary and what it tells us about change in culture and society; the relation between "language" and "dialect"; multilingualism and its consequences, including Pidgins and Creoles; genetic relationship between languages, with focus on the "Indo-European" family (English, German, French, Russian, Latin, Greek, and Sanskrit, etc.) and the relationships between human languages. Prerequisite: Fulfillment of the foreign language requirement of the College of Liberal Arts and Sciences. This course satisfies the General Education Criteria for:
Humanities - Hist Phil

LING 221 American Sign Language II credit: 4 Hours.
Same as SHS 221. See SHS 221.

LING 225 Language, Mind, and Brain credit: 3 Hours.
Introduction to the theory and methodology of psycholinguistics with emphasis on language acquisition and linguistic behavior. This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

LING 240 Language in Human History credit: 3 Hours.
Role of language in the life of nations as a tool of communication, as a symbol of identity, and as a means of power. Scripts and orthographies, language planning, culture and language glossopolitics. Prerequisite: Three years of high school foreign language study or fulfillment of the foreign language requirement of Liberal Arts and Sciences. This course satisfies the General Education Criteria for:
Humanities - Hist Phil

LING 250 Language Diversity in the USA credit: 3 Hours.
Investigation of the uses and users of different language varieties - English and non-English - as well as issues of language discrimination, gender/race/class, youth culture, and new communication technologies. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

LING 270 Language, Technology & Society credit: 3 Hours.
What technologies have humans developed to augment the quintessential human ability: language? We start with the development of writing, the first technology that was specifically designed for language, and trace its history through the invention of printing, and into the digital age. With the advent of computers the relevance of language for technology has broadened significantly. We review technologies such as automatic speech recognition, speech synthesis and automatic translation, and discuss their implications for present and future human-machine interaction. Prerequisite: LING 100 or consent of instructor. This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci
Cultural Studies - Western

LING 290 Individual Study credit: 1 to 4 Hours.
Individual readings and research reports on special topics dealing with the theoretical or applied aspects of the linguistic sciences. May be repeated to a maximum of 8 hours. Prerequisite: Written consent of instructor.

LING 291 Linguistics Laboratory Research Experience credit: 1 to 3 Hours.
Supervised participation in laboratory or other research, usually as an assistant to a senior researcher. May be repeated up to a maximum of 9 hours. Prerequisite: Consent of instructor.

LING 300 Anat & Physiol Spch Mechanism credit: 4 Hours.
Same as SHS 300. See SHS 300.

LING 301 Elements of Syntax credit: 3 Hours.
Introduction to concepts and techniques essential for syntactic analysis and description, with special attention to testing analyses and justifying them. Prerequisite: LING 100 or consent of instructor. This course satisfies the General Education Criteria for:
Advanced Composition

LING 302 Elements of Phonology credit: 3 Hours.
Introduces elements of phonological theory and data analysis. Emphasis is placed on both Structuralist and Generative theories, introducing students to the principles of phonological contrast, allophony, neutralization, and markedness. Formal phonological models are considered, including both distinctive feature theory and prosodic theory. Equal emphasis is placed on linguistic data analysis. Prerequisite: LING 100 or consent of instructor.

LING 303 General Speech Science credit: 4 Hours.

Same as SHS 301. See SHS 301.

LING 304 Elements of Morphology credit: 3 Hours.

An introduction to the concepts and methods of morphology, the linguistic study of word formation. We examine the smallest units of word structure—how they are arranged and organized, and how they interact with sentence structures (syntax) and sound patterns (phonology). Students will consider data from many different languages, and investigate how those languages are similar and different in terms of how they form their words. Prerequisite: LING 100.

LING 307 Elements Semantics & Pragmatics credit: 3 Hours.

Introduction to the theory of meaning for natural language, including techniques for the description of lexical meaning, compositional determination of phrase and sentence meaning, and pragmatic effects on interpretation in context. Same as PHIL 307. Prerequisite: LING 100 or consent of instructor.

LING 321 American Sign Language III credit: 4 Hours.

Same as SHS 321. See SHS 321.

LING 357 Intro to Conversation Analysis credit: 3 Hours.

Analysis of everyday conversation and talk in institutional settings, including basic organizational features of talk such as turn-taking, sequences of actions, openings and closings, and repair; ways that participants use talk to perform social actions such as complimenting, inviting, arguing, blaming, and apologizing; and ways that talk is used in professional settings such as 911 emergency calls, courtroom interactions, and doctor-patient interviews to perform the work of these social institutions. Same as CMN 357.

LING 391 Honors Individual Study credit: 2 to 4 Hours.

Study and research for honors thesis; open only to seniors in the linguistics major who are eligible for departmental distinction. May be repeated to a maximum of 8 hours. Prerequisite: Written consent of instructor and linguistics course average of 3.4.

LING 400 Intro to Linguistic Structure credit: 3 or 4 Hours.

Introduction to the theory and methodology of the science of linguistics with special reference to phonology, morphology, syntax and semantics. Not intended for undergraduate majors in linguistics. 3 undergraduate hours. 4 graduate hours.

LING 401 Intro to General Phonetics credit: 3 or 4 Hours.

Introduction to the main branches of general phonetics and phonological theory; emphasis on analysis of non-Western languages and research techniques. 3 undergraduate hours. 4 graduate hours.

LING 402 Tools & Tech Spch & Lang Proc credit: 3 Hours.

Introduction to aspects of the tools and methods of studies in speech and natural language processing (NLP), with a focus on programming for NLP and speech applications, statistical methods for data analysis, and tools for displaying and manipulating speech data. 3 undergraduate hours. 3 graduate hours.

LING 404 Tutorials in Non-Western Lang credit: 1 to 5 Hours.

Advanced or intensive language instruction in a selected non-Western language; excludes instruction in East or Southeast Asian languages. 1 to 5 undergraduate hours. 2 to 4 graduate hours. May be repeated with approval. Prerequisite: Consent of instructor.

LING 406 Intro to Computational Ling credit: 3 or 4 Hours.

Introduces the field of natural language processing and computational linguistics. Topics include finite-state methods, parsing, probabilistic methods, machine learning in NLP, computational semantics and applications of NLP technology. The course is mostly about concepts rather than programming, though some programming assignments will be given. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 402 or a 100-level computer science programming course, or consent of instructor.

LING 407 Logic and Linguistic Analysis credit: 3 or 4 Hours.

Introduction to the theory of logic as applied in linguistic analysis. Same as PHIL 407. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate students: LING 307 or equivalent background with consent of instructor.

LING 410 Historical Linguistics credit: 2 to 4 Hours.

Introduction to historical and comparative linguistics with particular attention to theoretical issues. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: LING 401 (or concurrent registration), and either LING 301 and LING 302, or LING 400.

LING 412 Lang in African Culture & Soc credit: 3 or 4 Hours.

Introductory survey of the role of language in African cultures and societies, with particular emphasis on the study of indigenous African languages in multilingual settings, their spread, and use as media of communication in various domains, and as tools of development. Same as AFST 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFST 222 or consent of instructor.

LING 415 Machine Translation: History and Applications credit: 3 or 4 Hours.

Same as TRST 415. See TRST 415.

LING 416 Structure of French Language credit: 3 Hours.

Same as FR 416. See FR 416.

LING 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

LING 420 Intro to African Linguistics credit: 3 or 4 Hours.

Introduction to the genetic and typological classification of the main language families of Africa; concentration on grammatical and phonological characteristics. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 100 or LING 400; consent of instructor.

LING 423 Language Acquisition credit: 3 or 4 Hours.

Same as MACS 423 and PSYC 423. See PSYC 423.

LING 425 Intro to Psycholinguistics credit: 3 or 4 Hours.

Introductory survey of psychological and linguistic approaches to the study of communication. Same as MACS 425. 3 undergraduate hours. 4 graduate hours. Credit is not given for both LING 425 and PSYC 425. Prerequisite: An introductory course in linguistics or psychology.

LING 426 Child & Adult Lang Acquisition credit: 3 or 4 Hours.

The study of first and second language acquisition by children and adults. Course topics will include the following: first language acquisition, including signed and spoken languages; bilingualism and second language acquisition; the comparison of monolingual and bilingual language development. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory course in linguistics or psychology.

LING 427 Language and the Brain credit: 3 or 4 Hours.

Same as PSYC 427 and SHS 427. See SHS 427.

LING 430 Intro to East Asian Ling credit: 3 or 4 Hours.

Introduction to the genetic relation of the Far Eastern languages with other languages; concentration on synchronic analysis of phonology and syntax. Same as EALC 430. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 400; consent of instructor.

LING 432 Gender and Language credit: 3 or 4 Hours.

Same as CMN 432 and GWS 432. See CMN 432.

LING 438 Philosophy of Language credit: 3 or 4 Hours.

Same as PHIL 438. See PHIL 438.

LING 450 Sociolinguistics I credit: 2 to 4 Hours.

Introduction to the fundamental concepts, philosophy, and research methods of the study of language in its social contexts. Special attention to language spread, and language variation; language attitudes; language diversity; code-switching; language standardization; and language identity and loyalty. 3 undergraduate hours. 2 or 4 graduate hours.

LING 462 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, ITAL 435, PORT 435, RMLG 435, and SPAN 435. See SPAN 435.

LING 469 Structure of Semitic Languages credit: 3 or 4 Hours.

In-depth survey of comparative issues in Semitic Linguistics, with particular emphasis on morphology, syntax, phonology and language change from the perspectives of current linguistic theories. Same as AFST 469. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 100, LING 400, or consent of instructor.

LING 480 Intro to Slavic Linguistics credit: 3 or 4 Hours.

Same as SLAV 480. See SLAV 480.

LING 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

General introduction to second language acquisition (SLA) theory. Examines nativist, interactionist and cognitive approaches to SLA and explores the role of learner characteristics. Same as FR 481, GER 489, ITAL 489, PORT 489, and SPAN 489. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory course in linguistics or consent of instructor.

LING 490 Special Topics in Linguistics credit: 3 or 4 Hours.

Course provides an opportunity to focus on various subfields of the linguistic sciences, depending on the interests of the faculty and student. 3 undergraduate hours. 4 graduate hours. May be repeated as topic varies to a maximum of 9 undergraduate hours or 12 graduate hours. Students may register for up to two sections in the same term. Prerequisite: LING 100, LING 400, or consent of instructor.

PERS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PERS>)

Persian Courses**PERS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

May be repeated.

PERS 201 Elementary Persian I credit: 5 Hours.

Introduction to Persian, including conversation with a native speaker under the direction of a linguist-instructor, and a minimum of formal grammar and writing.

PERS 202 Elementary Persian II credit: 5 Hours.

Continuation of PERS 201, with introduction of more advanced grammar and with emphasis on more fluency in speaking and reading. Prerequisite: PERS 201 or equivalent.

PERS 403 Intermediate Persian I credit: 4 Hours.

General review of the essentials of grammar, selected reading of materials emphasizing Iranian life and culture, compositions, and practice in speech. 4 undergraduate hours. 4 graduate hours. Prerequisite: PERS 202.

PERS 404 Intermediate Persian II credit: 4 Hours.

General review of the essentials of grammar, selected reading of materials emphasizing Iranian life and culture, compositions, and practice in speech. 4 undergraduate hours. 4 graduate hours. Prerequisite: PERS 403.

PERS 453 Advanced Persian I credit: 3 or 4 Hours.

Students will develop the ability to read and understand paragraph level text, expand on their oral skills, continue to refine Persian writing skills and expand knowledge on Persian-speaking cultures. 3 undergraduate hours. 4 graduate hours. Prerequisite: PERS 403 and PERS 404; or consent of Persian Studies Program Director (determined after placement test taken by student).

PERS 454 Advanced Persian II credit: 3 or 4 Hours.

Continuation of PERS 453. Students will become independent users of the language by studying more complex structures and contexts such as stories, news reports and movies. Students will also learn details of Persian grammar and apply them in written tasks. 3 undergraduate hours. 4 graduate hours. Prerequisite: PERS 453; or consent of Persian Studies Program Director (determined after placement test taken by student).

SNSK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SNSK>)

Sanskrit Courses**SNSK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

May be repeated.

SNSK 201 Elementary Sanskrit I credit: 4 Hours.

Introduction to Sanskrit, treating in full the grammar of the language as preparation for reading.

SNSK 202 Elementary Sanskrit II credit: 4 Hours.

Continuation of SNSK 201. Prerequisite: SNSK 201.

SNSK 403 Readings in Sanskrit I credit: 3 or 4 Hours.

Introduction to the reading of Sanskrit texts. Same as REL 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: SNSK 202.

SNSK 404 Readings in Sanskrit II credit: 3 or 4 Hours.

Readings in Sanskrit texts. Topics may vary according to students' needs; they may include religious texts, classical literature, or a general survey of texts. Same as REL 413. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: SNSK 403 and consent of instructor.

SWAH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SWAH>)

Swahili Courses**SWAH 201 Elementary Swahili I credit: 5 Hours.**

Beginning standard Swahili; emphasizes grammar, pronunciation, reading and conversation in standard Swahili. Same as AFST 231. Participation in language laboratory required.

SWAH 202 Elementary Swahili II credit: 5 Hours.

Continuation of elementary Swahili, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Swahili. Same as AFST 232. Participation in language laboratory required. Prerequisite: SWAH 201.

SWAH 403 Intermediate Swahili I credit: 4 Hours.

Second-year Swahili with emphasis on developing conversational fluency; some readings on Swahili culture and customs. Same as AFST 433. 4 undergraduate hours. 4 graduate hours. Prerequisite: One year of Swahili.

SWAH 404 Intermediate Swahili II credit: 4 Hours.

Continuation of SWAH 403; emphasis on the development of appropriate reading, writing, speaking, and comprehension skills in Standard Swahili, and understanding of East African culture. Same as AFST 434. 4 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 403 or equivalent.

SWAH 405 Advanced Swahili I credit: 3 Hours.

Third-year Swahili with emphasis on conversational fluency and on increased facility in reading Swahili texts, including current newspaper prose and (East) African culture materials. Same as AFST 435. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 404 or equivalent.

SWAH 406 Advanced Swahili II credit: 3 Hours.

Third-year Swahili with emphasis on conversational fluency and on increased facility in reading Swahili texts, including current newspaper prose and (East) African culture materials. Same as AFST 436. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 405 or equivalent.

SWAH 407 Topics Swahili Lang & Lit I credit: 3 Hours.

Selected readings from modern Kiswahili authors, with a focus on novels, plays, and basic poetry illustrative of East African cultural issues and advanced level Kiswahili grammar, as well as development of expository writing skills. Same as AFST 405. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 406.

SWAH 408 Topics Swahili Lang & Lit II credit: 3 Hours.

Continuation of SWAH 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 406. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 407.

SWAH 409 Adv Topics Swahili Lang&Lit I credit: 3 or 4 Hours.

Introduction to Kiswahili in the professions as documented in selected newspapers, educational radio and TV programs, works of fiction, biographies, anthologies, and professional journals. Students will be introduced to argumentative writing in Kiswahili, expected to make oral presentations, and to write a research paper in their field. Same as AFST 407. 3 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 408.

SWAH 410 Adv Topics Swahili Lang&Lit II credit: 3 or 4 Hours.

Continuation of SWAH 409 with increased emphasis on the development of comprehension and writing of professional language. Same as AFST 408. 3 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 409.

TURK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TURK>)

Turkish Courses**TURK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.**

Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 10 hours.

TURK 201 Elementary Turkish I credit: 5 Hours.

Mastery of Turkish alphabet and phonetics; elementary formal grammar and the development of reading and writing skills; and conversation in the formal noncolloquial style. Participation in the laboratory is required.

TURK 202 Elementary Turkish II credit: 5 Hours.

Continuation of TURK 201, with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Turkish. Participation in the language laboratory required. Prerequisite: TURK 201 or equivalent.

TURK 403 Intermediate Turkish I credit: 4 Hours.

Continuation of TURK 202; emphasis on the development of appropriate reading, writing, speaking, and comprehension skills in Standard and Colloquial Turkish, with increased attention to ordinary written texts. 4 undergraduate hours. 4 graduate hours. Prerequisite: TURK 202 or equivalent.

TURK 404 Intermediate Turkish II credit: 4 Hours.

Continuation of TURK 403; emphasis on the development of better receptive and productive language skills in Standard and Colloquial Turkish, with increased attention to both written and spoken texts. 4 undergraduate hours. 4 graduate hours. Prerequisite: TURK 403 or equivalent.

TURK 405 Advanced Turkish I credit: 3 Hours.

Third-year Turkish with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and Turkish cultural materials. Course will also deal with the advanced level grammar found in such texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: TURK 404 or equivalent.

TURK 406 Advanced Turkish II credit: 3 Hours.

Continuation of TURK 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. 3 undergraduate hours. 3 graduate hours. Prerequisite: TURK 405 or equivalent.

TURK 490 Special Topics in Turkish credit: 2 to 4 Hours.

Provides an opportunity to focus on various aspects of Turkish language, culture, and society. 2 to 4 undergraduate hours. 2 to 4 graduate hours. Approved for letter and S/U grading. May be repeated in separate terms.

WLOF Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/WLOF>)

Wolof Courses**WLOF 201 Elementary Wolof I credit: 5 Hours.**

Introduction to Wolof; emphasizes grammar, pronunciation, reading, and conversation in standard Wolof. Same as AFST 241. Participation in language laboratory required.

WLOF 202 Elementary Wolof II credit: 5 Hours.

Continuation of elementary Wolof, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Wolof. Same as AFST 242. Prerequisite: WLOF 201. Participation in language laboratory required.

WLOF 403 Intermediate Wolof I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, composition skills, study of written texts in standard and Dakar Wolof, and discussion of grammatical variations. Same as AFST 443. 4 undergraduate hours. 4 graduate hours. Prerequisite: WLOF 202.

WLOF 404 Intermediate Wolof II credit: 4 Hours.

Continuation of WLOF 403. Emphasizes ability to engage in reasonably fluent discourse in Wolof, comprehensive knowledge of formal grammar, and ability to read ordinary texts in standard and Dakar Wolof. Same as AFST 444. 4 undergraduate hours. 4 graduate hours. Prerequisite: WLOF 403.

WLOF 405 Advanced Wolof I credit: 3 Hours.

Third year Wolof with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and West African cultural materials. Course will also deal with the advanced level grammar found in such texts. Same as AFST 445. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 404 or equivalent.

WLOF 406 Advanced Wolof II credit: 3 Hours.

Continuation of WLOF 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. Same as AFST 446. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 405 or equivalent.

WLOF 407 Topics Wolof Lang & Lit I credit: 3 Hours.

Selected readings from modern Wolof authors, with a focus on novels, plays, and basic poetry illustrative of West African cultural issues and advanced level Wolof grammar, as well as development of expository writing skills. Same as AFST 447. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 406.

WLOF 408 Topics Wolof Lang & Lit II credit: 3 Hours.

Continuation of WLOF 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 448. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 407.

ZULU Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ZULU>)

Zulu Courses

ZULU 201 Elementary Zulu I credit: 5 Hours.

Introduction to Zulu; emphasis on grammar, pronunciation, reading and conversation in standard Zulu. Same as AFST 251. Participation in the language laboratory is required.

ZULU 202 Elementary Zulu II credit: 5 Hours.

Continuation of ZULU 201 with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Zulu. Same as AFST 252. Participation in the language laboratory is required. Prerequisite: ZULU 201.

ZULU 403 Intermediate Zulu I credit: 4 Hours.

Survey of more advanced grammar; emphasis on increasing conversational fluency, composition skills, study of written texts in standard Zulu and discussions of grammatical variations. Same as AFST 451. 4 undergraduate hours. 4 graduate hours. Prerequisite: ZULU 202.

ZULU 404 Intermediate Zulu II credit: 4 Hours.

Continuation of ZULU 403; emphasis on increasing conversational fluency, composition skills, study of written texts in the standard and spoken Zulu dialects, and discussion of grammatical variations. Same as AFST 452. 4 undergraduate hours. 4 graduate hours. Prerequisite: ZULU 403.

ZULU 405 Advanced Zulu I credit: 3 Hours.

Third year Zulu with emphasis on conversational fluency and on increased facility in reading, comprehension, writing in response to authentic Zulu texts such as those documented in selected newspapers, magazines, and South African cultural materials. Same as AFST 453. 3 undergraduate hours. 3 graduate hours. Prerequisite: ZULU 404.

ZULU 406 Advanced Zulu II credit: 3 Hours.

Continuation of ZULU 405 with increased emphasis on conversational fluency and increased facility in reading and comprehending authentic literary texts including prose and cultural materials from South Africa. Same as AFST 454. 3 undergraduate hours. 3 graduate hours. Prerequisite: ZULU 405.

Minor in Arabic Studies

The minor in Arabic Studies is designed for students interested in developing an expertise in one, or more, aspect of the Arab World, as complement to their disciplinary major. Completion of the minor requires at least 18 hours in applicable courses. For advising information please visit the Linguistics advising page (<http://www.linguistics.illinois.edu/students/undergrad/advising.html>).

Code	Title	Hours
Language requirement		6
ARAB 405	Advanced Standard Arabic I	
ARAB 406	Advanced Standard Arabic II	
Arabic Culture and Linguistics courses		6
Choose two courses from the following in consultation with the advisor: ARAB 150- Lang;Culture of Arab World OR ARAB 210: Colloquial Arabic I OR ARAB 412: Business Arabic OR a Study Abroad Equivalent (must be approved by the advisor)		
Two Interdisciplinary courses related to the Arab World (To be chosen from the following list in consultation with the advisor)		6
ARAB 407	Topics Stand Arabic Lang&Lit I	
ARAB 408	Topics Stand Arabic LangLit II	
ARAB 409	Adv Top Stand Arabic LangLit I	
ARAB 410	AdvTop Stand Arabic LangLit II	
ARAB 413	Arabic-English Translation	
CWL 205	Islam & West Through Lit	
CWL 481	Topics in Arabic Literature & Culture	
HIST 135	History of Islamic Middle East	
HIST 334	Modern Palestinian History	
HIST 335	Middle East 1566-1914	
HIST 337	Middle East Since World War I	
HIST 438	Egypt Since World War I	
PS 347	Gov & Pol of Middle East	
REL 213	Intro to Islam - ACP	
REL 214	Introduction to Islam	
REL 223	The Qur'an (Koran)	
REL 260	Mystics and Saints in Islam	
REL 403	Women in Muslim Societies	
REL 408	Islam & Politics in Mid. East	
REL 481	Muslim Ethics in Global Age	

REL 482	Muslim-Christian Interactions	
Total Hours		18

Minor in English as a Second Language

This minor, sponsored by the Department of Linguistics, prepares a student to teach English overseas and in contexts other than U.S. public schools. Completion of the minor fulfills the course work requirement for a Certificate in Teaching English as a Second Language (TESL). To receive a Certificate in TESL and a letter of completion from the department, the student must apply for the Certificate after completing all certificate requirements. Students must declare their minor at the start of their study. The Certificate in TESL does not lead to ISBE State certification for K-12 Schools.

For advising information please visit the Linguistics advising page.

Code	Title	Hours
Introduction to Linguistics (select one of the following)		3
LING 100	Intro to Language Science	
LING 400	Intro to Linguistic Structure	
EIL 487	Topics in Second Lang Studies	
LING 489	Theoretical Foundations of SLA	3
EIL 411	Intro to TESL Methodology	3
Select three of the following:		9
EIL 422	Engl Grammar for ESL Teachers	
EIL 445	Second Lang Reading & Writing	
EIL 456	Lang and Social Interaction I	
EIL 460	Principles of Language Testing	
EIL 488	English Phon & Morph for TESL	
Total Hours		18

Minor in Hindi Studies

The minor in Hindi Studies is designed for students interested in receiving training in processing and using Hindi in a wide variety of authentic (from informal to institutional) contexts. Students will be encouraged to read authentic Hindi material from different genres and registers (including Hindi print media). Completion of the minor requires at least 19 hours in applicable courses. For advising information please visit the Linguistics advising page.

Code	Title	Hours
Hindi language requirement		10
HNDI 404	Intermediate Hindi II	
HNDI 405	Advanced Hindi I	
HNDI 406	Advanced Hindi II	
Two courses in Indian Linguistics/sociolinguistics (to be chosen from the following list in consultation with advisor)		6
LING 115	Language and Culture in India	
HNDI 412	Business Hindi	
LING 111	Language in Globalization	
One historically significant language course related to Modern Hindi or a course on Indian/South Asian Literature		3-5
SNSK 201	Elementary Sanskrit I	
SNSK 202	Elementary Sanskrit II	

ARAB 201	Elementary Standard Arabic I
ARAB 202	Elementary Standard Arabic II
PERS 201	Elementary Persian I
PERS 202	Elementary Persian II
HNDI 408	Intro to South Asian Lit

Students with prior knowledge of any of the languages mentioned above can also meet the 3-5 credit requirement by taking upper level courses of the languages.

Total Hours	19-21
-------------	-------

Minor in Linguistics

The Linguistics Minor is designed for students who seek a basic familiarity with the field and is especially suited for students with majors in foreign language and other language-related fields such as anthropology, computer science, English, psychology, communication, and for anyone interested in the nature of language.

For advising information please visit the Linguistics advising page.

Code	Title	Hours
LING 100	Intro to Language Science	3
Select two of the following:		6
LING 301	Elements of Syntax	
LING 302	Elements of Phonology	
LING 307	Elmnts Semantics & Pragmatics	
Nine additional hours of linguistics courses, including at least six hours chosen from the following:		9
LING 301	Elements of Syntax (if not chosen for the second requirement above)	
LING 302	Elements of Phonology (if not chosen for the second requirement above)	
LING 307	Elmnts Semantics & Pragmatics (if not chosen for the second requirement above)	
LING 210	Language History	
LING 225	Language, Mind, and Brain	
LING 250	Language Diversity in the USA	
LING 400	Intro to Linguistic Structure	
LING 401	Intro to General Phonetics	
LING 406	Intro to Computational Ling	

Minor in Sub-Saharan African Languages

The minor in Sub-Saharan African Languages is designed for students who are interested in developing proficiency in any one of the languages for which there is faculty expertise, and to develop their understanding of the region, as a complement to their disciplinary major. Available African Languages include: Bamana, Lingala, Swahili, Wolof and Zulu. Completion of the minor requires at least 18 hours.

For advising information please visit the Linguistics advising page.

Code	Title	Hours
Language		6
Advanced African Language courses beyond the second year courses chosen in consultation with the minor advisor. Only one African Language can be chosen to fulfill this requirement.		
African Linguistics		6
3 hours: Introductory course chosen from the following:		
LING 100	Intro to Language Science	
LING 400	Intro to Linguistic Structure	
3 hours: 300 or 400-level course chosen from the following:		
LING 412	Lang in African Culture & Soc	
LING 420	Intro to African Linguistics	
A similar course at the 300- or 400-level approved by the advisor		
African Studies		6
Courses must be selected in consultation with the advisor.		
One course chosen from the list of approved introductory courses; and		
One course chosen from the list of approved courses at the 300 or 400-level.		
Note that many courses on the list require a prerequisite such as AFST 222 or HIST 110.		
Total Hours		18

Teacher Education Minor in English as a Second Language

For those in another teacher education curriculum who want to prepare themselves to gain an ESL approval on their teacher's certificate related to their major field. Teacher education minors are available only to students seeking to add additional teaching fields to their teaching majors.

Students are advised that additional course work is necessary to teach middle grades six through eight. Consult the certification officer at 505 East Green suite 203 for additional information. For advising information please visit the Linguistics advising page.

Code	Title	Hours
Select one of the following:		2
EIL 214	TESL in the Elementary School	
EIL 215	TESL in the Secondary School	
EIL 422	Engl Grammar for ESL Teachers	3
EIL 411	Intro to TESL Methodology	3
Select one of the following:		3
EIL 456	Lang and Social Interaction I	
CI 446	Culture in the Classroom	
EIL 460	Principles of Language Testing	3
EIL 488	English Phon & Morph for TESL	3
LING 489	Theoretical Foundations of SLA	3
LING 100	Intro to Language Science	3
Total Hours		23

Mathematics

Sheldon Katz, Interim Department Chair
273 Altgeld Hall, 1409 West Green, Urbana
PH: (217) 333-3350
<http://math.illinois.edu>

Mathematics is a broad discipline that contains a range of areas of specialization within it. The required core courses provide fundamental background for mathematics in general. The concentrations allow the student to broaden this background or begin to specialize. Students must complete the core courses and a concentration.

An entering student in mathematics should have academic preparation to enroll in MATH 220 during the first semester. Admission to MATH 220 requires an acceptable ALEKS score. A student should attain grades of B in calculus in order to complete the advanced courses successfully.

The Department of Mathematics sponsors the Mathematics major, including the Teaching of Mathematics concentration; the Mathematics minor; Teacher Education Minor in Math, Grades 9-12; the Actuarial Science (p. 502) major; and a major in Mathematics and Computer Science (p. 505) in coordination with the Department of Computer Science.

The Department of Mathematics offers the following majors:

Actuarial Science (p. 502)- an interdisciplinary subject involving mathematics, statistics, and financial economics. It is designed to prepare students to enter the actuarial profession, as well as to provide a background in quantitative finance and risk management.

Mathematics- Students must select a concentration in consultation with their adviser:

- Mathematics Concentration (p. 504)
- Graduate Preparatory Concentration (p. 503)
- Applied Mathematics Concentration (p. 503)
- Operations Research Concentration (p. 506)
- Teaching of Mathematics Concentration (p. 507)

Mathematics and Computer Science (p. 505)-Prepares students for professional or graduate work in mathematics and computer science.

- Minor in Mathematics (p. 505)
- Teacher Education Minor in Mathematics, Grades 9-12 (p. 507)

MATH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MATH>)

Courses

MATH 002 Introductory Algebra credit: 3 Hours.

Methods of elementary algebra, including simplification of algebraic expressions, solving linear and quadratic equations, equations of lines, systems of linear equations, and radicals. Approved for Letter and S/U grading. Enrollment is restricted. Credit may not be used toward graduation at the University of Illinois. Prerequisite: Score on appropriate placement test, or consent of Mathematics Department.

MATH 101 Thinking Mathematically credit: 3 Hours.

Designed for students in majors that do not specifically require a mathematics course beyond the level of precalculus. Focus is on critical thinking and applications. All topics are covered from a contextual standpoint. Topics include proportional reasoning and modeling, functions, sets, consumer math, probability, and statistics. Other topics may be covered as time permits. Prerequisite: Three years of high school mathematics. Undergraduates only.

MATH 103 Theory of Arithmetic credit: 4 Hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades K-5. Topics include sets, arithmetic algorithms, elementary number theory, rational and irrational numbers, measurement, and probability. There is an emphasis on problem solving. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary or childhood education. Prerequisite: MATH 112 (formerly MATH 012) or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 112 Algebra credit: 3 Hours.

Rapid review of basic techniques of factoring, rational expressions, equations and inequalities; functions and graphs; exponential and logarithm functions; systems of equations; matrices and determinants; polynomials; and the binomial theorem. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of 1.5 units of high school algebra and 1 unit of high school geometry.

MATH 114 Trigonometry credit: 2 Hours.

Studies degrees and radians, the trigonometric functions, identities and equations, inverse functions, oblique triangles and applications. Credit is not given for MATH 114 and either MATH 014 or MATH 115. Prerequisite: 1.5 units of high school algebra; 1 unit of high school geometry.

MATH 115 Preparation for Calculus credit: 3 Hours.

Reviews trigonometric, rational, exponential, and logarithmic functions; provides a full treatment of limits, definition of derivative, and an introduction to finding area under a curve. Intended for students who need preparation for MATH 220, either because they lack the content background or because they are not prepared for the rigor of a university calculus course. Credit is not given for both MATH 115 and either MATH 014 or MATH 114. Credit is not given for MATH 115 if credit for either MATH 220 or MATH 221 has been earned. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of the topics of MATH 112. This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 117 Elementary Mathematics credit: 4 Hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades 6-8. Topics include the Real number system and field axioms, sequences and series, functions and math modeling with technology, Euclidean and non-Euclidean geometry, probability and statistics. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary education. Prerequisite: MATH 112 (formerly MATH 012) or equivalent.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 119 Ideas in Geometry credit: 3 Hours.

General education course in mathematics, for students who do not have mathematics as a central part of their studies. The goal is to convey the spirit of mathematical thinking through topics chosen mainly from plane geometry. Prerequisite: Two units of high school algebra; one unit of high school geometry; or equivalent.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 124 Finite Mathematics credit: 3 Hours.

Introduction to finite mathematics for students in the social sciences; introduces the student to the basic ideas of logic, set theory, probability, vectors and matrices, and Markov chains. Problems are selected from social sciences and business. Prerequisite: MATH 112 (formerly MATH 012) or an adequate ALEKS score.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 125 Elementary Linear Algebra credit: 3 Hours.

Basic concepts and techniques of linear algebra; includes systems of linear equations, matrices, determinants, vectors in n-space, and eigenvectors, together with selected applications, such as Markov processes, linear programming, economic models, least squares, and population growth. Credit is not given for both MATH 125 and any of MATH 225, MATH 410, or MATH 415. Prerequisite: MATH 112 (formerly MATH 012) or an adequate ALEKS score.

MATH 181 A Mathematical World credit: 3 Hours.

Introduction to selected areas of mathematical sciences through application to modeling and solution of problems involving networks, circuits, trees, linear programming, random samples, regression, probability, inference, voting systems, game theory, symmetry and tilings, geometric growth, comparison of algorithms, codes and data management. Prerequisite: Three years of high school mathematics, including two years of algebra and one year of geometry.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 198 Freshman Seminar credit: 3 Hours.

Guides the student in the study of selected topics not considered in standard courses. Prerequisite: Enrollment in the mathematics honors program; consent of department.

MATH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

MATH 210 Theory of Interest credit: 3 Hours.

Study of compound interest and annuities; applications to problems in finance. Prerequisite: MATH 231 or equivalent.

MATH 213 Basic Discrete Mathematics credit: 3 Hours.

Beginning course on discrete mathematics, including sets and relations, functions, basic counting techniques, recurrence relations, graphs and trees, and matrix algebra; emphasis throughout is on algorithms and their efficacy. Credit is not given for both MATH 213 and CS 173. Prerequisite: MATH 220 or MATH 221, or equivalent.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 220 Calculus credit: 5 Hours.

First course in calculus and analytic geometry; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 220 and either MATH 221 or MATH 234. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of topics of MATH 115. Students with previous calculus experience should consider MATH 221.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 221 Calculus I credit: 4 Hours.

First course in calculus and analytic geometry for students with some calculus background; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 221 and either MATH 220 or MATH 234. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/> and either one year of high school calculus or a minimum score of 2 on the AB Calculus AP exam.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 225 Introductory Matrix Theory credit: 2 Hours.

Systems of linear equations, matrices and inverses, determinants, and a glimpse at vector spaces, eigenvalues and eigenvectors. Credit is not given for both MATH 225 and any of MATH 125, MATH 410, or MATH 415. Prerequisite: MATH 220 or MATH 221; or equivalent.

MATH 231 Calculus II credit: 3 Hours.

Second course in calculus and analytic geometry: techniques of integration, conic sections, polar coordinates, and infinite series. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 234 Calculus for Business I credit: 4 Hours.

Introduction to the concept of functions and the basic ideas of the calculus. Credit is not given for both MATH 234 and either MATH 220 or MATH 221. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of the topics of MATH 112.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 241 Calculus III credit: 4 Hours.

Third course in calculus and analytic geometry including vector analysis: Euclidean space, partial differentiation, multiple integrals, line integrals and surface integrals, the integral theorems of vector calculus. Credit is not given for both MATH 241 and MATH 292. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 249 Honors Supplement credit: 1 Hour.

Supplemental credit hour for honors courses with additional material or special projects. Prerequisite: Concurrent registration in a specially designated honors section and consent of department.

MATH 284 Intro Differential Systems credit: 4 Hours.

First order differential equations; mathematical models and numerical methods; linear systems and matrices; higher-order linear differential equations; eigenvalues and eigenvectors; linear systems of differential equations; Laplace transform methods. Credit is not given for both MATH 284 and either MATH 285 or MATH 286. Prerequisite: MATH 231 or equivalent.

MATH 285 Intro Differential Equations credit: 3 Hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, and an introduction to partial differential equations. Intended for engineering majors and others who require a working knowledge of differential equations. Credit is not given for both MATH 285 and any of MATH 284, MATH 286, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 286 Intro to Differential Eq Plus credit: 4 Hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, linear systems of differential equations, and an introduction to partial differential equations. Covers all the MATH 285 plus linear systems. Intended for engineering majors and other who require a working knowledge of differential equations. Credit is not given for both MATH 286 and any of MATH 284, MATH 285, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 290 Symbolic Computation Lab credit: 1 Hour.

Laboratory component to courses using a symbolic programming package. Prerequisite: Consent of department; concurrent registration in a designated section of a mathematics course with symbolic computation component. May be taken only once for credit.

MATH 292 Vector Calculus Supplement credit: 2 Hours.

Course in multivariable calculus. Topics include gradient, divergence, and curl; line and surface integrals; and the theorems of Green, Stokes, and Gauss. Intended for transfer students whose multivariable calculus course did not include the integral theorems of vector calculus. Credit is not given for both MATH 292 and MATH 241. Prerequisite: Consent of instructor.

MATH 299 Topics in Mathematics credit: 1 to 4 Hours.

Topics course; see Class Schedule or department office for current topics. May be repeated in the same or subsequent semesters to a maximum of 8 hours. Prerequisite: MATH 220 or MATH 221; consent of instructor.

MATH 347 Fundamental Mathematics credit: 3 Hours.

Fundamental ideas used in many areas of mathematics. Topics will include: techniques of proof, mathematical induction, binomial coefficients, rational and irrational numbers, the least upper bound axiom for real numbers, and a rigorous treatment of convergence of sequences and series. This will be supplemented by the instructor from topics available in the various texts. Students will regularly write proofs emphasizing precise reasoning and clear exposition. Credit is not given for both MATH 347 and MATH 348. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 348 Fundamental Mathematics-ACP credit: 4 Hours.

Course is identical to MATH 347 except for the additional writing component. Credit is not given for both MATH 348 and MATH 347. Prerequisite: MATH 231 and completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Quantitative Reasoning II

MATH 357 Numerical Methods I credit: 3 Hours.

Same as CS 357. See CS 357.

MATH 362 Probability with Engrg Applic credit: 3 Hours.

Same as ECE 313. See ECE 313.

MATH 370 Actuarial Problem Solving credit: 1 Hour.

Methods and techniques of solving problems in actuarial mathematics for advanced students intending to enter the actuarial profession. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor.

MATH 390 Individual Study credit: 0 to 3 Hours.

Guided individual study of advanced topics not covered in other courses. May be repeated to a maximum of 8 hours. Approved for both letter and S/U grading. Prerequisite: Consent of instructor.

MATH 399 Math/Actuarial Internship credit: 0 Hours.

Full-time or part-time practice of math or actuarial science in an off-campus government, industrial, or research laboratory environment. Summary report required. Approved for S/U grading only. May be repeated in separate terms. Prerequisite: After obtaining an internship, Mathematics majors must request entry from the Mathematics Director of Undergraduate Studies; Actuarial Science majors must request entry from the Director of the Actuarial Science Program.

MATH 402 Non Euclidean Geometry credit: 3 or 4 Hours.

Historical development of geometry; includes tacit assumptions made by Euclid; the discovery of non-Euclidean geometries; geometry as a mathematical structure; and an axiomatic development of plane geometry. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 403 Euclidean Geometry credit: 3 or 4 Hours.

Selected topics from geometry, including the nine-point circle, theorems of Ceva and Menelaus, regular figures, isometries in the plane, ordered and affine geometries, and the inversive plane. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or 348, or equivalent; or consent of instructor.

MATH 405 Teacher's Course credit: 3 or 4 Hours.

In-depth, advanced perspective look at selected topics covered in the secondary curriculum. Connects mathematics learned at the university level to content introduced at the secondary level. Intended for students who plan to seek a secondary certificate in mathematics teaching. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 406 History of Calculus credit: 3 or 4 Hours.

Examination of the historical origins and genesis of the concepts of the calculus; includes mathematical developments from the ancient Greeks to the eighteenth century. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 408 Actuarial Statistics I credit: 4 Hours.

Same as STAT 408. See STAT 408.

MATH 409 Actuarial Statistics II credit: 4 Hours.

Same as STAT 409. See STAT 409.

MATH 410 Lin Algebra & Financial Apps credit: 3 or 4 Hours.

Emphasizes techniques of linear algebra and introductory and advanced applications to actuarial science, finance and economics. Topics include linear equations, matrix theory, vector spaces, linear transformations, eigenvalues and eigenvectors and inner product spaces. In addition, current research topics such as modeling, data mining, and generalized linear models are explored. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 410 and any of MATH 125, MATH 225, MATH 415 or MATH 416. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 210 or FIN 221; or consent of instructor.

MATH 412 Graph Theory credit: 3 or 4 Hours.

Examines basic concepts and applications of graph theory, where graph refers to a set of vertices and edges that join some pairs of vertices; topics include subgraphs, connectivity, trees, cycles, vertex and edge coloring, planar graphs and their colorings. Draws applications from computer science, operations research, chemistry, the social sciences, and other branches of mathematics, but emphasis is placed on theoretical aspects of graphs. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience or CS 374.

MATH 413 Intro to Combinatorics credit: 3 or 4 Hours.

Permutations and combinations, generating functions, recurrence relations, inclusion and exclusion, Polya's theory of counting, and block designs. Same as CS 413. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience.

MATH 414 Mathematical Logic credit: 3 or 4 Hours.

Introduction to the formalization of mathematics and the study of axiomatic systems; expressive power of logical formulas; detailed treatment of propositional logical and predicate logic; compactness theorem and Godel completeness theorem, with applications to specific mathematical theories; algorithmic aspects of logical formulas. Proofs are emphasized in this course, which can serve as an introduction to abstract mathematics and rigorous proof; some ability to do mathematical reasoning required. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience. This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 415 Applied Linear Algebra credit: 3 or 4 Hours.

Introductory course emphasizing techniques of linear algebra with applications to engineering; topics include matrix operations, determinants, linear equations, vector spaces, linear transformations, eigenvalues, and eigenvectors, inner products and norms, orthogonality, equilibrium, and linear dynamical systems. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 415 and any of MATH 125, MATH 225, MATH 410, or MATH 416. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor.

MATH 416 Abstract Linear Algebra credit: 3 or 4 Hours.

Rigorous proof-oriented course in linear algebra. Topics include determinants, vector spaces over fields, linear transformations, inner product spaces, eigenvectors and eigenvalues, Hermitian matrices, Jordan Normal Form. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 416 and either MATH 410 or MATH 415. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor; MATH 347 is recommended.

MATH 417 Intro to Abstract Algebra credit: 3 or 4 Hours.

Fundamental theorem of arithmetic, congruences. Permutations. Groups and subgroups, homomorphisms. Group actions with applications. Polynomials. Rings, subrings, and ideals. Integral domains and fields. Roots of polynomials. Maximal ideals, construction of fields. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: Either MATH 416 or one of MATH 410, MATH 415 together with one of MATH 347, MATH 348, CS 374; or consent of instructor.

MATH 418 Intro to Abstract Algebra II credit: 3 or 4 Hours.

Rings of quotients of an integral domain. Euclidean domains, principal ideal domains. Unique factorization in polynomial rings. Fields extensions, ruler and compass constructions. Finite fields with applications. Modules. Structure theorem for finitely generated modules over principal ideal domains. Application to finitely generated abelian groups and canonical forms of matrices. Introduction to error-correcting codes. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 417 or consent of instructor.

MATH 423 Differential Geometry credit: 3 or 4 Hours.

Applications of the calculus to the study of the shape and curvature of curves and surfaces; introduction to vector fields, differential forms on Euclidean spaces, and the method of moving frames for low-dimensional differential geometry. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 424 Honors Real Analysis credit: 3 Hours.

A rigorous treatment of basic real analysis via metric spaces recommended for those who intend to pursue programs heavily dependent upon graduate level Mathematics. Metric space topics include continuity, compactness, completeness, connectedness and uniform convergence. Analysis topics include the theory of differentiation, Riemann-Darboux integration, sequences and series of functions, and interchange of limiting operations. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Credit is not given for both MATH 424 and either MATH 444 or MATH 447. Approved for honors grading. Prerequisite: An honors section of MATH 347 or an honors section of MATH 416, and consent of the department.

MATH 425 Honors Advanced Analysis credit: 3 Hours.

A theoretical treatment of differential and integral calculus in higher dimensions. Topics include inverse and implicit function theorems, submanifolds, the theorems of Green, Gauss and Stokes, differential forms, and applications. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Approved for honors grading. Prerequisite: MATH 424 and either MATH 415 or MATH 416, and consent of the department.

MATH 427 Honors Abstract Algebra credit: 3 Hours.

Group theory, counting formulae, factorization, modules with applications to Abelian groups and linear operators. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Approved for honors grading. Credit is not given for both MATH 427 and MATH 417. Prerequisite: Consent of the department is required. Prerequisite courses are either an honors section of MATH 416, or MATH 415 together with an honors section of MATH 347.

MATH 428 Honors Topics in Mathematics credit: 3 Hours.

A capstone course in the Mathematics Honors Sequences. Topics will vary. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Consent of the department.

MATH 432 Set Theory and Topology credit: 3 or 4 Hours.

Informal set theory, cardinal and ordinal numbers, and the axiom of choice; topology of metric spaces and introduction to general topological spaces. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or consent of instructor.

MATH 439 Philosophy of Mathematics credit: 3 or 4 Hours.

Same as PHIL 439. See PHIL 439.

MATH 441 Differential Equations credit: 3 or 4 Hours.

Basic course in ordinary differential equations; topics include existence and uniqueness of solutions and the general theory of linear differential equations; treatment is more rigorous than that given in MATH 285. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 441 and any of MATH 284, MATH 285, MATH 286. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348 is recommended.

MATH 442 Intro Partial Diff Equations credit: 3 or 4 Hours.

Introduces partial differential equations, emphasizing the wave, diffusion and potential (Laplace) equations. Focuses on understanding the physical meaning and mathematical properties of solutions of partial differential equations. Includes fundamental solutions and transform methods for problems on the line, as well as separation of variables using orthogonal series for problems in regions with boundary. Covers convergence of Fourier series in detail. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 444 Elementary Real Analysis credit: 3 or 4 Hours.

Careful treatment of the theoretical aspects of the calculus of functions of a real variable intended for those who do not plan to take graduate courses in Mathematics. Topics include the real number system, limits, continuity, derivatives, and the Riemann integral. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 444 and either MATH 424 or MATH 447. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent.

MATH 446 Applied Complex Variables credit: 3 or 4 Hours.

For students who desire a working knowledge of complex variables; covers the standard topics and gives an introduction to integration by residues, the argument principle, conformal maps, and potential fields. Students desiring a systematic development of the foundations of the subject should take MATH 448. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 446 and MATH 448. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241.

MATH 447 Real Variables credit: 3 or 4 Hours.

Careful development of elementary real analysis for those who intend to take graduate courses in Mathematics. Topics include completeness property of the real number system; basic topological properties of n -dimensional space; convergence of numerical sequences and series of functions; properties of continuous functions; and basic theorems concerning differentiation and Riemann integration. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 447 and either MATH 424 or MATH 444. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 241 or equivalent; junior standing; MATH 347 or MATH 348, or equivalent experience; or consent of instructor.

MATH 448 Complex Variables credit: 3 or 4 Hours.

For students who desire a rigorous introduction to the theory of functions of a complex variable; topics include Cauchy's theorem, the residue theorem, the maximum modulus theorem, Laurent series, the fundamental theorem of algebra, and the argument principle. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 448 and MATH 446. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 447.

MATH 450 Numerical Analysis credit: 3 Hours.

Same as CS 450, CSE 401 and ECE 491. See CS 450.

MATH 453 Elementary Theory of Numbers credit: 3 or 4 Hours.

Basic introduction to the theory of numbers. Core topics include divisibility, primes and factorization, congruences, arithmetic functions, quadratic residues and quadratic reciprocity, primitive roots and orders. Additional topics covered at the discretion of the instructor include sums of squares, Diophantine equations, continued fractions, Farey fractions, recurrences, and applications to primality testing and cryptography. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

This course satisfies the General Education Criteria for:

Quantitative Reasoning II

MATH 461 Probability Theory credit: 3 or 4 Hours.

Introduction to mathematical probability; includes the calculus of probability, combinatorial analysis, random variables, expectation, distribution functions, moment-generating functions, and central limit theorem. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 461 and either MATH 408 or ECE 313. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 463 Statistics and Probability I credit: 4 Hours.

Same as STAT 400. See STAT 400.

MATH 464 Statistics and Probability II credit: 3 or 4 Hours.

Same as STAT 410. See STAT 410.

MATH 469 Methods of Applied Statistics credit: 3 or 4 Hours.

Same as STAT 420. See STAT 420.

MATH 471 Life Contingencies I credit: 4 Hours.

Distribution of the time-to-death random variable for a single life, and its implications for evaluations of insurance and annuity functions, net premiums, and reserves. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 408 and MATH 210.

MATH 472 Life Contingencies II credit: 3 Hours.

Continuation of MATH 471. Introduction to tabular or parametric survival models with single or multiple-life states; life insurance and annuity premium calculations; reserving and profit measures; introductions to universal life insurances, participating insurances, pension plans and retirement benefits. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 472 and MATH 565. Prerequisite: MATH 471.

MATH 473 Algorithms credit: 4 Hours.

Same as CS 473 and CSE 414. See CS 473.

MATH 475 Formal Models of Computation credit: 3 or 4 Hours.

Same as CS 475. See CS 475.

MATH 476 Investments and Financial Markets credit: 3 Hours.

Theoretical foundation in financial models and their applications to insurance and other financial risks. Topics include derivative markets, no arbitrage pricing of financial derivatives, interest rate models, dynamic hedging and other risk management techniques. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 476 and MATH 567. Prerequisite: Credit or concurrent registration in STAT 409 or STAT 410.

MATH 478 Loss Models credit: 3 Hours.

Foundation in the actuarial modeling process; construction, selection and validation of empirical models and parametric models. Also covers survival, severity, frequency and aggregate loss models; statistical methods to estimate model parameters. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 478 and MATH 568. Prerequisite: MATH 408, MATH 461 or MATH 463; credit or concurrent registration in MATH 409 or MATH 464.

MATH 479 Casualty Actuarial Mathematics credit: 3 or 4 Hours.

An introduction to property/casualty actuarial science, exploring its mathematical financial, and risk-theoretical foundations. Specific topics include risk theory, loss reserving, ratemaking, risk classification, credibility theory, reinsurance, financial pricing of insurance, and other special issues and applications. 3 or 4 undergraduate hours. No graduate credit. Credit is not given for MATH 479 and MATH 569. Prerequisite: MATH 210; credit or concurrent registration in MATH 409; or consent of instructor.

MATH 481 Vector and Tensor Analysis credit: 3 or 4 Hours.

Introductory course in modern differential geometry focusing on examples, broadly aimed at students in mathematics, the sciences, and engineering. Emphasis on rigorously presented concepts, tools and ideas rather than on proofs. The topics covered include differentiable manifolds, tangent spaces and orientability; vector and tensor fields; differential forms; integration on manifolds and Generalized Stokes Theorem; Riemannian metrics, Riemannian connections and geodesics. Applications to configuration and phase spaces, Maxwell equations and relativity theory will be discussed. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 and one of MATH 415 or MATH 416 or equivalent.

MATH 482 Linear Programming credit: 3 or 4 Hours.

Rigorous introduction to a wide range of topics in optimization, including a thorough treatment of basic ideas of linear programming, with additional topics drawn from numerical considerations, linear complementarity, integer programming and networks, polyhedral methods. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 410, MATH 415, or MATH 416.

MATH 484 Nonlinear Programming credit: 3 or 4 Hours.

Iterative and analytical solutions of constrained and unconstrained problems of optimization; gradient and conjugate gradient solution methods; Newton's method, Lagrange multipliers, duality and the Kuhn-Tucker theorem; and quadratic, convex, and geometric programming. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348; or equivalent; MATH 415 or equivalent; or consent of instructor.

MATH 487 Advanced Engineering Math credit: 3 or 4 Hours.

Complex linear algebra, inner product spaces, Fourier transforms and analysis of boundary value problems, Sturm-Liouville theory. Same as ECE 493. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 488 Math Methods In Engineering credit: 3 or 4 Hours.

Matrices, determinants, bounds and approximations to eigenvalues, introduction to linear operator theory and inner product spaces, orthogonal expansions, and Fourier transforms. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 489 Dynamics & Differential Eqns credit: 3 or 4 Hours.

Studies mathematical theory of dynamical systems, emphasizing both discrete-time dynamics and nonlinear systems of differential equations. Topics include: chaos, fractals, attractors, bifurcations, with application to areas such as population biology, fluid dynamics and classical physics. Basic knowledge of matrix theory will be assumed. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 490 Advanced Topics in Mathematics credit: 1 to 4 Hours.

Deals with selected topics and applications of mathematics; see Class Schedule or department office for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated with approval. Prerequisite: Consent of instructor.

MATH 492 Undergraduate Research in Math credit: 1 to 3 Hours.

Work closely with department faculty on a well-defined research project. Topics and nature of assistance vary. Capstone paper or computational project required. 1 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 8 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

MATH 495 Models in Mathematical Biology credit: 3 or 4 Hours.

Research-motivated subject material from Mathematical Biology with emphasis on modeling. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or equivalent.

MATH 496 Honors Seminar credit: 3 Hours.

Careful study of a selected area of mathematics, carried out either deductively from axioms or inductively through problems; subject matter varies with instructor. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of Mathematics Honors Committee.

MATH 499 Introduction Graduate Research credit: 1 Hour.

Seminar is required of all first-year graduate students in Mathematics. It provides a general introduction to the courses and research work in all of the areas of mathematics that are represented at the University of Illinois at Urbana-Champaign. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: Graduate standing or consent of instructor.

Actuarial Science

<http://www.math.illinois.edu/ActuarialScience/>

This major is sponsored by the Department of Mathematics, and is an interdisciplinary subject involving mathematics, statistics, and financial economics. It is designed to prepare students to enter the actuarial profession, as well as to provide a background in quantitative finance and risk management. See also Mathematics (p. 496) and Mathematics and Computer Science (p. 505).

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: mathadvising@illinois.edu

Minimum required major and supporting course work normally equates to 57-59 hours including 29-30 hours of mathematics beyond calculus.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: To qualify for distinction, the student must take MATH 472, have a grade point average in mathematics courses of at least 3.25, and pass at least two examinations offered by the professional actuarial societies. To qualify for high or highest distinction, the student must have passed at least three professional exams, with highest distinction going to those whose grade point averages in mathematics are at least 3.75. Finance courses and additional professional exams may also be given consideration in close decisions.

Code	Title	Hours
Calculus through:		11-12
MATH 241	Calculus III (or equivalent)	
Select one of the following:		3
CS 101	Intro Computing: Engrg & Sci	
CS 105	Intro Computing: Non-Tech	
CS 125	Intro to Computer Science	
MATH 210	Theory of Interest	3
MATH 408	Actuarial Statistics I	3-4

or MATH 461	Probability Theory	
MATH 409	Actuarial Statistics II	4
MATH 469	Methods of Applied Statistics	3
MATH 410	Lin Algebra & Financial Apps	3
MATH 471	Life Contingencies I	4
Select two of the following:		6
MATH 472	Life Contingencies II	
MATH 476	Investments and Financial Markets	
MATH 478	Loss Models	
MATH 479	Casualty Actuarial Mathematics	
A third course from the list above or an approved section of MATH 490 (e.g. financial mathematics)		3
FIN 221	Corporate Finance	3
FIN 300	Financial Markets	3
FIN 321	Advanced Corporate Finance	3
Select two of the following:		6
ECON 302	Inter Microeconomic Theory	
ECON 303	Inter Macroeconomic Theory	
FIN 230	Introduction to Insurance	
FIN 431	Property-Liability Insurance	
FIN 432	Managing Fin Risk for Insurers	
FIN 434	Employee Benefit Plans	

Applied Mathematics Concentration For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:mathadvising@illinois.edu

Minimum required major and supporting course work normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

Minimum hours required for graduation: 120 hours

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Code	Title	Hours
Required Core Courses		
MATH 241	Calculus III ¹	4
MATH 347	Fundamental Mathematics	3-4
or MATH 348	Fundamental Mathematics-ACP	
MATH 416	Abstract Linear Algebra ²	3
MATH 417	Intro to Abstract Algebra	3
or MATH 427	Honors Abstract Algebra	
MATH 424	Honors Real Analysis ³	3
or MATH 444	Elementary Real Analysis	
or MATH 447	Real Variables	
MATH 461	Probability Theory ⁴	3-4
or STAT 400	Statistics and Probability I	
CS 101	Intro Computing: Engrg & Sci	3-4
or CS 125	Intro to Computer Science	
Approved supporting coursework or any minor		12
Applied Mathematics Courses		
MATH 441	Differential Equations	3
MATH 446	Applied Complex Variables	3
or MATH 448	Complex Variables	
CS 357	Numerical Methods I	3
or MATH 442	Intro Partial Diff Equations	
or MATH 489	Dynamics & Differential Eqns	
MATH 412	Graph Theory	3
or MATH 413	Intro to Combinatorics	
or MATH 482	Linear Programming	
One additional 400- or 500-level Math course		3
Total Hours		49-52

¹ Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.

² Beginning in Fall 2012, students may not receive credit for both MATH 416 and either MATH 410 or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of MATH 410 or MATH 415.

³ If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.

⁴ If STAT 400 is completed, a requirement for the Operations Research concentration has been satisfied.

Graduate Preparatory Concentration For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:mathadvising@illinois.edu

Minimum required major and supporting course work normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

Minimum hours required for graduation: 120 hours

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Code	Title	Hours
Required Core Courses		
MATH 241	Calculus III ¹	4
MATH 347 or MATH 348	Fundamental Mathematics Fundamental Mathematics-ACP	3-4
MATH 416	Abstract Linear Algebra ²	3
MATH 417 or MATH 427	Intro to Abstract Algebra Honors Abstract Algebra	3
MATH 424 or MATH 447	Honors Real Analysis Real Variables	3
MATH 461 or STAT 400	Probability Theory ³ Statistics and Probability I	3-4
CS 101 or CS 125	Intro Computing: Engrg & Sci Intro to Computer Science	3-4
Approved supporting coursework or any minor		12
Graduate Preparatory Courses		
The courses chosen from the core and the Graduate Preparatory concentration must include at least two of MATH 424, MATH 425, MATH 427, MATH 428.		
MATH 418 or MATH 428	Intro to Abstract Algebra II Honors Topics in Mathematics	3
MATH 448	Complex Variables	3
MATH 423 or MATH 425 or MATH 432	Differential Geometry Honors Advanced Analysis Set Theory and Topology	3
MATH 441	Differential Equations	3 or 4
Two additional 400- or 500-level Math courses		6
Total Hours		52-56

¹ Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.

² Beginning in Fall 2012, students may not receive credit for both MATH 416 and either MATH 410 or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of MATH 410 or MATH 415.

³ If STAT 400 is completed, a requirement for the Operations Research concentration has been satisfied.

Mathematics Concentration

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: mathadvising@illinois.edu

Minimum required major and supporting course work normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

Minimum hours required for graduation: 120 hours

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Code	Title	Hours
Required Core Courses		
MATH 241	Calculus III ¹	4
MATH 347 or MATH 348	Fundamental Mathematics Fundamental Mathematics-ACP	3-4
MATH 416	Abstract Linear Algebra ²	3
MATH 417 or MATH 427	Intro to Abstract Algebra Honors Abstract Algebra	3
MATH 424 or MATH 444 or MATH 447	Honors Real Analysis ³ Elementary Real Analysis Real Variables	3
MATH 461 or STAT 400	Probability Theory ⁴ Statistics and Probability I	3-4
CS 101 or CS 125	Intro Computing: Engrg & Sci Intro to Computer Science	3-4
Approved supporting coursework or any minor		12

Mathematics Concentration Courses

Select a total of two courses from two of the following three lists:

Geometry	
MATH 402	Non Euclidean Geometry
MATH 403	Euclidean Geometry
MATH 423	Differential Geometry
MATH 481	Vector and Tensor Analysis

Differential Equations and Complex Analysis	
MATH 441	Differential Equations
MATH 446	Applied Complex Variables
MATH 448	Complex Variables
Number Theory	
MATH 453	Elementary Theory of Numbers
Two additional 400- or 500-level Math courses	
6	
Total Hours	
46-49	

- ¹ Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.
- ² Beginning in Fall 2012, students may not receive credit for both MATH 416 and either MATH 410 or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of MATH 410 or MATH 415.
- ³ If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.
- ⁴ If STAT 400 is completed, a requirement for the Operations Research concentration has been satisfied.

Mathematics and Computer Science For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: academic@cs.illinois.edu or mathadvising@illinois.edu

Degree title: Bachelor of Science in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 70 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: To graduate with distinction requires a specified minimum grade point average in all Computer Science and Mathematics courses listed below. A GPA of 3.25 is required for Distinction, 3.5 for High Distinction, and 3.75 for Highest Distinction. In addition, students must complete at least three semester hours of additional Computer Science or Mathematics courses selected from the following: CS 196, CS 296, CS 397, CS 492, CS 493, CS 499, any CS course numbered 411 or higher, MATH 412, MATH 414, MATH 417, MATH 418, MATH 423, MATH 432, MATH 448, MATH 482, MATH 484, MATH 496.

NOTE: A student taking a cross-listed course in this major may designate it as either mathematics or computer science.

Requirements

Code	Title	Hours
CS 100	Freshman Orientation (recommended)	0-1
Calculus through MATH 241-Calculus III		11-12
MATH 347	Fundamental Mathematics	3

or MATH 348	Fundamental Mathematics-ACP	
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
CS/MATH 357	Numerical Methods I	3
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
CS 457	Numerical Methods II	3
MATH 415	Applied Linear Algebra	3
or MATH 416	Abstract Linear Algebra	
400-level mathematics and computer science requirements:		18
Students must select at least six 400-level mathematics and computer science courses, including one from each of the following groups:		

GROUP I

CS 361	Probability & Statistics for Computer Science (recommended)
MATH 461	Probability Theory
STAT 400/ MATH 463	Statistics and Probability I

GROUP II

MATH 412	Graph Theory
MATH 417	Intro to Abstract Algebra

GROUP III

MATH 441	Differential Equations
MATH 446	Applied Complex Variables
MATH 484	Nonlinear Programming

GROUP IV

MATH 444	Elementary Real Analysis
MATH 447	Real Variables

GROUP V

MATH 414	Mathematical Logic
CS/MATH 473	Algorithms
CS/MATH 475	Formal Models of Computation
CS 476	Program Verification
CS 477	Formal Software Devel Methods
CS 481	Stochastic Processes & Applic
CS 482	Simulation

Minor in Mathematics

E-mail: mathadvising@illinois.edu

Web address for department: www.math.illinois.edu (<http://www.math.illinois.edu>)

Students must complete MATH 241, and at least one 400-level MATH course for admission into the minor. The Mathematics minor is designed to prepare students majoring in some other discipline with a background in mathematics that is both broad and deep. Students interested in pursuing the minor should have completed the calculus sequence through MATH 241, and one additional Math course at the 400-level

demonstrating a strong record of success in college-level mathematics courses. Given the cumulative character of mathematics preparation, students earning grades of C or below in previous mathematics courses are advised not to pursue the minor.

Code	Title	Hours
MATH 241	Calculus III	4
Completed in one of two ways:		15
MATH 347	Fundamental Mathematics (and four courses chosen from at least two of the following lists of courses)	
OR		
five courses chosen from at least two of the following lists of courses.		
Algebra		
MATH 410	Lin Algebra & Financial Apps	
MATH 415	Applied Linear Algebra	
MATH 416	Abstract Linear Algebra	
MATH 417	Intro to Abstract Algebra	
MATH 418	Intro to Abstract Algebra II	
MATH 427	Honors Abstract Algebra	
MATH 453	Elementary Theory of Numbers	
Discrete Mathematics		
MATH 412	Graph Theory	
MATH 413	Intro to Combinatorics	
MATH 414	Mathematical Logic	
MATH 482	Linear Programming	
Analysis		
MATH 284	Intro Differential Systems	
MATH 285	Intro Differential Equations	
MATH 286	Intro to Differential Eq Plus	
MATH 424	Honors Real Analysis	
MATH 425	Honors Advanced Analysis	
MATH 441	Differential Equations	
MATH 442	Intro Partial Diff Equations	
MATH 444	Elementary Real Analysis	
MATH 446	Applied Complex Variables	
MATH 447	Real Variables	
MATH 448	Complex Variables	
CS 450	Numerical Analysis	
MATH 484	Nonlinear Programming	
MATH 487	Advanced Engineering Math	
MATH 489	Dynamics & Differential Eqns	
Geometry		
MATH 402	Non Euclidean Geometry	
MATH 403	Euclidean Geometry	
MATH 423	Differential Geometry	
MATH 428	Honors Topics in Mathematics	
MATH 432	Set Theory and Topology	
MATH 481	Vector and Tensor Analysis	
Probability and Statistics		
MATH 461	Probability Theory	
STAT 400	Statistics and Probability I	
STAT 410	Statistics and Probability II ¹	

or STAT 420 Methods of Applied Statistics

Total Hours 19

¹ Students may use STAT 410 or STAT 420, but not both toward the minor.

Operations Research Concentration For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: mathadvising@illinois.edu

Minimum required major and supporting course work normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

Minimum hours required for graduation: 120 hours

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Code	Title	Hours
Required Core Courses		
MATH 241	Calculus III ¹	4
MATH 347	Fundamental Mathematics	3-4
or MATH 348	Fundamental Mathematics-ACP	
MATH 416	Abstract Linear Algebra ²	3
MATH 417	Intro to Abstract Algebra	3
or MATH 427	Honors Abstract Algebra	
MATH 424	Honors Real Analysis ³	3
or MATH 444	Elementary Real Analysis	
or MATH 447	Real Variables	
STAT 400	Statistics and Probability I	4
CS 101	Intro Computing: Engrg & Sci	3-4
or CS 125	Intro to Computer Science	
Approved supporting coursework or any minor		12
Operations Research Courses		
CS 357	Numerical Methods I	3
MATH 412	Graph Theory	3
or MATH 484	Nonlinear Programming	

STAT 410	Statistics and Probability II	3
or STAT 420	Methods of Applied Statistics	
MATH 482	Linear Programming	3
Total Hours		47-49

- ¹ Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.
- ² Beginning in Fall 2012, students may not receive credit for both MATH 416 and either MATH 410 or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of MATH 410 or MATH 415.
- ³ If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.

Teacher Education Minor in Mathematics, Grades 9-12

For students in teacher education curricula other than mathematics who wish to be qualified to teach mathematics at the high school level.

E-mail: mathadvising@illinois.edu

Web address for department: www.math.illinois.edu (<http://www.math.illinois.edu>)

Code	Title	Hours
To obtain an endorsement to teach mathematics in grades 9-12, students must also pass the Illinois Certification Testing System Test in Mathematics. Information and practice exams are available at www.icts.nesinc.com (http://www.icts.nesinc.com).		
MATH 220	Calculus	5
MATH 231	Calculus II (or equivalent)	3
MATH 241	Calculus III	4
Methods courses in the teaching of mathematics		3
CI 434	Teaching Secondary Math	
A course covering topics in non-Euclidean geometry		3
MATH 402	Non Euclidean Geometry	
or MATH 403	Euclidean Geometry	
At least 7 hours of work from at least two of the following areas:		7
Computer Science (one course only)		
CS 101	Intro Computing: Engrg & Sci	
CS 105	Intro Computing: Non-Tech	
Linear Algebra		
MATH 125	Elementary Linear Algebra	
MATH 225	Introductory Matrix Theory	
MATH 415	Applied Linear Algebra	
MATH 416	Abstract Linear Algebra	
Modern Algebra		
MATH 413	Intro to Combinatorics	
MATH 417	Intro to Abstract Algebra	
MATH 453	Elementary Theory of Numbers	
Applied Mathematics		
MATH 347	Fundamental Mathematics	
or MATH 348	Fundamental Mathematics-ACP	

MATH 285	Intro Differential Equations
MATH 441	Differential Equations
MATH 444	Elementary Real Analysis
MATH 446	Applied Complex Variables
Probability-Statistics	
STAT 400/	Statistics and Probability I
MATH 463	
History of Calculus	
MATH 406	History of Calculus

Teaching of Mathematics Concentration

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail:mathadvising@illinois.edu

Minimum required course work normally equates to 80-84 hours including 27-29 hours of mathematics beyond calculus, 3-4 hours of computer science, and 39 hours for the Teacher Education Minor in Secondary School Teaching.

General education: Students must fulfill the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school math (grades 9-12) through the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters, with some students requiring 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education grade-point averages of 2.5 (A= 4.0). Candidates should consult their adviser or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
MATH 220 or MATH 221	Calculus Calculus I	4-5
MATH 231	Calculus II	3
MATH 241	Calculus III ¹	4
Three advanced mathematics courses, including		
MATH 347 or MATH 348	Fundamental Mathematics Fundamental Mathematics-ACP	3-4
Required Core Courses		
MATH 416	Abstract Linear Algebra ²	3
MATH 417 or MATH 427	Intro to Abstract Algebra Honors Abstract Algebra	3
MATH 424 or MATH 444 or MATH 447	Honors Real Analysis ³ Elementary Real Analysis Real Variables	3
MATH 461 or STAT 400	Probability Theory ⁴ Statistics and Probability I	3-4
CS 101 or CS 125	Intro Computing: Engrg & Sci Intro to Computer Science	3-4
Teacher Education Minor in Secondary School Teaching (p. 139)		39
Teaching of Mathematics Courses		
MATH 402 or MATH 403	Non Euclidean Geometry Euclidean Geometry	3
MATH 453	Elementary Theory of Numbers	3
Two additional 400- or 500-level mathematics courses		6
Total Hours		80-84

¹ Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.

² Students may not receive credit for both MATH 416 and either MATH 410 or MATH 415.

³ If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.

⁴ If STAT 400 is completed, a group requirement for the Operations Research concentration has been satisfied.

Medieval Studies, Program In

Eleonora Stoppino, Director
4080 Foreign Languages Building
707 S. Mathews Avenue
Urbana, Illinois 61801
e-mail: medievalstudies@illinois.edu

PH: (217) 265-6254
FX: (217) 244-8430

http://medieval.illinois.edu

The purpose of the Program in Medieval Studies is to foster the interdisciplinary and cross-cultural study of the history, literature, languages, religion, philosophy, art, and archaeology of cultures across the globe from approximately the fourth through the fifteenth centuries

C.E., by sponsoring activities such as seminars, conferences, symposia, and lectures, visiting scholars, and exchange and outreach programs, and by offering an undergraduate Interdisciplinary Studies Medieval Studies Concentration (p. 476) and Minor in Medieval Studies (p. 508).

Interdisciplinary Minor in Medieval Studies

This minor introduces students to medieval (ca. 500- ca. 1500 CE) cultures across the world, providing them with an understanding of periods and movements, institutions, material culture, ideas, beliefs, and values of the diverse cultures that comprise the medieval globe. The coursework spans both geographical regions and disciplines to introduce students to the breadth of medieval cultures as well as to the diversity of methods and perspectives for their study.

The minor includes a minimum of 21 hours, divided into (I) an introductory course in global medieval literatures and cultures; (II) geographical distribution coursework as specified below; and (III) advanced medieval coursework selected by the student in consultation with a faculty advisor. 3 hours of appropriate language study can be applied to the Additional Medieval Studies Coursework.

Code	Title	Hours
Introduction to Medieval Studies ¹		
ENGL 202/ MDVL 201/CWL 253	Medieval Lit and Culture	3
Geographical Distribution Coursework ²		9
3 hours- Medieval Europe- One course chosen from the following:		
ARTH/MDVL 111	Ancient to Medieval Art	
ARTH/MDVL 222	Medieval Art	
ARTH/MDVL 231	Northern Renaissance Art	
ITAL/MDVL 240	Italy Middle Ages & Renaissance	
HIST/MDVL 245	Women & Gender Pre-Mod Europe	
HIST/MDVL 247	Medieval Europe	
SCAN/MDVL 251	Viking Mythology	
SCAN/MDVL 252	Viking Sagas in Translation	
HIST/MDVL 255	British Isles to 1688	
ARCH/MDVL 412	Medieval Architecture	
3 hours-Classical and Medieval East Asia- One course chosen from the following:		
HIST 220	Traditional China	
HIST 226	Premodern Japanese History	
EALC 240	Chinese Civilization	
EALC 275	Masterpieces of East Asian Lit	
REL 287	Introduction to Buddhism	
3 hours-Medieval Central Asia, South Asia, or the Middle East- One course chosen from the following:		
HIST 130	History of South Asia	
HIST 135	History of Islamic Middle East	
LA 218	S Asian Cultural Landscapes	
LA 222	Islamic Gardens & Architecture	
REL 213 or REL 214	Intro to Islam - ACP Introduction to Islam	
REL 223	The Qur'an (Koran)	
REL 260	Mystics and Saints in Islam	

REL 283	Jewish Sacred Literature	
CWL 208	Cultures & Literatures of South Asia	
Additional Medieval Studies Coursework		9
Medieval-related coursework from participating departments selected in consultation with the minor advisor. At least 6 hours must be at the 300- or 400-level. A list of courses is maintained on the Medieval Studies Program website. 3 hours of appropriate language study can be applied to meet this requirement with approval of the Director of the Program in Medieval Studies. ³		
Total Hours		21

- ¹ A student may substitute the "Medieval World" section of HIST 100 by petition to the Director of Medieval Studies. Only the section of HIST 100 devoted to the Middle Ages may be substituted.
- ² A student may substitute 3 hours in geographical distribution coursework with a course on the medieval civilizations of the Americas: ANTH 277 or ANTH 278.
- ³ List of courses to fulfill Additional Medieval Studies Coursework. (<http://www.medieval.illinois.edu/education/undergrad>)

MDVL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MDVL>)

Courses

MDVL 111 Ancient to Medieval Art credit: 4 Hours.

Same as ARTH 111. See ARTH 111.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MDVL 122 Swords, Sorcery & Sex: The Middle Ages in Popular Culture credit: 3 Hours.

Same as ENGL 122. See ENGL 122.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MDVL 201 Medieval Lit and Culture credit: 3 Hours.

Same as CWL 253 and ENGL 202. See ENGL 202.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

MDVL 216 Legends of King Arthur credit: 3 Hours.

Same as CWL 216 and ENGL 216. See ENGL 216.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

MDVL 222 Medieval Art credit: 3 Hours.

Same as ARTH 222. See ARTH 222.

MDVL 231 Northern Renaissance Art credit: 3 Hours.

Same as ARTH 231. See ARTH 231.

MDVL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

Same as CWL 240 and ITAL 240. See ITAL 240.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MDVL 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Same as GWS 245 and HIST 245. See HIST 245.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MDVL 247 Medieval Europe credit: 3 Hours.

Same as HIST 247. See HIST 247.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MDVL 251 Viking Mythology credit: 3 Hours.

Same as CWL 251, REL 251, and SCAN 251. See SCAN 251.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MDVL 252 Viking Sagas in Translation credit: 3 Hours.

Same as CWL 252 and SCAN 252. See SCAN 252.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

MDVL 255 British Isles to 1688 credit: 3 Hours.

Same as HIST 255. See HIST 255.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MDVL 344 Medieval Jewish Thought credit: 3 Hours.

Same as REL 344. See REL 344.

MDVL 345 Medieval Civilization credit: 3 Hours.

Same as HIST 345 and REL 345. See HIST 345.

MDVL 346 The Age of the Renaissance credit: 3 Hours.

Same as HIST 346 and REL 346. See HIST 346.

MDVL 403 European Education to 1600 credit: 2 to 4 Hours.

Same as EPS 403 and HIST 440. See EPS 403.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

MDVL 407 Introduction to Old English credit: 3 or 4 Hours.

Same as ENGL 407. See ENGL 407.

MDVL 410 Topics in Medieval Brit Lit credit: 3 or 4 Hours.

Same as CWL 417 and ENGL 412. See ENGL 412.

MDVL 411 Chaucer credit: 3 or 4 Hours.

Same as ENGL 411. See ENGL 411.

MDVL 412 Medieval Architecture credit: 3 Hours.

Same as ARCH 412. See ARCH 412.

MDVL 413 Dante credit: 3 or 4 Hours.

Same as CWL 413 and ITAL 413. See ITAL 413.

MDVL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.

Same as CWL 414 and ITAL 414. See ITAL 414.

MDVL 415 Classical Rhetorics credit: 3 or 4 Hours.

Same as CLCV 415 and CMN 415. See CMN 415.

MDVL 417 History of the French Language credit: 3 or 4 Hours.

Same as FR 417. See FR 417.

MDVL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.

Same as CWL 420 and ITAL 420. See ITAL 420.

MDVL 423 Romanesque Art credit: 3 or 4 Hours.

Same as ARTH 423. See ARTH 423.

MDVL 424 Gothic Art credit: 3 or 4 Hours.

Same as ARTH 424. See ARTH 424.

MDVL 431 Topics: Northern Art 1300-1500 credit: 3 or 4 Hours.
Same as ARTH 431. See ARTH 431.

MDVL 433 Fifteenth-Century Italian Art credit: 3 or 4 Hours.
Same as ARTH 433. See ARTH 433.

MDVL 440 Early Christian Thought credit: 3 or 4 Hours.
Same as REL 440. See REL 440.

MDVL 443 Byzantine Empire AD 284-717 credit: 3 or 4 Hours.
Same as HIST 443. See HIST 443.

MDVL 444 Medieval England credit: 2 to 4 Hours.
Same as HIST 445. See HIST 445.

MDVL 460 Medieval Latin credit: 3 or 4 Hours.
Same as LAT 460. See LAT 460.

MDVL 470 Middle Ages to Baroque credit: 3 Hours.
Same as GER 470. See GER 470.

Molecular and Cellular Biology, School of

Milan Bagchi, Director of School

393 Morrill Hall, 505 South Goodwin Avenue, Urbana

PH: (217) 333-3166

<http://mcb.illinois.edu>

The Molecular and Cellular Biology major provides students with a solid preparation in molecular biology, molecular genetics, microbiology, cellular biology, biochemistry, physiology, and structural biology. Students will also acquire a strong background in chemistry, math and physical sciences. After completion of the core curriculum in MCB, students may complete the required advanced course work by taking a variety of MCB courses or by selecting a more focused group of courses in any of the following areas: biochemistry, cells and tissues, developmental biology, infection and immunity, microbiology, genetics, neurobiology and physiology. The MCB Advising Program (MAP) staff is available to help students plan their combination of advanced courses.

The Molecular and Cellular Biology Honors Concentration is designed for students whose preparation and interests motivate them to desire a more intensive undergraduate biology experience and to prepare for graduate or professional school. The MCB Honors Concentration is based on the MCB major. Students must satisfy all of the requirements for the MCB major in addition to the requirements for the MCB Honors Concentration. Students interested in the MCB Honors Concentration should contact the MCB Honors Concentration coordinator during the freshman year for more information.

The School of Molecular and Cellular Biology also sponsors the Minor in MCB and the Biochemistry Specialized Curriculum.

The School of Molecular and Cellular Biology offers the following degree programs:

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Students choose the Molecular and Cellular Biology concentration (p. 515) or the MCB Honors concentration (p. 516)

For the Degree of Bachelor of Science in Biochemistry

Major in Specialized Curriculum in Biochemistry (p. 517)

Minor in Molecular and Cellular Biology

The minor, administered by the School of Molecular and Cellular Biology, is designed to provide students with an understanding of foundational principles of physiology, cellular and developmental biology, microbiology, molecular genetics and biochemistry. A minor in Molecular and Cellular Biology will prepare students for training in medicine and other health sciences, graduate studies in related disciplines, as well as for employment opportunities in pharmaceutical and biotechnology industries.

Students must contact an MCB advisor (<https://mcb.illinois.edu/undergrad/advising>) for acceptance into the minor. MCB 150 must be completed or in progress before acceptance into the minor.

Code	Title	Hours
MCB 244	Human Anatomy & Physiology I	3
or MCB 246	Human Anatomy & Physiology II	
MCB 250	Molecular Genetics	3
MCB 251	Exp Techniqs in Molecular Biol	2
MCB 252	Cells, Tissues & Development	3
MCB 253	Exp Techniqs in Cellular Biol	2
MCB 354	Biochem & Phys Basis of Life	3
or MCB 450	Introductory Biochemistry	
Choose one additional 3-5 credit hour course from the approved list of 300- and 400-level courses for MCB majors.		3-5
Total Hours		19-21

BIOP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOP>)

Biophysics Courses

BIOP 401 Introduction to Biophysics credit: 3 or 4 Hours.
Same as PHYS 475. See PHYS 475.

BIOP 419 Brain, Behavior & Info Process credit: 3 Hours.
Same as MCB 419 and NEUR 419. See MCB 419.

BIOP 432 Photosynthesis credit: 3 Hours.
Same as CPSC 489 and IB 421. See IB 421.

MCB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MCB>)

Molecular and Cell Biology Courses

MCB 100 Introductory Microbiology credit: 3 Hours.

Introduction to the principal activities and properties of microorganisms, including bacteria, yeasts, molds, and viruses; consideration of the role of natural processes, such as photosynthesis; and man's use and control of microorganisms in the production of antibodies and vaccines in industrial fermentations, in sanitation and public health, and in agriculture. Credit is not given for both MCB 100 and MCB 300. Prerequisite: There are no prerequisites for MCB 100, but some chemistry is recommended.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

MCB 101 Intro Microbiology Laboratory credit: 2 Hours.

Laboratory introduction to the techniques employed in the investigation of microbial activities and properties; experiments designed to familiarize the student with the handling, identification, and characterization of microorganisms and their activities, particularly those of interest to man. Credit is not given for both MCB 101 and MCB 301. Prerequisite: Credit or concurrent registration in MCB 100.

MCB 150 Molec & Cellular Basis of Life credit: 4 Hours.

Introductory course focusing on the basic structure, metabolic, and molecular processes (including membranes, energy metabolism, genes) common to all cells. Emphasis on unique properties that differentiate the major sub-groups of organisms (Archaea, Bacteria, plants, and animals), and will discuss how cells are integrated into tissues and organs in multicellular organisms.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

MCB 151 Molec & Cellular Laboratory credit: 1 Hour.

Introductory laboratory course focusing on basic techniques in molecular and cellular biology. Credit is not given for MCB 151 for students majoring in Molecular and Cellular Biology, or Integrative Biology; Credit is not given for both MCB 151 and MCB 251. Prerequisite: Concurrent enrollment in MCB 150.

MCB 170 Society and the Brain credit: 3 Hours.

Presents recent findings concerning the brain-society interaction. The facts will span many levels, from molecular and cellular interactions, to the functions of specific brain regions, and on to the behaviors of individuals, groups and societies. Intended to bring a broad range of neurobiological data and ideas into an interesting and relevant context.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

MCB 180 Human Reproduction & Society credit: 3 Hours.

Lectures and discussions on topics in human reproduction where technological and clinical advances are having economic, social, and ethical consequences.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

MCB 198 Internship credit: 0 Hours.

Full-time or part-time internship at another University or an off-campus medical facility, research institute or other approved institution. Approved for S/U grading only. May be repeated. Prerequisite: For MCB and Biochemistry majors only.

MCB 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 10 hours.

MCB 215 Foundation in Mol & Cell Bio credit: 3 Hours.

Online course that will provide transfer students with the essential bases in Molecular and Cellular Biology needed to succeed in the MCB core curriculum, when entering it at the sophomore level. Students will be exposed to the major concepts and the experimental aspects of MCB and be presented with an integrated view of a cell and its inner workings. In addition, a strong peer mentoring program will help students transitioning from their previous institutions by introducing them to the complex setting of a large undergraduate campus. Prerequisite: Successful completion of two semesters of college biology. Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent, or consent of instructor.

MCB 244 Human Anatomy & Physiology I credit: 3 Hours.

Organ system biology with an emphasis on normal human anatomy and physiology, physiological processes and associated disease processes of the following systems; skeletal, muscle, nervous, sensory, and endocrine. Prerequisite: Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 245 Human Anat & Physiol Lab I credit: 2 Hours.

Laboratory exploration of normal human anatomy and physiology and relevant disease processes for the following systems: tissue, skeletal, nervous, muscular, sensory, and endocrine. Previously dissected human cadavers are an important part of the learning experience in this course, but students will not dissect human cadavers. Neither animal dissection or animal use are elements of this course. Prerequisite: Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 246 Human Anatomy & Physiology II credit: 3 Hours.

Organ system biology with an emphasis on normal human anatomy and physiology, physiological processes and associated disease processes of the following systems: digestion, cardiovascular, respiratory, renal, and reproductive. Prerequisite: MCB 244 and credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent or consent of instructor.

MCB 247 Human Anat & Physiol Lab II credit: 2 Hours.

Laboratory exploration of normal human anatomy and physiology and relevant disease processes for the following systems: digestive, cardiovascular, respiratory, renal, and reproductive. Previously dissected human cadavers are an important part of the learning experience in this course, but students will not dissect human cadavers. Neither animal dissection or animal use are elements of this course. Prerequisite: MCB 245 and credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 250 Molecular Genetics credit: 3 Hours.

Fundamentals of molecular biology including structure of DNA, RNA and proteins, mechanisms of DNA replication, transcription and translation, gene organization, genetic variation and repair, and regulation of gene expression in Bacteria, and Eukarya. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: MCB 150, CHEM 102 and CHEM 104, or equivalents or consent of instructor.

MCB 251 Exp Techniqs in Molecular Biol credit: 2 Hours.

Laboratory course emphasizing a range of molecular biology questions, and the experimental approaches and methodologies needed to answer these questions. Lectures will accompany labs to explain theoretical background and experimental rationale. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Credit is not given for both MCB 251 and MCB 151. Prerequisite: Concurrent or prior enrollment in MCB 250 or consent of instructor.

MCB 252 Cells, Tissues & Development credit: 3 Hours.

Functional organization and physiology of cells and tissues, including cellular signaling, cellular interactions, and developmental processes. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: MCB 250 or equivalent with consent of instructor.

MCB 253 Exp Techniqs in Cellular Biol credit: 2 Hours.

Laboratory course emphasizing experimental techniques in cellular biology, cellular physiology, and developmental biology. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Credit is not given for both MCB 253 and MCB 151. Prerequisite: Concurrent or prior enrollment in MCB 252 or consent of instructor.

MCB 270 Medical Genetics credit: 3 Hours.

Addresses key issues in medical genetics, defined as human genetics for pre-health care professionals. The course covers basic principles of medical ethics, modes of inheritance, the molecular basis of genetic disorders, treatment approaches, gene therapy and emerging technologies like whole genome sequencing. Prerequisite: MCB 252 or equivalent or consent of instructor.

MCB 290 Undergraduate Research credit: 1 to 5 Hours.

Students assist in and/or conduct research under faculty supervision in an MCB research laboratory. The topics and nature of the work will vary but will be defined as work conducted in MCB research laboratories. For each hour of course credit in fall and spring terms, the student will be expected to complete 5 hours of work in the lab as directed. 75-80 total hours would be the expectation for 1 credit hour during 15-16 week terms. May be repeated to a maximum of 10 hours. Prerequisite: Consent of instructor.

MCB 291 Undergraduate Research Abroad credit: 1 to 5 Hours.

Students engage in research under faculty supervision at a location outside of the United States. Topics and precise nature of assistance to be determined by MCB faculty in consultation with faculty at the institution. May be repeated in separate terms up to 10 hours. Prerequisite: Consent of MCB faculty who has approved the proposed research plan; consent of faculty member at institution abroad who will be supervising the work and has approved the proposed research plan; evidence of adequate preparation for such study; consent of School of MCB. Not available to freshman.

MCB 297 MCB Honors Discussion credit: 1 Hour.

Honors discussion section associated with MCB 250, MCB 252, and MCB 354. Concurrent enrollment in the appropriate lecture course is required. May be repeated in separate terms to a maximum of 3 hours.

MCB 298 MCB Honors Lab Discussion credit: 1 Hour.

Discussion section associated with the Honors lab sections of MCB 251 and MCB 253. Concurrent enrollment in the appropriate Honors lab section is required. May be repeated in separate terms to a maximum of 2 hours.

MCB 299 MCB Merit Program Discussion credit: 1 Hour.

Provides the extra earned credit hours for students enrolled in the Merit Program in MCB 250, MCB 252, or MCB 354. Approved for letter and S/U grading. May be repeated up to 6 hours in a semester, to a maximum of 10 total hours. Prerequisite: Consent of instructor.

MCB 300 Microbiology credit: 3 Hours.

Emphasizes fundamental concepts of microbiology, including nutrition, physiology, genetics, molecular biology, ecology and evolution of microorganisms, and their role in nature, human health and disease. Credit is not given for both MCB 300 and MCB 100. Prerequisite: MCB 250 and credit or concurrent registration in MCB 252 or consent of instructor.

MCB 301 Experimental Microbiology credit: 3 Hours.

Laboratory emphasizing the fundamentals of microbiology. Topics include growth, isolation, and identification of bacteria; restriction endonuclease analysis of DNA, genetic cloning, and gene transfer. Computer methods are used for the identification of microorganisms and for the analysis of recombinant DNA molecules. Prerequisite: MCB 250 and 251 and credit or concurrent registration in MCB 300, or consent of instructor.

MCB 314 Introduction to Neurobiology credit: 3 Hours.

Introduction to functional and organizational principles of the mammalian nervous system. Topics include the function of nerve cells, neural signaling, sensory and motor systems, learning and memory, attention, motivation, emotions, language, neural development and neurological disorders. A general introduction appropriate for all majors. Same as NEUR 314. Prerequisite: Junior or senior standing.

MCB 316 Genetics and Disease credit: 4 Hours.

Introduction of the structure, expression, and regulation of genes of higher eukaryotes with an emphasis upon animal cells. Specific topics will include chromatin structure and its relation to gene expression, regulation of gene expression during development, recombination, molecular genetic technologies, gene replacement therapy, and the molecular genetics of cancers. Credit is not given for both MCB 316 and MCB 317. Prerequisite: MCB 150 and credit or concurrent registration in MCB 250 or consent of instructor.

MCB 317 Genetics and Genomics credit: 4 Hours.

Study of genetics as a discipline, genetic analysis as a tool to understand biology and the role of genome sciences in biology. Credit is not given for both MCB 317 and MCB 316. Prerequisite: MCB 250, MCB 251, MCB 252, and MCB 253; or consent of instructor.

MCB 320 Mechanisms of Human Disease credit: 3 Hours.

The advent of molecular biology and the Human Genome Project has dramatically increased our understanding of the mechanisms of human disease. The underlying molecular causes for many diseases have been elucidated. This course examines how abnormalities that occur at the molecular and cellular level manifest as pathologies affecting the structure and function of human tissues and organs. In addition, this course focuses on the pathophysiology of common human diseases and the environmental, genetic and epigenetic causes of specific disease types. Prerequisite: MCB 252 or consent of instructor.

MCB 354 Biochem & Phys Basis of Life credit: 3 Hours.

Introduction to biochemistry and structural biology emphasizing the physical and chemical properties of macromolecules. Credit is not given for both MCB 354 and MCB 450. Prerequisite: CHEM 232 or CHEM 236, and MCB 250 and MCB 252, or consent of instructor.

MCB 395 Special Topics in Human Physiology credit: 2 Hours.

This course consists of 2 components: (1) a journal club, in which students explore current advances in the diagnosis, treatment, and understanding of human diseases by reading, presenting and discussing primary research articles; and (2) instructional support for MCB 244, in which students hold open office hours and make brief (10-15 minute) instructional videos that highlight advanced topics covered in journal club. Prerequisite: MCB 244 and MCB 246 and instructor approval.

MCB 396 Special Topics in Human Health and Disease credit: 2 Hours.

This course consists of 2 components: (1) a journal club, in which students explore current advances in the diagnosis, treatment, and understanding of human diseases by reading, presenting and discussing primary research articles; and (2) instructional support for MCB 246, in which students hold open office hours and make brief (10-15 minute) instructional videos that highlight advanced topics covered in journal club. Prerequisite: MCB 244 and MCB 246 and instructor approval.

MCB 400 Cancer Cell Biology credit: 3 Hours.

Principles of eukaryotic cell biology with an emphasis on cancer cell biology; consideration of molecular and fine structural components of the cell with an emphasis on experimental analysis of the relationship of structure to function of gene, membrane, cytoskeleton, and extracellular matrix. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 251, MCB 252, MCB 253, and credit or concurrent registration in MCB 354 or MCB 450 or consent of instructor.

MCB 401 Cell & Membrane Physiology credit: 3 Hours.

Cellular and molecular basis of physiological process with an emphasis on phenomena taking place at the membrane of cells and organelles (e.g., signal transduction, ion transport, synaptic transmission, nerve conduction, bioelectricity, synaptic plasticity.) Structure and function of biological membranes through a quantitative lens. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 402 Sys & Integrative Physiology credit: 3 Hours.

Examines human systems physiology. Topics to be covered include the nervous and endocrine systems, muscle physiology, cardiac physiology, respiratory physiology, blood and immune homeostasis, renal physiology, and gastrointestinal physiology and energy homeostasis. Special emphasis is on homeostatic control and integration of body systems in both health and disease. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 403 Cell & Membrane Physiology Lab credit: 1 or 2 Hours.

Experimental investigation of cellular functions common to most eukaryotic cells; emphasis on biochemical, electrical, and mechanical recording techniques. Some animal dissection and the use of animal tissues are required in this course. Alternatives are not available. Inquiries concerning the use of or the dissection of animal tissues can be directed to the Instructor or Head of the Department. 2 undergraduate hours. 1 graduate hour. Prerequisite: Credit or concurrent registration in MCB 401 and previous biology laboratory experience.

MCB 404 Sys & Integrative Physiol Lab credit: 1 to 2 Hours.

Experimental investigation of organ systems of vertebrates with emphasis on biochemical, electrical and physical recording techniques. Some animal dissection and the use of animal tissues are required in this course. Alternatives are not available. Inquiries concerning the use of, or the dissection of animal tissues can be directed to the instructor or Head of the Department. 2 undergraduate hours. 1 graduate hour. Prerequisite: Credit or concurrent registration in MCB 402 and previous biology laboratory experience.

MCB 406 Gene Expression & Regulation credit: 3 Hours.

Provides in-depth and up-to-date coverage of gene expression and regulation. Lectures are centered on the principles of regulating gene expression in eukaryotic cells. The course covers macromolecule structure and function in gene expression; molecular mechanisms of the key gene expression events including transcription, RNA processing, localization and translation. Applications of these principles in medicine and therapeutics such as aging, cancer and drug design are also discussed. Same as BIOC 406. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 354 or consent of instructor.

MCB 408 Immunology credit: 3 Hours.

Introduction to fundamentals of immunology with emphasis on biological application; basic background for understanding immunological responses and techniques applicable to biological research. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 251, MCB 252, MCB 253, and MCB 354; or consent of instructor.

MCB 410 Developmental Biology, Stem Cells and Regenerative Medicine credit: 3 Hours.

Survey of molecular and cellular mechanisms involved in development and growth of animals, as well as recent advancement in stem cell and Regenerative medicine research. Topics to be covered include fertilization and early cell lineage, body axis formation, gastrulation, neural induction and patterning, segmentation, and other aspects of pattern formation including organogenesis and limb development, as well as embryonic stem cells, induced pluripotent stem cells, adult stem cells, regeneration and regenerative medicine. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 413 Endocrinology credit: 3 Hours.

Physiology and biochemistry of the endocrine system and its hormones with special reference to vertebrates and to human endocrine disorders. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor. One semester of biochemistry is recommended.

MCB 419 Brain, Behavior & Info Process credit: 3 Hours.

Exploration of the neural basis of animal behavior. Emphasis on the information processing problems that animals face in complex natural environments and how nervous systems have evolved to solve these problems. Introduction to the use of computer modeling and simulation techniques for exploring principles of nervous system design and function. Current literature in computational neurobiology and neuroethology will be incorporated in readings and class discussion. Same as BIOP 419 and NEUR 419. 3 undergraduate hours. 3 graduate hours. Prerequisite: CS 101; and PHYS 102 or PHYS 212; and MCB 252; or equivalent or consent of instructor.

MCB 421 Microbial Genetics credit: 3 Hours.

Prokaryotic microbial genetic systems; emphasis on typical data analyses, together with the basic classes of genetic phenomena. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or consent of instructor.

MCB 424 Microbial Biochemistry credit: 3 Hours.

Examines the biochemical ecology of diverse microbial groups with emphasis on anaerobic systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250 and MCB 354 or MCB 450, or consent of instructor.

MCB 426 Bacterial Pathogenesis credit: 3 Hours.

Emphasizes prokaryotes that cause important diseases in humans and other animals; host-parasite bacteriology; and chemistry and genetics of mechanisms of pathogenesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and MCB 354, or consent of instructor.

MCB 428 Microbial Pathogens Laboratory credit: 2 Hours.

Laboratory study of methods of recognition and differentiation, diagnostic tests, and mechanisms of bacterial and viral pathogenesis. Topics include infections of the urinary tract, respiratory tract, gastrointestinal tract, and sexually transmitted diseases. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 300 and MCB 301 or consent of instructor.

MCB 429 Cellular Microbiology & Disease credit: 3 Hours.

Emphasizes cell biology of infectious diseases, using cellular, molecular, and animal models. Will stress molecular cross-talk that drives host-pathogen interactions, state-of-the art approaches for investigating host and microbial cell and molecular biology, latest paradigms in host cell biology, and, the evolutionary basis by which pathogens can manipulate host cell cytoskeleton, membranes, organelles, cell cycle, gene expression, and signaling in eukaryotic cells. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and MCB 354 or consent of instructor.

MCB 430 Molecular Microbiology credit: 3 Hours.

Modern contributions to the science of microbiology; emphasizes the structure, function, and synthesis of informational macromolecules and on the role microorganisms have played in molecular biology. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and credit or concurrent registration in MCB 354, or consent of instructor.

MCB 431 Microbial Physiology credit: 3 Hours.

Examines bacterial physiology, including discussions of energetics, regulation of metabolism, and cell structure. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or equivalent; credit or concurrent registration in a biochemistry course.

MCB 432 Computing in Molecular Biology credit: 3 Hours.

Examination of computational aspects of biology with an emphasis on the relationships between biological questions and their recastings as mathematical or logical problems. Topics are drawn from biochemistry, genetics, molecular sequence analysis, and molecular structure. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 252, MCB 354, and calculus I (MATH 220 or MATH 221), and calculus II (MATH 231) or biostatistics (STAT 212); or consent of instructor.

MCB 433 Virology & Viral Pathogenesis credit: 3 Hours.

Same as PATH 433. See PATH 433.

MCB 434 Food & Industrial Microbiology credit: 3 Hours.

Same as FSHN 471. See FSHN 471.

MCB 435 Evolution of Infectious Disease credit: 3 Hours.

Understanding the evolution and ecology of the microbial world is of great importance to human health and the health of our planet. Students will explore the ecology and evolution principles that apply to viruses, microbial eukaryotes, archaea and bacteria. The primary literature on historical and emerging infectious diseases will be used to illustrate critical applications of these basic principles. Examples include applying genomics tools to understand the evolutionary basis for antibiotic resistance, the spread of emerging pathogens, and the ecology of probiotics and the human microbiome. The objective of this class is to better understand how humans shape the diversity and dynamics of the microbial world living in and around us every day. Same as IB 442. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or consent of instructor.

MCB 436 Global Biosecurity credit: 1 Hour.

Designed to provide students with broad coverage of key areas of scientific, legal, social, ethical, and political aspects of biosecurity, emphasizing current problems and research in the areas of biodefense, emerging infectious diseases, synthetic biology, and other topics. In combination with related reading assignments, the weekly special topics-based seminar will integrate knowledge of modern biomedical research, advances in biotechnology, and natural and manmade biological threats with the skills to analyze and develop public policies and strategies for enhancing global biosecurity. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 150 or the equivalent or consent of instructor.

MCB 442 Comparative Immunobiology credit: 4 Hours.

Same as ANSC 450 and PATH 410. See ANSC 450.

MCB 446 Physical Biochemistry credit: 3 Hours.

Same as CHEM 472 and BIOC 446. See BIOC 446.

MCB 450 Introductory Biochemistry credit: 3 Hours.

Chemistry and metabolism of carbohydrates, lipids, proteins, nucleic acids, vitamins, and coenzymes and their relation to the regulation and processes of organisms, cells, and subcellular components. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MCB 450 and MCB 354. Prerequisite: CHEM 232 or CHEM 236, or equivalent, or consent of instructor. Not intended for students in the MCB or biochemistry curricula.

MCB 458 Basic Human Pathology credit: 3 Hours.

Introduction to the basic mechanisms of human disease with a focus on the building blocks of pathological processes at the sub-organismal and organismal level. Basic biological processes will be stressed including tissue adaptation, injury, inflammation, repair and neoplasia. Pathology synthesizes cellular and molecular biology, biochemistry and immunology holistically so as to understand the body's limited responses to the cornucopia of experienced physiological insults. 3 undergraduate hours. No graduate credit. Prerequisite: MCB 354 or equivalent, or consent of instructor. For MCB and Biochemistry undergraduate majors only.

MCB 460 Regeneration and Medicine credit: 3 Hours.

A survey of regeneration biology and medicine at the organ, tissues, and cellular/genetic/molecular/levels. Basic concepts are presented with a focus on contemporary methods and seminal experiments. Students will learn to think critically and creatively about experimentation and analyses of three regenerative medicine strategies: stem cell transplantation, bioartificial tissues, and chemical induction of regeneration in vivo. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 410 or consent of instructor. Recommended: knowledge of vertebrate histology and anatomy.

MCB 461 Cell & Molecular Neuroscience credit: 3 Hours.

Designed as an in-depth foundation course for graduate and undergraduate students with strong neuroscience interests. Covers up-to-date cellular and molecular neurobiology (including basic principles of neuronal function, signaling, and plasticity) and introductory brain anatomy that underlie brain function and animal behaviors. Pathogenic mechanisms of neurological diseases and disorders from the latest research will be heavily explored. Same as NEUR 461. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252, MCB 250 or equivalent, or consent of instructor. May be taken concurrently with MCB 462.

MCB 462 Integrative Neuroscience credit: 3 Hours.

Employs integrative, multi-level systems approaches to nervous system and behavior. Focuses on neural circuits in sensory integration, pattern generation, the integration of sensation, internal states and learning in behavioral decision, the neuronal natures of pain, sleep, and biological rhythms, neuroeconomics, new vistas in neural modeling and interfacing brain and machine. Students are presented in neuroethological contexts of evolution and the economics of behavior and physiology. Same as NEUR 462. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor. May be taken concurrently with MCB 461.

MCB 465 Human Metabolic Disease credit: 3 Hours.

Examination of the molecular and physiological basis of human metabolic disease. Disruption of metabolic and energy homeostasis plays key roles leading to metabolic disorders. We will examine how lipid/glucose levels and energy balance are controlled in health and how they are abnormally regulated in disease states. In addition, we will cover current topics related to control of metabolism including aging and circadian rhythms. Methodologies leading to scientific discoveries and potential preventive and therapeutic agents will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 252, or consent of instructor.

MCB 471 Cell Structure and Dynamics credit: 3 Hours.

Molecular basis of cellular organization focusing on how cells secrete, move, adhere, divide, communicate, and die. Material will emphasize critical analysis of experiments, current controversies and hypothesis testing. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250 and MCB 252 or consent of instructor. Prior or concurrent enrollment in MCB 354 desirable.

MCB 480 Eukaryotic Cell Signaling credit: 2 Hours.

General principles of molecular signaling regulating membrane, cytoplasmic, and nuclear events in eukaryotic cells with emphasis on mammalian systems. Contemporary methods of investigation and the principles of identifying and solving problems related to signal transduction will be emphasized. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 481 Developmental Neurobiology credit: 3 Hours.

Principles of vertebrate and invertebrate developmental neurobiology with emphasis on the molecular and cellular mechanisms controlling neuronal determination, axon pathfinding, synapse formation, and plasticity. Same as NEUR 481. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 400 or MCB 461 or consent of instructor.

MCB 492 Senior Thesis credit: 3 to 5 Hours.

Research conducted under the direction of a faculty member in the School of Molecular and Cellular Biology. Normally, the student enrolls in MCB 492 during the last semester on campus prior to graduation. In the semester preceding enrollment, interested students should consult with their faculty advisors concerning enrollment procedures. A minimum of 3 credit hours is required, and a thesis must be presented for credit to be received. Successful completion of MCB 492 is required in order to be eligible for graduation with distinction in MCB. 3 to 5 undergraduate hours. No graduate credit. Prerequisite: Two consecutive semesters of at least 2 credit hours of MCB 290 under the guidance of the same faculty member, or consent of instructor.

MCB 493 Special Topics Mol Cell Biol credit: 1 to 4 Hours.

Discussion of current topics of interest within the broad domain of molecular and cellular biology; seminar or lecture format. Topics vary. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing and consent of instructor.

NEUR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NEUR>)

Neuroscience Courses**NEUR 302 Applied Neuroscience credit: 3 Hours.**

Same as PSYC 302. See PSYC 302.

NEUR 314 Introduction to Neurobiology credit: 3 Hours.

Same as MCB 314. See MCB 314.

NEUR 403 Memory and Amnesia credit: 3 or 4 Hours.

Same as PSYC 403. See PSYC 403.

NEUR 405 Cognitive Neuroscience credit: 3 or 4 Hours.

Same as PSYC 404. See PSYC 404.

NEUR 413 Psychopharmacology credit: 3 or 4 Hours.

Same as PSYC 413. See PSYC 413.

NEUR 414 Brain, Learning, and Memory credit: 3 or 4 Hours.

Same as PSYC 414. See PSYC 414.

NEUR 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Same as FSHN 417 and PSYC 417. See PSYC 417.

NEUR 419 Brain, Behavior & Info Process credit: 3 Hours.

Same as BIOP 419 and MCB 419. See MCB 419.

NEUR 421 Principles of Psychophysiology credit: 3 or 4 Hours.

Same as PSYC 421. See PSYC 421.

NEUR 432 Genes and Behavior credit: 3 Hours.

Same as ANTH, IB 432, and PSYC 432. See IB 432.

NEUR 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Same as PHIL 433 and PSYC 433. See PSYC 433.

NEUR 445 Cognitive Neuroscience Lab credit: 4 Hours.

Same as PSYC 445. See PSYC 445.

NEUR 450 Cognitive Psychophysiology credit: 3 or 4 Hours.

Same as PSYC 450. See PSYC 450.

NEUR 451 Neurobio of Aging credit: 0 to 4 Hours.

Same as PSYC 451 and KIN 458. See PSYC 451.

NEUR 453 Cog Neuroscience of Vision credit: 3 or 4 Hours.

Same as PSYC 453. See PSYC 453.

NEUR 461 Cell & Molecular Neuroscience credit: 3 Hours.

Same as MCB 461. See MCB 461.

NEUR 462 Integrative Neuroscience credit: 3 Hours.

Same as MCB 462. See MCB 462.

NEUR 481 Developmental Neurobiology credit: 3 Hours.

Same as MCB 481. See MCB 481.

Molecular and Cellular Biology Concentration**For the Degree of Bachelor of Science in Liberal Arts and Sciences****Major in Sciences and Letters Curriculum**

E-mail address: undergrad@mcb.illinois.edu

Students receive a Degree of Bachelor of Science in Liberal Arts and Sciences

Minimum required courses: 67-71 hours, including 21 hours of 300- or 400-level courses; 12 hours of 300- and 400-level courses in the major must be taken on this campus.

General Education requirements: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Certain advanced courses may be taken prior to completion of the MCB 250-MCB 253, MCB 354 sequence with permission of an academic advisor. A minimum of 15 hours of 300- or 400-level courses in MCB from the approved list is required.

In addition, undergraduate research (MCB 290, MCB 291 or departmental equivalent) is strongly recommended for students planning to go to graduate school. No more than 10 hours of MCB 290, MCB 291 or departmental equivalent credit may be counted towards the 120 hours required for a degree in MCB.

Minimum hours required for graduation: 120 hours.

Students earning a degree in Molecular and Cellular Biology may not also earn a second degree in the Specialized Curriculum in Biochemistry.

Students earning a degree in Molecular and Cellular Biology may not double major in Integrative Biology.

Code	Title	Hours
MATH 220	Calculus	4-5
or MATH 221	Calculus I	
MATH 231	Calculus II	3
or STAT 212	Biostatistics	
Select one group of courses:		8-10
CHEM 102 & CHEM 103 & CHEM 104 & CHEM 105	General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II	
CHEM 202 & CHEM 203 & CHEM 204 & CHEM 205	Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II	
CHEM 232	Elementary Organic Chemistry I	4
CHEM 233	Elementary Organic Chem Lab I	2
Select one group of courses:		10-12
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern	
PHYS 211 & PHYS 212 & PHYS 213 & PHYS 214	University Physics: Mechanics and University Physics: Elec & Mag and Univ Physics: Thermal Physics and Univ Physics: Quantum Physics	
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
MCB 250	Molecular Genetics	3
MCB 251	Exp Techniqs in Molecular Biol	2
MCB 252	Cells, Tissues & Development	3
MCB 253	Exp Techniqs in Cellular Biol	2
MCB 354	Biochem & Phys Basis of Life	3

At least four additional courses at the 300- to 400-level from the Approved List of Advanced Courses for MCB Majors are also required, including one lab course. (<http://mcb.illinois.edu/undergrad/courses/advanced>) 15-16

Distinction

Students in MCB can qualify for Distinction via one of the following:

Distinction for Excellence in Research:

To be eligible for graduation with Distinction a student must:

Complete 3 semesters of MCB 290 for 2 credit hours or more each semester. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator.

To be eligible for graduation with High Distinction a student must:

Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester of MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee.

To be eligible for graduation with Highest Distinction a student must:

Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.90 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee. Distinction for Excellence in Academics:

To be eligible for graduation with Academic Distinction a student must:

Maintain a major GPA of 3.90 or higher in the MCB major (biology, chemistry, physics and math courses for the MCB major) at the end of their penultimate semester.

Molecular and Cellular Biology Honors Concentration

The Molecular and Cellular Biology Honors Concentration is designed for students whose preparation and interests motivate them to desire a more intensive undergraduate biology experience and to prepare for graduate or professional school. The MCB Honors Concentration is based on the MCB concentration (p. 515). Students must satisfy all of the requirements for the MCB concentration in addition to the requirements for the MCB Honors Concentration. Students interested in the MCB Honors Concentration (<http://mcb.illinois.edu/undergrad/honors>) should contact the MCB Honors Concentration coordinator (shawna@illinois.edu) during the freshman year for more information.

Distinction

Students in MCB can qualify for Distinction via one of the following:

Distinction for Excellence in Research:

To be eligible for graduation with Distinction a student must:

Complete 3 semesters of MCB 290 for 2 credit hours or more each semester. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator.

To be eligible for graduation with High Distinction a student must:

Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester of MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.25 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee.

To be eligible for graduation with Highest Distinction a student must:

Complete 2 semesters of MCB 290 for 2 credit hours or more each semester. Complete 1 semester MCB 492 for 3 credit hours or more. Maintain a minimum cumulative GPA of 3.90 at the end of penultimate semester. Give at least one poster presentation at the Undergraduate Research symposium or other approved venue. Obtain a letter of support from their Principal Investigator. Submit a written thesis that is approved by the Distinction Committee. Distinction for Excellence in Academics:

To be eligible for graduation with Academic Distinction a student must:

Maintain a major GPA of 3.90 or higher in the MCB major (biology, chemistry, physics and math courses for the MCB major) at the end of their penultimate semester.

Specialized Curriculum in Biochemistry

For the Degree Bachelor of Science in Biochemistry

The typical program of courses required to satisfy this degree totals 126-131 hours as outlined below including up to 12 hours of non-primary language (if not completed in high school); in no case will a program totaling less than 120 hours qualify for graduation. In addition, in order to graduate there is a minimum 2.0 cumulative academic grade point average and student must attain a 2.5 academic grade point average in the chemistry, biochemistry, biology, mathematics, physics and advanced electives in science/engineering courses specified in this curriculum. All proposals for course substitutions must be approved by the academic advisor. This curriculum is intended for those students who desire a rigorous education in chemistry, biochemistry, and biology, who have definite research-oriented goals, and whose career objectives include graduate school, MD/PhD programs, or industry.

E-mail: biocug@life.illinois.edu

Web address for department: <http://mcb.illinois.edu/departments/biochemistry>

All students must complete the General education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 120 hours

Students earning the Biochemistry degree automatically complete the Chemistry minor. Students earning a degree in the Specialized Curriculum in Biochemistry may not earn a second degree in the Science and Letters Curriculum in Molecular and Cellular Biology.

Departmental distinction: A student seeking distinction must satisfy the following:

- Complete a minimum of 6 credit hours of undergraduate research (BIOC 290 and BIOC 492) with a minimum of 4 credit hours of BIOC 492.
- Earn at least a 3.25 grade-point average.
- Present a senior thesis to the department.

Code	Title	Hours
Select one of the following:		8-9
CHEM 202 & CHEM 203 & CHEM 204 & CHEM 205	Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II and Accelerated Chemistry Lab II (preferred sequence)	
CHEM 102 & CHEM 103 & CHEM 104 & CHEM 105	General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II (with advisor approval)	
Organic chemistry, select from:		8-9
CHEM 236 & CHEM 237 & CHEM 436	Fundamental Organic Chem I and Structure and Synthesis and Fundamental Organic Chem II (preferred sequence)	
CHEM 232 & CHEM 233 & CHEM 332	Elementary Organic Chemistry I and Elementary Organic Chem Lab I and Elementary Organic Chem II (with advisor approval)	
Molecular and Cellular Biology		17
MCB 150	Molec & Cellular Basis of Life	
MCB 250	Molecular Genetics	
MCB 251	Exp Techniqs in Molecular Biol	
MCB 252	Cells, Tissues & Development	
MCB 253	Exp Techniqs in Cellular Biol	
MCB 354	Biochem & Phys Basis of Life	
or equivalent as approved by academic advisor		
Physical chemistry, select one group of courses:		7-8
CHEM 440	Physical Chemistry Principles (Biological Perspective Section)	
BIOC 446	Physical Biochemistry (preferred sequence)	
or		
CHEM 442	Physical Chemistry I	
CHEM 444	Physical Chemistry II (with advisor approval)	
Mathematics		11-12
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	

MATH 241	Calculus III	
Physics, select from: ³		10-12
PHYS 211 & PHYS 212 & PHYS 213 & PHYS 214	University Physics: Mechanics and University Physics: Elec & Mag and Univ Physics: Thermal Physics and Univ Physics: Quantum Physics (preferred sequence)	
PHYS 101 & PHYS 102	College Physics: Mech & Heat and College Physics: E&M & Modern (or equivalent as approved by academic advisor (with advisor approval)	
Biochemistry: ⁴		13
BIOC 455	Technqs Biochem & Biotech	
BIOC 460	Biochemistry Senior Seminar	
BIOC 406	Gene Expression & Regulation	
BIOC 445	Current Topics in Biochemistry	
Select 10 hours of Advanced Science/Technical Electives (may include up to 7 hours of BIOC 492, Senior Thesis) from approved list. ⁵		10
Nontechnical Requirements: ⁶		variable
General education:		
Foreign language - three semesters of college study (or three years of high school study) in a single foreign language to satisfy the campus foreign language requirement		
Composition I writing requirement to satisfy the campus Composition I requirement		
Advanced Composition writing requirement (BIOC 460 is required)		
Humanities/Arts to satisfy the campus general education requirements		
Social/Behavioral sciences to satisfy the campus general education requirements		
Cultural Studies to satisfy the campus general education requirement		
Electives (not including any credit in satisfaction of the above requirements)		variable

¹ *Transfer credit must be approved by an advisor in biochemistry in order to be used to satisfy degree requirements.*

² *A more detailed description of the requirements is listed in the Biochemistry Curriculum Handbook, available in room 419A of Roger Adams Laboratory.*

³ *PHYS 213 is not required if CHEM 442/CHEM 444 sequence is taken.*

⁴ *Freshman orientation course is under development and will be required. See advisor for details.*

⁵ *An approved list of current courses will be updated annually in January/February for the coming year. Contact advisor.*

⁶ *The requirements for the Campus General Education categories of Natural Sciences and Technology and Quantitative Reasoning I are fulfilled through coursework in the curriculum.*

Philosophy

Kirk Sanders, Department Head

105 Gregory Hall, 810 South Wright, Urbana

PH: (217) 333-2889

<http://www.philosophy.illinois.edu/>

Philosophy is the oldest, broadest, and most fundamental form of inquiry. Some philosophical questions have to do with the understanding of ourselves and whatever else there may be. Others focus upon the nature of different forms of knowledge and experience, and upon ethical issues and problems of value. The study of philosophy is one of the most important elements in a good liberal education. It also improves one's ability to think clearly, and to construct, analyze, and criticize arguments of any kind. The major and minor are sponsored by the Department of Philosophy.

Major in Philosophy

Major in Sciences and Letters Curriculum

E-mail: phildept@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 44 hours including at least 32 hours of Philosophy courses

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Eligibility for distinction may be pursued by either:

1. the thesis option, which requires at least 35 hours of philosophy courses (including 5 courses at the 300- or 400-level), a grade point average of 3.5 in all philosophy courses, and writing a thesis; or
2. the course work option, which requires 38 hours of philosophy (including 8 advanced courses) and a 3.5 grade point average in all philosophy courses. For further information, inquire in the department office.

Code	Title	Hours
32 hours of Philosophy courses including: ¹		
Select one of the following:		
PHIL 102	Logic and Reasoning	3
PHIL 103	Logic and Reasoning QR II	
PHIL 202	Symbolic Logic ²	
PHIL 203	Ancient Philosophy	4
PHIL 206	Early Modern Philosophy	4
At least one course in Ethics and Value Theory chosen from the following:		
PHIL 421	Ethical Theories	3

PHIL 422	Recent Developments in Ethics	
PHIL 429	Value Theory	
PHIL 435	Social Philosophy	
PHIL 436	Phil of Law and of the State	
PHIL 441	Existential Philosophy	
At least one course in Epistemology and Metaphysics chosen from the following:		3
PHIL 425	Philosophy of Mind	
PHIL 426	Metaphysics	
PHIL 430	Theory of Knowledge	
PHIL 438	Philosophy of Language	
PHIL 443	Phenomenology	
At least 15 additional hours of course work in philosophy, with 12 of those hours being above the 100 level (including at least two 300- or 400-level courses).		15
A student may select either of two types of programs of supporting course work and should work out a specific program of the type chosen with the help and approval of a departmental adviser.		12
Twelve hours minimum. Select from:		
Option I: Intensive study in another discipline. Courses normally beyond the 100 level in one other discipline. Most approved minors satisfy this requirement. A second major may also be used to satisfy this requirement		
or		
Option II: A special program of study built around a unifying theme or topic. Course work outside philosophy in one or more other discipline(s), normally beyond the 100 level.		
Total Hours		44

¹ *If possible, students should take these courses prior to the senior year. Substitutions may be made only with the approval of the chair of the department.*

² *Those considering graduate work in philosophy should take PHIL 202.*

Minor in Philosophy

E-mail: phildept@illinois.edu

Web address for department: www.phil.illinois.edu (<http://www.philosophy.illinois.edu>)

Code	Title	Hours
PHIL 203	Ancient Philosophy	4
PHIL 206	Early Modern Philosophy	4
Four other Philosophy courses, including at least 6 hours at the 300- or 400- level		12
Total Hours		20

PHIL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PHIL>)

Courses

PHIL 100 Intro to Philosophy-ACP credit: 3 Hours.

Consideration of some main problems of philosophy concerning, for example, knowledge, God, mind and body, and human freedom. Course is identical to PHIL 101 except for the additional writing component. Credit is not given for both PHIL 100 and PHIL 101. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil

PHIL 101 Introduction to Philosophy credit: 3 Hours.

Consideration of some main problems of philosophy concerning, for example, knowledge, God, mind and body, and human freedom. Credit is not given for both PHIL 101 and PHIL 100.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

PHIL 102 Logic and Reasoning credit: 3 Hours.

Practical study of logical reasoning; techniques for analyzing and criticizing arguments, with emphasis on assessing the logical coherence of what we read and write.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

PHIL 103 Logic and Reasoning QR II credit: 3 Hours.

Introductory logic course that concentrates on investigating how the formal mathematical structure of statements, as well as the structure of the relationships among such statements, reveals the logical force of arguments that we use everyday. PHIL 102 takes a less formal, less mathematical approach to the same material. Credit is not given for both PHIL 103 and PHIL 102.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Quantitative Reasoning II

PHIL 104 Intro to Ethics-ACP credit: 3 Hours.

Some basic questions of ethics, discussed in the light of influential ethical theories and with reference to specific moral problems, such as: What makes an action morally right? Are moral standards absolute or relative? What is relation between personal morality and social morality, and between social morality and law? Course is identical to PHIL 105 except for the additional writing component. Credit is not given for both PHIL 104 and either PHIL 105 or PHIL 106. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil

PHIL 105 Introduction to Ethics credit: 3 Hours.

Some basic questions of ethics, discussed in the light of influential ethical theories and with reference to specific moral problems, such as: what makes an action morally right? are moral standards absolute or relative? what is the relation between personal morality and social morality, and between social morality and law? Credit is not given for both PHIL 105 and either PHIL 104 or PHIL 106.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

PHIL 106 Ethics and Social Policy credit: 3 Hours.

Examination of the moral aspects of social problems, and a survey of ethical principles formulated to validate social policy. Credit is not given for both PHIL 106 and either PHIL 104 or PHIL 105.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

PHIL 107 Intro to Political Philosophy credit: 3 Hours.

Introduction to core ideas in political and legal philosophy, for example, rights, equality, political obligations, legitimacy of states, nationalism, and oppression.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PHIL 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, JS 108, REL 108, and SOC 108. See REL 108.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

PHIL 109 Religion & Society in West II credit: 3 Hours.

Same as ANTH 109, REL 109, and SOC 109. See REL 109.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

PHIL 110 World Religions credit: 3 Hours.

Same as REL 110. See REL 110.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

PHIL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

PHIL 198 Freshman Seminar credit: 3 Hours.

Investigation of selected fundamental topics of philosophical inquiry. See Schedule for current topics. Prerequisite: Freshman James Scholar.

PHIL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PHIL 201 Philosophy in Literature credit: 3 Hours.

Consideration of the philosophical themes implicit in a variety of important literary works, both classical and modern; may include such authors as Sophocles, Shakespeare, Goethe, Dostoevsky, and Sartre.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 202 Symbolic Logic credit: 3 Hours.

Introduction to the techniques of formal logic, dealing primarily with truth-functional logic and quantification theory.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

PHIL 203 Ancient Philosophy credit: 4 Hours.

Introduction to ancient philosophy, concentrating on Plato and Aristotle, dealing with such topics as metaphysics, ethics, and the theory of knowledge. Same as CLCV 203.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 206 Early Modern Philosophy credit: 4 Hours.

The history of philosophy from Descartes to Kant, concentrating on such topics as metaphysics, ethics, and the theory of knowledge.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 210 Ethics credit: 3 Hours.

Problems in ethical theory; the nature of right and wrong, justice, conscience, moral feelings, etc.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 214 Biomedical Ethics credit: 3 Hours.

Philosophical study of selected moral and social problems concerning medicine and biology, such as euthanasia, abortion, allocation of scarce medical resources, health care and rights, and genetic engineering.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 220 Special Topics credit: 3 Hours.

A consideration of readings on selected philosophical topics. May be repeated in the same semester to a maximum of 6 undergraduate hours and in separate semesters if topics vary. See Class Schedule for current topics.

PHIL 230 Philosophy of Religion Intro credit: 3 Hours.

Introduction to philosophical analysis of religious thought and experience. Same as REL 230.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 231 Religion and Philosophy credit: 3 Hours.

Same as REL 231. See REL 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 250 Conceptions of Human Nature credit: 3 Hours.

Comparative examination of important historical and contemporary conceptions of human nature.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 270 Philosophy of Science credit: 3 Hours.

Investigation of the nature of scientific knowledge by examining archetypal examples from physical science (e.g., Ptolemaic and Copernican astronomy); nature of scientific truth, validation of theories, nature of scientific theories, evolution of theories, experimental procedure, role of presuppositions, scientific revolutions, etc.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 307 Elmnts Semantics & Pragmatics credit: 3 Hours.

Same as LING 307. See LING 307.

PHIL 316 Ethics and Engineering credit: 3 Hours.

Same as ECE 316. See ECE 316.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

PHIL 325 Recent European Philosophy credit: 3 Hours.

Introduction to the major recent philosophical movements in Europe, such as phenomenology, existentialism, philosophical anthropology, and neo-Marxism.

PHIL 351 Thinking and Reasoning credit: 3 Hours.

Same as PSYC 351. See PSYC 351.

PHIL 356 Evolution of Mind credit: 3 Hours.

Same as PSYC 356. See PSYC 356.

PHIL 357 Intro Cognitive Science credit: 3 Hours.

Same as PSYC 357. See PSYC 357.

PHIL 380 Current Controversies credit: 3 Hours.

Philosophical examination of positions taken on some issue of current concern, for example, human sexuality, death and dying, feminism, race, intelligence, war, sociobiology, and environmental ethics. See Class Schedule for current topics. May be repeated with approval.

PHIL 390 Individual Study credit: 2 to 4 Hours.

Readings in selected philosophical topics. Course may be taken by honors students in partial fulfillment of department honors requirements. May be repeated to a maximum of 6 hours in separate terms. Prerequisite: Open to juniors and seniors with a grade-point average of 3.0 only by prior arrangement with a member of the faculty and with consent of the department director of undergraduate studies or the chair.

PHIL 398 Advanced Undergraduate Seminar credit: 3 Hours.

Seminar on selected philosophical topics; intended primarily for advanced undergraduate philosophy majors. May be repeated to a maximum of 6 hours. Prerequisite: A grade-point average of 3.0 and consent of instructor.

PHIL 404 Medieval Philosophy credit: 3 or 4 Hours.

History of philosophy from St. Augustine to William of Ockham. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 101 or PHIL 203.

PHIL 407 Logic and Linguistic Analysis credit: 3 or 4 Hours.

Same as LING 407. See LING 407.

PHIL 410 Classical Ancient Philosophers credit: 3 or 4 Hours.

Intensive study of one ancient philosopher or the intensive study of a major philosophical problem through the consideration of a number of ancient philosophers; chief emphasis on Plato and/or Aristotle. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy, preferably PHIL 203.

PHIL 411 Nineteenth Century Philosophy credit: 3 or 4 Hours.

Examination of the thought of such major figures as Hegel, Marx, and Nietzsche. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 412 Classical Modern Philosophers credit: 3 or 4 Hours.

Intensive study of one classical modern philosopher or the intensive study of major philosophical problem through the consideration of a number of classical modern philosophers, e.g., Descartes, Leibniz, Locke, Hume, Kant, and Hegel. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy, preferably PHIL 206.

PHIL 414 Major Recent Philosophers credit: 3 or 4 Hours.

Intensive study of one or two important philosophers of the present century, e.g., Wittgenstein, Dewey, Heidegger, or Quine. Topics vary; see Class Schedule. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy.

PHIL 419 Space, Time, and Matter-ACP credit: 3 or 4 Hours.

Same as PHYS 419. See PHYS 419.

This course satisfies the General Education Criteria for:
Advanced Composition

PHIL 420 Space, Time, and Matter credit: 2 Hours.

Same as PHYS 420. See PHYS 420.

PHIL 421 Ethical Theories credit: 3 or 4 Hours.

Systematic study of selected classics in moral philosophy by such philosophers as Aristotle, Hume, Mill, Kant, and Nietzsche. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 422 Recent Developments in Ethics credit: 3 or 4 Hours.

Intensive treatment of issues in contemporary ethical theory. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated one time with approval. Prerequisite: One course in ethics.

PHIL 424 Philosophy of Religion credit: 3 or 4 Hours.

Considers central issues in the philosophy of religion, e.g., the justification of religious belief, the nature of God, religious experience, etc. Same as REL 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 425 Philosophy of Mind credit: 3 or 4 Hours.

Philosophical problems arising in connection with mental phenomena; the relation of mind and body; free will and determinism; our knowledge of other minds; and the self and personal identity. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 426 Metaphysics credit: 3 or 4 Hours.

Investigation of various metaphysical issues concerning, for example, existence, particulars and universals, causation, laws of nature, time, personal identity, material objects, and modality. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 429 Value Theory credit: 3 or 4 Hours.

Study of the nature and status of values, and of variable topics in value theory, e.g., different types of values, and problems of truth, justifiability, objectivity and relativism with respect to them. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated as topics vary to a maximum of 6 undergraduate hours, or 8 graduate hours. Prerequisite: Junior standing.

PHIL 430 Theory of Knowledge credit: 3 or 4 Hours.

Investigation of issues concerning, for example, the nature and possibility of knowledge; its forms and limits; its relation to belief, truth, and justification; and the nature of truth. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Same as NEUR 433 and PSYC 433. See PSYC 433.

PHIL 435 Social Philosophy credit: 3 or 4 Hours.

Selected topics from the nature of social organization, nature and convention, utility, justice, equality, liberty, rights, and duties. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 436 Phil of Law and of the State credit: 3 or 4 Hours.

Examination of issues in the philosophy of law, such as the nature of law, law and morality, justice, liberty and authority, punishment, and legal responsibility. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 438 Philosophy of Language credit: 3 or 4 Hours.

Historical or comparative study of the philosophy of language. Same as LING 438. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 439 Philosophy of Mathematics credit: 3 or 4 Hours.

Introduction to some of the main philosophical problems and contemporary viewpoints concerning mathematical concepts, mathematical methods, and the nature of mathematical truth. Same as MATH 439. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 441 Existential Philosophy credit: 3 or 4 Hours.

Study of a selection of the major writings of the more important existential philosophers, e.g., Kierkegaard, Nietzsche, Heidegger, Sartre, and de Beauvoir. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 443 Phenomenology credit: 3 or 4 Hours.

Study of the development of phenomenology from Husserl to the present. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 444 Topics in Recent European Phil credit: 3 or 4 Hours.

Examines the continental treatments of selected issues, such as interpersonal relationships, human nature, perception or interpretation; see Class Schedule for current topics. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated in separate terms as topics vary to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: One course in philosophy.

PHIL 453 Formal Logic and Philosophy credit: 3 or 4 Hours.

Techniques and results of symbolic logic, with special attention to topics of philosophical importance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 202 or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

PHIL 454 Advanced Symbolic Logic credit: 3 or 4 Hours.

Completeness, compactness, and Lowenheim-Skolem theorems for first-order logic; incompleteness and undecidability of formal systems; and additional material on proof theory, model theory, or axiomatic set theory as time permits. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 202 or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

PHIL 471 Contemporary Phil of Science credit: 3 or 4 Hours.

Examines important developments and controversies in recent philosophy of science. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 472 Kierkegaard and the Self credit: 3 or 4 Hours.

Same as CWL 472, REL 472, and SCAN 472. See SCAN 472.

PHIL 477 Philosophy of Psychology credit: 3 or 4 Hours.

Psychology, broadly construed, is a cluster of disciplines devoted to the study of mind and behavior, including cognitive and developmental psychology, neuroscience, and artificial intelligence. Investigates the relationships that these disciplines bear to one another and of their overall potential to resolve age-old philosophical questions about the mind. Same as PSYC 477. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two courses in philosophy or two courses in psychology or consent of instructor.

PHIL 492 Thesis credit: 2 to 4 Hours.

Special training in philosophical investigation. Course may be taken by students pursuing graduation with distinction in partial fulfillment of those requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Open to seniors with a grade-point average of 3.5 in all philosophy courses only by prior arrangement with a member of the faculty and with consent of the department director of undergraduate studies or the chair.

Political Science

Robert Pahre, Head of Department

420 David Kinley Hall, MC - 713, 1407 West Gregory Drive, Urbana, IL
PH: (217) 333-3881

<http://www.pol.illinois.edu>

The Department of Political Science helps students acquire a broad understanding of political science and to pursue selected subfields of the discipline in depth. To accomplish these objectives, the department

provides courses of study that introduce students to the discipline and to its principal fields. These include American government and politics, comparative government and politics, international relations, and political philosophy. Supporting courses are an integral part of the program and should be selected with a view toward building a coherent selection adapted to the student's particular interests.

The Department of Political Science, along with the European Union Center, offers a **5 year BALAS/MA in Political Science and European Union Studies**.

The Civic Leadership Program

Students are admitted to the Civic Leadership Program through a competitive process administered by the Department of Political Science. The Civic Leadership Program offers a plan of study to enable students with the capacity, skills, and knowledge to provide informed, principled, and effective civic leadership. Students can participate either as Political Science Majors with a concentration in Civic Leadership or as majors in other fields with a Minor in Political and Civic Leadership. All students in the Civic Leadership Program must complete 17 hours of courses related to and distributed within the Civic Leadership Program. See the Civic Leadership concentration and Political and Civic Leadership minor for full information.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Students must complete the Political Science Core Requirements and select one concentration in consultation with an academic adviser.

- General Concentration in Political Science (p. 530)
- Civic Leadership Concentration (p. 530)

Code	Title	Hours
Political Science Core Requirements		
PS 101	Intro to US Gov & Pol	3
Select three of the following:		9
PS 100 or PS 200	Intro to Political Science ¹ Foundations of Pol Sci	
PS 220	Intro to Public Policy	
PS 230	Intro to Pol Research	
PS 231	Strategic Models	
PS 240	Intro to Comp Politics	
PS 270	Intro to Political Theory	
PS 280	Intro to Intl Relations	
Concentration Requirements (Students must choose one concentration)		38-40
Total Hours		50-52

¹ Credit is not given for PS 100 and PS 200.

Departmental distinction

To be eligible for distinction, a student majoring in Political Science must complete one of the following two tracks:

1. Individual Study Track. On this track, a student must:
 - a. Complete a senior thesis,
 - b. Earn a political science major grade point average on this campus of at least 3.25 or higher, and
 - c. Earn a grade point average in PS 496 of 3.67 or higher.
2. Honors Program Track. On this track, a student must:
 - a. Complete a senior thesis,
 - b. Earn a political science major grade point average on this campus of at least 3.25 or higher,
 - c. Be admitted to and maintain good standing within the departmental honors program, and
 - d. Complete required coursework in the departmental honors program with a grade point average in PS 495 and PS 496 between 2.67 and 3.66.

Admission to the departmental honors program requires the following:

1. Completion of PS 230 or PS 231 or an acceptable substitute,
2. An on-campus political science major grade point average of 3.5,
3. Completion of nine hours (including at least three advanced hours) of political science on this campus,
4. Application and affirmative vote of a departmental committee.

High Distinction

To be eligible for high distinction, a student majoring in Political Science must:

1. Complete a senior thesis,
2. Earn a political science major grade point average on this campus of at least 3.25 or higher,
3. Be admitted to and maintain good standing in the departmental honors program, and
4. Complete required coursework in the departmental honors program with a grade point average in PS 495 and PS 496 of 3.67 or higher.

5 Year BALAS/MA in Political Science and European Union Studies

The Department of Political Science, in conjunction with the European Union Center, offers a 5-year BALAS /MA degree program in Political Science and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS –granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the stand-alone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; BALAS and MA degrees will be conferred separately and independently. More detailed information may be obtained from department and EUC offices.

- Political and Civic Leadership Minor (p. 531)
- Political Science Minor (p. 531)

PS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PS>)

Courses

PS 100 Intro to Political Science credit: 3 Hours.

Surveys the major concepts and approaches employed in the study of politics. Credit is not given for both PS 100 and PS 200. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

PS 101 Intro to US Gov & Pol credit: 3 Hours.

Examines the organization and development of national, state, and local governments in the U.S.; the federal system; the U.S. Constitutions; civil and political rights; the party system; and the nature, structure, powers, and procedures of national political institutions. This course may require limited participating as a subject in research.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

PS 125 Washington Experience credit: 3 Hours.

An examination of political Washington and policymaking. Through visits to think tanks, nonprofit organizations and agencies we will examine the policymaking world in Washington and get to know different participants in this process, what they do, and how they interact and work to affect policy and express their ideas. This course is a required component of the Illinois in Washington Program. Prerequisite: Acceptance to and enrollment in the Illinois in Washington Program.

PS 152 The New Middle East credit: 3 Hours.

Discussion of contemporary sociopolitical change and current events in the Middle East. We will explore the background to these events, the factors that are driving them, and the short-term and long-term implications for the region and the world. Course reflects diverse fields of study, including cultural studies, economics, education, history, law, linguistics, literature, media, religion, political science, and sociology. Same as SAME 152 and SOC 152.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

PS 180 IntroPolitics of Globalization credit: 3 Hours.

Introduction to the politics of globalization; identification of the principal actors, properties, and patterns of the politics of globalization that distinguish global politics from other forms of politics between and within groups, communities, states, and international organizations.

PS 191 Topics in Civic Leadership credit: 1 or 2 Hours.

Examines public and political life from the perspective of public and political leaders. Topics include professional development, career narratives, and/or development or selection of opportunities for civic or public service. May be repeated in separate terms if topics to vary to a maximum of 3 hours.

PS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

PS 200 Foundations of Pol Sci credit: 3 Hours.

Surveys the social scientific approach to the study of politics. Credit is not given for both PS 200 and PS 100.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

PS 201 US Racial & Ethnic Politics credit: 3 Hours.

Examines efforts by racial and ethnic communities to organize politically and by society to allocate resources based on race or ethnicity. Topical focus includes African Americans, Latinos, Asian Americans, Native Americans, and white ethnics. The primary goal of the course is to develop a more comprehensive understanding of racial and ethnic politics by identifying commonalities and differences among these groups and their relationship to the state. Same as AAS 201, AFRO 201, and LLS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

PS 202 Religion & Politics in the US credit: 3 Hours.

Examines how religion and politics influence each other in the United States, both historically and in contemporary society.

PS 220 Intro to Public Policy credit: 3 Hours.

Surveys the policy process including adoption, implementation, and evaluation. Topics may include reviews of substantive policy issues such as crime, energy, environment, poverty, foreign policy, civil liberties, or economic regulation. Prerequisite: PS 100 or PS 101, or consent of instructor.

PS 222 Ethics and Public Policy credit: 3 Hours.

Examination of the moral issues in public policy that arise in a democratic setting, utilizing conceptual tools from political and moral theory to evaluate policy decisions involving means and ends between conflicting goals. Prerequisite: PS 100, PS 101, or consent of instructor.

PS 224 Politics of the National Parks credit: 2 or 3 Hours.

Examines the politics of national parks in the United States, including creation of parks, local support or opposition to parks, and park policy as well as policy questions such as the value of wilderness ecosystem management, endangered species protection, and role of parks in national identity and remembrance of events such as the Civil War, the Indian wars, or the civil rights movement. Same as RST 224. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 10 hours.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 225 Environmental Politics & Policy credit: 3 Hours.

Examinations of the political, economic, ecological, and cultural trade-offs between the use and the preservation of the environment, with particular emphasis on the preservation of land and water resources in national parks, forests, and other reserved lands. Same as RST 225.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 230 Intro to Pol Research credit: 3 Hours.

Surveys the principles that guide empirical research in political science; emphasizes definition of research problems, principles and practices of measurement, use of data as evidence, and data analysis. Prerequisite: PS 100 or PS 101, or consent of instructor.

PS 231 Strategic Models credit: 3 Hours.

Introduces strategic models of political behavior and their implications for our understanding of politics. Uses simple models, inspired by game theory, to examine fundamental political questions.

PS 240 Intro to Comp Politics credit: 3 Hours.

Surveys the basic concepts and principles of political analysis from a comparative perspective.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 241 Comp Politics in Dev Nations credit: 3 Hours.

Provides comparative and historical insights into the problems affecting the developing world by examining social, economic and political changes in Africa, Asia, and Latin America.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

PS 242 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, ANTH 222, and SOC 222. See AFST 222.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

PS 243 Pan Africanism credit: 3 Hours.

Provides an introduction to Pan African political movements and ideologies from the Americas to continental Africa. Examines the political, social, economic, and ideological relationships and connections between Africans and their descendants in the diaspora from an historical and comparative perspective. Same as AFRO 243, AFST 243, and SOC 267.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

PS 270 Intro to Political Theory credit: 3 Hours.

Introduces the nature, structure, and purposes of political theory; examines major works on the problems of political order, obedience, justice, liberty, and representation to distinguish and clarify different theoretical approaches.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PS 272 Women and Politics credit: 3 Hours.

Examines the political status and roles of women. Topics include women's political behavior; feminist and anti-feminist politics; and contemporary legislative and public policy issues, such as educational equity, equal rights legislation, and health care delivery for women. Same as GWS 272.

PS 273 Environment and Society credit: 3 Hours.

Same as ESE 287, GEOG 287 and NRES 287. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

PS 280 Intro to Intl Relations credit: 3 Hours.

Structure and processes of international relations, trends in international politics, and the future of the international system. Credit is not given for both PS 280 and PS 281.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 281 Intro to Intl Relations-ACP credit: 3 Hours.

This course is identical to PS 280 except for the additional writing component that fulfills the campus' advanced composition requirement. Credit is not given for both PS 280 and PS 281. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Social Beh Sci - Soc Sci

PS 282 Governing Globalization credit: 3 Hours.

Examines the historical, socio-economic, political, and moral dimensions associated with the rise of a global society and its governance.

Prerequisite: Completion of campus Composition I general education requirement; completion of one course in a social science or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition
Social Beh Sci - Soc Sci

PS 283 Intro to Intl Security credit: 3 Hours.

Surveys the major issues associated with arms control, disarmament and international security. Also examines the military, socio-economic, and political dimensions of weapons systems, military strategy, the ethics of modern warfare, nuclear proliferation, and regional security issues. Same as GLBL 283.

PS 289 Politics of the Vietnam War credit: 3 Hours.

Examines questions about the war in Vietnam and the era during which it was fought. Focuses on official policy questions, such as the decision making process, the legality of the war, the question of war crimes, and lessons for international relations. Domestic issues, such as the rise and effect of the antiwar movement, are also discussed. Prerequisite: Allen Hall residency or consent of Unit One director.

PS 292 Undergraduate Research Practicum credit: 1 to 4 Hours.

Familiarize students with processes for producing, validating and analyzing political science data through experiential learning. Nature and topical focus of research projects vary. May be repeated up to 4 hours in separate terms. Prerequisite: Consent of faculty member supervising the practicum.

PS 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in an approved study-abroad program in Political Science, appropriate to the student's course of study. Approved for letter and S/U grading. May be repeated to a maximum of 34 hours per academic year. Prerequisite: Overall GPA 2.75, 3.00 grade point average in Political Science, admission to approved program.

PS 300 Special Topics credit: 3 Hours.

Selected readings and research in political science. See Class Schedule for current topics. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Six hours of political science, or consent of instructor.

PS 301 The US Constitution I credit: 3 Hours.

Analyzes issues related to judicial interpretation of the constitution; the separation of governmental powers; federalism; checks and balances among the three branches of the national government; and the jurisdiction of federal courts. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 302 The US Constitution II credit: 3 Hours.

Analyzes issues involved in free speech, freedom of religion, rights of the criminally accused, and government's responsibility to protect persons from discrimination based on race or sexual preference. Pays special attention to the role of law and judges. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 303 The US Congress credit: 3 Hours.

Examines the legislative function in government; the structure and organization of Congress; legislative procedures; pressure groups and lobbying; the relation of legislature to other branches of government; and problems of legislative reorganization. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 304 The US Presidency credit: 3 Hours.

Examines the multiple roles of the president; the determinants and growth of presidential influence; presidential decision making; the president's role in the formulation and implementation of public policy; and the president's multiple constituencies. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 305 The US Supreme Court credit: 3 Hours.

Examines how the modern Supreme Court resolves major issues in American constitutional politics. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor; PS 301 or PS 302.

PS 306 Judicial Politics credit: 3 Hours.

Introduction to the study of courts and judges as political institutions and actors. Focuses primarily on federal courts in the United States, but also covers courts in the American states. Addresses topics such as how judges are selected; who or what determines which cases are heard; the influence of ideology and the law on judges' decisions; the relationships that exist between the courts in the judiciary; the role of the president and the Senate in judicial decisions; and judges' decisions that run contrary to the public's wishes. Prerequisite: PS 101.

PS 307 Separation of Powers credit: 3 Hours.

Explores how the checks and balances built into the US Constitution affect the interactions between the Executive, Legislative, and Judicial branches. Addresses topics such as whether Congress is less productive during times of divided government; why some presidential nominees sail through confirmation, while others take years to be confirmed; and whether Supreme Court justices pay attention to the preferences of the President and Congress when deciding cases. Prerequisite: PS 101.

PS 308 Politics, Policy & Regulation credit: 3 Hours.

Explores how federal agencies (e. g., the Environmental Protection Agency, and the Department of Defense) shape national policy. Provides students with a background in the concepts and ideas that political scientists use in the study of the federal bureaucracy, and motivates further study of political institutions. Students will use traditional political science and legal texts to analyze contemporary policy problems. Prerequisite: PS 101.

PS 309 State Gov in the US credit: 3 Hours.

Surveys the origins and evolution of state government in the United States. Topics include history, structure and dynamics of state governments, laws and the judiciary, state legislatures, political parties, organized interests, bureaucracies, demographic change and electoral patterns, and political conflicts, and coalitions. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 310 Politics of Organizations credit: 3 Hours.

Introduction to the study of public organizations with a focus on formal political organizations including parties, legislatures, and bureaucracies. In-depth analysis of two of the main problems confronted by organizations: collective action problems and delegation problems. Students will acquire an understanding of these problems as well as different ways in which they can be addressed. A strong emphasis is also placed on developing the analytical skills necessary for informed analysis of political interactions involving formal organizations. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 311 Political Parties in the US credit: 3 Hours.

Examines the organization and operation of the American party system; national, state, and local organizations and their interactions; the convention and primary systems; and campaign methods and finance. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 312 Politics and the Media credit: 3 Hours.

Examines the processes of mass-mediated political communication in democratic societies. Special emphasis will be given to the role of news media in democratic theory, factors shaping the construction of news such as journalism routines, media economics, and the strategic management of news by political elites. Same as CMN 325 and MACS 322.

PS 313 Congress and Foreign Policy credit: 3 Hours.

Examines cases of foreign-policy making over 100 years with a focus on the struggle between the legislative and executive branches, constitutional questions, explanations for changes in behavior, and the impact on democratic process. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 314 Political Psychology credit: 3 Hours.

Explores the psychological processes that underlie political attitudes and behaviors. Specifically, we will take theories from social, personality, cognitive, and evolutionary psychology and apply them to political phenomena. Topics will include how politics is affected by cognitive biases, emotions, persuasion, social influence, identity, prejudice and discrimination, personality, and evolution and genetics. We will also explore what we can learn about basic human psychology by studying politics carefully. Prerequisite: PS 101.

PS 315 African American Politics credit: 3 Hours.

Examines the role of race in stimulating change in American political life; types of strategies employed in the civil rights struggle; how race affects electoral participation and the broader political and economic conditions of African Americans. Same as AFRO 315. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 316 Latina/Latino Politics credit: 3 Hours.

Examines the role of Latino electorates in shaping state and national politics. Reviews the histories of Latino national origin groups, examines public policy issues of concern to Latinos, successes and failures of Latino empowerment strategies, and the electoral impact of Latino votes. Focus will be primarily on Mexican Americans, Puerto Ricans, and Cuban Americans and an assessment of the degree to which their political agendas are likely to merge over the coming years. Same as LLS 316. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 317 Asian American Politics credit: 3 Hours.

Provides an overview of the role of Asian Americans in the American political system. Topics include: the international context of emigration, the history of different Asian groups in the U.S., demographic patterns, issues of identity, classification, and pan-ethnicity, voting behavior, minority representation, and public policy. Same as AAS 317. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 318 Interests Grps & Soc Movements credit: 3 Hours.

Focuses on two important forces in American politics that provide ways for citizens to affect public policy: interests groups and social movements. Examination of organized interest groups, including their organization, growth, activity, and impact in American politics. Examines the formation and role of social movements. Prerequisite: PS 101, or six hours of Political Science credit, or consent of instructor.

PS 319 Campaigns and Elections credit: 3 Hours.

Examines the dynamics of United States congressional and presidential campaigns, including electoral rules, campaign organization and finance, candidate strategy, role of parties, interest groups, and the media, campaign effects, and proposals for reform. Prerequisite: PS 101 or six hours of Political Sciences credit.

PS 320 Public Opinion credit: 3 Hours.

Examines the nature of public opinion in contemporary American politics. Considers the extent to which public opinion is organized by ideology, values, party identification and other group-related identities. Will analyze both the sources and consequences of public opinion and the nature of public support for democracy and democratic institutions. Will investigate the relationship between public opinion and policymaking. Prerequisite: PS 101.

PS 321 Principles of Public Policy credit: 3 Hours.

Examines different approaches to evaluating the performance of public sector organizations, including private sector accountability principles. Focuses on how to improve the performance of governmental agencies, as well as corporate social responsibility. Same as ACCY 321, ACE 321, and BADM 303. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 322 Law and Public Policy credit: 3 Hours.

Examines the nature of law, law makers, and law appliers; the determinants of law-making; and the societal impact of law. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 323 Law and Representation credit: 3 Hours.

Examines political and legal policies related to electoral representation including constitutional protections of voting rights and related topics such as a gerrymandering, vote counting, majority minority districts, and the Voting Rights Act. Prerequisite: PS 101 or six hours of Political Science or consent of instructor.

PS 328 Introduction to Biology and Politics credit: 3 Hours.

Examines the biological processes that underlie political attitudes and behaviors. Specifically, we will take theories from behavioral and molecular genetics, psychophysiology, neuroscience, and evolutionary psychology and apply them to political attitudes and behaviors. Topics will include how evolutionary adaptations shape political life, how genes affect political traits, the effects of physiological differences on how people experience the political world, and what political insights can be drawn from studying differences in brain structures and functioning. Prerequisite: PS 101.

PS 329 Immigration & Citizenship credit: 3 Hours.

Examination of the conceptual issues associated with citizenship and immigration, considering current political debates from a variety of perspectives: empirical, historical, and normative. Focuses on the United States but will also examine the immigration and citizenship processes of other nations as well. Among topics considered: why people migrate; consequences of migration; efforts to integrate immigrants; public opinion, citizenship traditions and rationales; membership; belonging, and national identify; post national citizenship. Prerequisites: PS 101, 6 hours of Political Science credit, or consent of instructor.

PS 330 Intro to Political Behavior credit: 3 Hours.

Analyzes the relationship between political attitudes and public opinion formation. The course also discusses political participation, political tolerance, and attitudes toward political leaders. Prerequisite: POLS 101, six hours of Political Science credit, or consent of instructor.

PS 331 Intro to Electoral Behavior credit: 3 Hours.

Examines the social, psychological and institutional determinants of individual voting decisions. Prerequisite: POLS 101, six hours of Political Science credit, or consent of instructor.

PS 339 Political Violence credit: 3 Hours.

Survey of various forms of political violence and examination of competing theories about why these types of political violence occur and their implications. The different "categories" of violence under examination constitute pressing topics in the study of conflict in both international relations and comparative politics. These categories, which may overlap conceptually or empirically, include phenomena such as mass collective action in protests, riots, repression and torture, coups, civil war and insurgency, genocide and massacres, sexual violence during war, self sacrifice, and terrorism. Prerequisite: PS 240 or PS 241 or PS 280, six hours of Political Science credit, or consent of instructor.

PS 340 Politics in Intl Development credit: 3 Hours.

Examines the ways in which the wealthy countries of the world, international organizations and non-governmental organizations have tried to catalyze or facilitate economic and human development in the poorer countries of the world. Prerequisite: PS 240 or PS 241 or PS 281, or six hours of Political Science credit, or consent of instructor.

PS 341 Gov & Pol in Africa credit: 3 Hours.

Examines contemporary economic, social, and political processes in Africa, focusing on three basic explanatory themes: historical patterns of development; emerging patterns of class and interest; and leadership strategies. Same as AFRO 341. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 343 Gov & Pol of China credit: 3 Hours.

Introduces the government and politics of modern China. Same as EALC 343. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 345 Gov & Pol of SE Asia credit: 3 Hours.

Provides a comparative analysis of the political development of the countries of Southeast Asia. Emphasis is placed on differing approaches to the governance and public policy formation, as well as economic, social, historical, and cultural influences on political development. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 346 Gov & Pol of South Asia credit: 3 Hours.

Provides a comparative analysis of the political development of India, Pakistan, Sri Lanka, and other nations in South Asia. Emphasis is placed on the differing approaches to governance and public policy formation, as well as the economic, social, historical, geographical and cultural influences on political development. Same as ASST 346. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 347 Gov & Pol of Middle East credit: 3 Hours.

Analyzes the transformation of Middle Eastern society from Morocco to Iran, as case studies in political modernization. The politics of the area are studied with special reference to causes and character of modernization, role of leadership, ideologies and institutions, methods and theories for analyzing political systems undergoing fundamental transformation, and implications for U. S. policy. Same as ASST 347. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 348 Gov & Pol in Western Europe credit: 3 Hours.

Examines the major governmental systems of continental Europe; the evolution, structure, and functioning of the political institutions of France, Germany, Italy, Spain, Switzerland, and the Scandinavian countries. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 351 Gov & Pol Post-Soviet States credit: 3 Hours.

Examines the evolution, structure, and functioning of post-Soviet governments. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 352 Gov & Pol of East Europe credit: 3 Hours.

Examines the collapse of communism and efforts to develop capitalism and democracy. Special emphasis is given to national conflict and European integration. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 353 Gov & Pol of Latin America credit: 3 Hours.

Examines the origin and development of Latin American political institutions. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 355 Democratization credit: 3 Hours.

Examines the global process of democratization, with special attention to gains and failures in selected areas since 1974. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 356 Comparative Political Economy credit: 3 Hours.

Examines the effect of domestic political processes on economic performance, including monetary, fiscal, and trade policies. Topics include partisan influences on policy, interest group intermediation, political accountability for economic outcomes, and consequences of product and capital market internationalization. Same as GBLB 356. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 357 Ethnic Conflict credit: 3 Hours.

Explores the bases of nationalist and ethnic identities across a variety of different national and cultural contexts, and how these are related to conflict at the intrastate and interstate levels. Consideration is given to the characteristics and patterns of ethnic conflict with special emphasis on how and when ethnic tensions become manifested in violent conflict. The course concludes with consideration and evaluations of various domestic and international approaches to conflict management and resolution. Same as GBLB 357. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

PS 358 Comparative Political Behavior credit: 3 Hours.

Examines themes of political behavior such as political participation, electoral politics, political culture, and contentious politics from a cross-national perspective. Prerequisite: PS 240, or PS 241, or six hours of Political Science credit.

PS 371 Classical Political Theory credit: 3 Hours.

Considers the major works of Greek and Roman political theory, stressing their relevance to modern political analysis and action. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 372 Modern Political Theory credit: 3 Hours.

Provides critical analysis of political theories from the fifteenth century to the present. The discussions focus on topics such as the development of conceptions of human nature, the role of the state, justice, legitimacy, obligation, individual rights, equality, and mechanisms of maintenance and change. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 373 Democratic Theory credit: 3 Hours.

Examines theories of the nature and conditions of democracy; compares and analyzes contemporary democratic institutions. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 374 Future Politics credit: 3 Hours.

Examines visions of the future drawn from science fiction literature as a way to engage with political and social theory and to cultivate the political imagination. Prerequisite: Six hours of political science credit or consent of instructor.

PS 376 American Political Theory credit: 3 Hours.

Surveys American political thought from colonial times to the present. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 377 Topics Contemp Pol Theory credit: 3 Hours.

Examines specific topics and writers of contemporary political theory. Recent themes have included conceptions of power, rights, justice, and radical political thought. May be repeated to a maximum of 9 hours. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 378 Topics Non-Western Pol Thought credit: 3 Hours.

Considers political thought outside of the Greco-Roman, European, and North American tradition. May be repeated if topics vary. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 379 Intl Rel & Domestic Politics credit: 3 Hours.

Examines conceptual linkages between international relations and domestic politics. Emphasizes theoretical explanations of and empirical evidence for these linkages. Prerequisite: PS 280 or PS 281, or six hours of Political Science credit, or consent of instructor.

PS 380 International Cooperation credit: 3 Hours.

A study of cooperation among states. Cooperation dilemmas and their solutions, with focus on institutional arrangements that are aimed to facilitate cooperation among states. Prerequisite: PS 280 or PS 281, six hours of Political Science credit, or consent of instructor.

PS 382 Intl Political Economy credit: 3 Hours.

Examines the interaction between international politics and economics; locates ideologies and practices in the context of international economic relations. Considers such topics as international trade, the global monetary order, multi-national corporations, economic aid relationships, and food and energy politics. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 384 Politics of Globalization credit: 3 Hours.

Examines the basic concepts and politics associated with the emergence of the global society. This course evaluates divergent theoretical explanations for the emergence of global politics, as well as how and why the global society governs itself. It examines the strengths and shortcomings of the nation-state, markets, and democratization as responses to the imperatives of order, welfare, and legitimacy. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 385 Politics of the European Union credit: 3 Hours.

Considers the history of the European Union and its current functions and operations. Focuses on the ongoing process of political and cultural integration. Consists of sections in Illinois and abroad, interacting extensively via the worldwide web. Same as EURO 385, FR 385, and GER 385. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor; cross-listings require language training appropriate for enrollment in the respective overseas programs.

PS 386 International Law credit: 3 Hours.

Analyzes the concepts and bases of public international law. Topics include sources and subjects of international law, as well as issues of jurisdiction, territory, law of the sea, and use of military force. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 387 National Security Policy credit: 3 Hours.

Examines principal theories of international security and evaluates their capacity to explain the security behavior of states and other key international actors. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 389 International Communications credit: 3 Hours.

Same as MACS 389. See MACS 389.

PS 390 American Foreign Policy credit: 3 Hours.

Considers the major foreign policy decisions currently confronting the United States government: analyzes their background, principal issues, and alternative actions, as well as the policy formulation process. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 391 Soviet & Post-Sov Foreign Pol credit: 3 Hours.

Surveys Soviet and Post-Soviet foreign policy from 1917 to the present, with emphasis upon the forces shaping this policy; special attention to the interplay of ideology and national interest in policy formulation. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 392 Intl Organizations&Regionalism credit: 3 Hours.

Examines regionalism and regional international organizations and their consequences for multilateralism cooperation, and conflict. Prerequisite: PS 280.

PS 393 Diplomatic Studies Practicum credit: 4 Hours.

Practical introduction to the study of international organizations, consisting of three parts: academic modules in Urbana-Champaign; guest lectures and site visits in Vienna, Austria, and field trips TBA; and a final research paper based on fieldwork in Vienna, extending into late June. Enrollment requires prior admission to the Vienna Diplomatic Program.

PS 394 Crisis Diplomacy credit: 3 Hours.

A comparative study of foreign policy decision-making and diplomacy among the major states from 1816-1948 with a focus on crisis bargaining, management, and escalation. Foreign relations of Britain, France, Germany, Russia, Italy, Japan, and the United States are covered in light of international relations theories. Emphasis is placed on how domestic political struggles, like those between hard liners and accommodationists, and external factors, like alliances and international norms, affect decision-making. Comparisons are made between those crises that are peacefully settled and those that escalate to war and/or get out of control. Prerequisite: PS 280, PS 281, PS 283, or consent of instructor.

PS 395 International Organization credit: 3 Hours.

Examines the development of basic principles underlying world organization; also considers the principles, structure, methods, and operation of international governmental institutions. Gives special attention to the United Nations and related agencies and to their evolution from the League of Nations system. Credit is not given for both PS 383 and PS 395. Prerequisite: PS 280 or PS 281 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 396 International Conflict credit: 3 Hours.

Examines the conditions that promote war and peace between states. General topics covered are: historical patterns in warfare; causes of war, including arms races and power distributions; outcomes of war; and approaches to peace. Credit is not given for both PS 381 and PS 396. Prerequisite: PS 280 or PS 281 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 397 Authoritarian Regimes credit: 3 Hours.

Examines the various aspects of the politics in authoritarian regimes: their emergence and breakdown, the policy choices and institutions typically adopted, leadership change, and the theories that explain them. Historical case studies and statistical data will be used to examine real-world cases. Prerequisite: PS 240 or PS 241; or six hours of Political Sciences credit; or consent of instructor.

PS 398 Strategic Interntl Relations credit: 3 Hours.

Examination of basic concepts and tools for analyzing foreign policy and understanding international politics and economy. Simple game-theoretic models will be used to explore the logic and the mechanisms behind key policy issues in international economy, cooperation, security, and institutions. Prerequisite: PS 280 or PS 281; or six hours of Political Sciences credit; or consent of instructor.

PS 399 Politics of International Treaties credit: 3 Hours.

Treaties are agreements between sovereign states governed by international law. This course examines why countries commit to treaties and why they comply with them. It will provide advanced undergraduate students with the opportunity to read a range of scholarly works on international agreements and to conduct their own research on related topics. Prerequisite: PS 280.

PS 408 Islam & Politics in Mid. East credit: 3 or 4 Hours.

Same as REL 408 and SAME 408. See REL 408.

PS 410 Neighborhoods and Politics credit: 3 or 4 Hours.

Introduction to the social and political impacts of neighborhood life through readings, discussion, and field work. The political theories of local social networks, social ecology, the social context, third places, the physical form, and public space are examined. Students do library research and field work examining theories of social capital, civic engagement, new urbanism, public space, social context and urban form. Same as HDES 410. 3 undergraduate hours. 4 graduate hours. Prerequisite: PS 100 or PS 101 or consent of instructor.

PS 411 Campaigning to Win credit: 3 or 4 Hours.

Same as CMN 424. See CMN 424.

PS 413 Sex, Power and Politics credit: 3 or 4 Hours.

Same as GWS 478. See GWS 478.

PS 415 Europe and the Mediterranean credit: 3 or 4 Hours.

Same as EURO 415 and ITAL 415. See EURO 415.

PS 418 Language&Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, SLAV 418, and SPAN 418. See FR 418.

PS 456 Democracy and Identity credit: 3 or 4 Hours.

A normative and empirical examination of the special issues surrounding the development and maintenance of democracy in plural societies. Analyzes the impact of racial, ethnic and religious diversity on citizenship, civil rights, political institutions and public policy, as well as on democratic stability more generally, in established and newly emergent democracies. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

PS 457 Dem Gov in a Global Setting credit: 3 or 4 Hours.

Examination of the basic concepts and politics associated with the emergence of a global society. Students evaluate competing explanations for the emergence of this new politics and how and why the global society governs itself. It examines the strengths and weaknesses of the nation-state, markets, and democratization as responses, respectively, to the imperatives of order, welfare, and legitimacy in the governance of world's peoples and states. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

PS 480 Energy and Security credit: 3 Hours.

Same as GLBL 480 and NPRE 480. See NPRE 480.

PS 490 Individual Study credit: 1 to 4 Hours.

Special topics not treated in regularly scheduled courses; designed primarily for juniors and seniors. 1 to 4 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

PS 491 Internship credit: 0 to 6 Hours.

Students follow a program of study and research related to an approved internship under the direction of the internship director and/or a faculty sponsor. Consult departmental undergraduate advisor or internship director. 0 to 6 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated to a maximum of 12 undergraduate hours. Prerequisite: 45 credit hours completed, one year in residence at an institution of higher learning, minimum 2.5 grade point average, coursework related to the internship, and acceptance to the internship director or undergraduate director and by faculty sponsor. Students enrolled in internship courses may not register for more than 18 hours total for all courses during the semester of the internship course.

PS 492 UG Research Assistance credit: 0 to 3 Hours.

Assist departmental faculty in on-going research. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours. Credit is not given for more than nine hours toward completion of the political science major from any combination of PS 490, PS 491, and/or PS 492. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

PS 494 Junior Honors Seminar credit: 3 Hours.

Research, reading, and discussion in selected topics and works in literature of political science. A major research project is required in preparation for PS 495. 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours if topics vary. Credit is not given for non-honors courses and honors seminar on the same topic. Prerequisite: Admission to Political Science Honors Program or consent of department.

PS 495 Senior Honors Seminar credit: 3 Hours.

Provides an advanced overview of methodological issues in political science especially identification of research questions and design of research strategies in political science appropriate for a senior thesis. Requires completion of a substantial research proposal. 3 undergraduate hours. No graduate credit. Credit is not given for more than six hours towards any combination of PS 495 and PS 496. Neither PS 495 nor PS 496 counts towards the 30 hours required for completion of the political science major. Prerequisite: Admissions to Political Science Honors Program or consent of instructor.

PS 496 Senior Honors Thesis credit: 2 to 6 Hours.

2 to 6 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Written consent of instructor of department approval; open only to seniors whose major is political science and who have a general University grade point of 3.0.

Civic Leadership Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: pol@illinois.edu

Minimum required major and supporting course work equates to 50 hours including 30 hours of Political Science courses

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Not more than 6 hours of individual study courses in political science (PS 490) or 6 hours for internships (PS 491) or 6 hours of supervised research (PS 492) may be included in the major; a student with any mix of independent study hours and internship hours and supervised research hours may include a maximum of 9 hours of such credit in the major. PS 496 is reserved for those seniors doing honors theses for distinction in political science and may not be counted in the 50-hour minimum required for the major.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Core Courses		
PS 101	Intro to US Gov & Pol	3
Select three of the following:		9
PS 100 or PS 200	Intro to Political Science ¹ Foundations of Pol Sci	
PS 220	Intro to Public Policy	
PS 230	Intro to Pol Research	
PS 231	Strategic Models	
PS 240	Intro to Comp Politics	
PS 270	Intro to Political Theory	
PS 280	Intro to Intl Relations	

Civic Leadership Concentration Requirements

Completion of the Civic Leadership Concentration must include either as major or supporting coursework one course in each of the following areas, chosen from a list maintained by the department:

1. An intermediate or advanced course in public policy (3 hours)

2. A course examining the construction and consequences of social identity relating to race, religion, ethnicity, or gender (3 hours)

3. A course exploring different perspectives on a just, ordered, and moral society (3 hours)

At least four political science courses at the advanced level ²	12
Supporting coursework is required and must be selected in consultation with the student's adviser. Supporting courses should complement subfields in political science chosen by the student. At least 12 of these 20 hours must be in courses numbered 200 or above.	20
At least two sections of PS 199 designated as pertaining to the Civic Leadership Program. A list of such sections is available in the Undergraduate Studies Office of the Department of Political Science. ³	2
PS 491 Internship	3
One additional course (1-3 credits) in political science at any level	1-3
Total Hours	50-52

¹ Credit is not given for both PS 100 and PS 200.

² Most advanced level courses will require as prerequisites the appropriate 200-level courses (or, in the case of American politics courses, PS 101) or the consent of the instructor. Students may count a maximum of six hours of credit in PS 300 and six hours of credit in PS 494 toward this requirement. Neither PS 495 nor PS 496 toward the 30 credits of PS required for the major.

³ PS 199 is a temporary designation. As these courses are developed and receive PS numbers, these new course numbers will take the place of PS 199.

General Concentration in Political Science

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: pol@illinois.edu

Minimum required major and supporting course work equates to 50 hours including 30 hours of Political Science courses

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Not more than 6 hours of individual study courses in political science (PS 490) or 6 hours for internships (PS 491) or 6 hours of supervised research (PS 492) may be included in the major; a student with any mix of independent study hours and internship hours and supervised research hours may include a maximum of 9 hours of such credit in the major. (PS 496) is reserved for those seniors doing honors theses for distinction

in political science and may not be counted in the 50-hour minimum required for the major.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Core Courses		
PS 101	Intro to US Gov & Pol	3
Select three of the following:		9
PS 100 or PS 200	Intro to Political Science ¹ Foundations of Pol Sci	
PS 220	Intro to Public Policy	
PS 230	Intro to Pol Research	
PS 231	Strategic Models	
PS 240	Intro to Comp Politics	
PS 270	Intro to Political Theory	
PS 280	Intro to Intl Relations	

General Political Science Concentration Requirements

At least four political science courses at the advanced level ²	12
Political science courses at any level	6
Supporting course work is required and must be selected in consultation with the student's adviser. Supporting courses should complement subfields in political science chosen by the student. At least 12 of these 20 hours must be in courses numbered 200 or above.	20
Total Hours	50

¹ Credit is not given for both PS 100 and PS 200.

² Most advanced level courses will require as prerequisites the appropriate 200-level courses (or, in the case of American politics courses, PS 101) or the consent of the instructor. Students may count a maximum of six hours of credit in PS 300 and six hours of credit in PS 494 toward this requirement. Neither PS 495 nor PS 496 toward the 30 credits of PS required for the major.

Minor in Political Science

A minor in political science is designed for students who want to improve their ability to deal intelligently and critically with issues and ideas about government and politics. The minor permits choices among five sub-fields, each involving important theoretical and applied questions about the role of citizens, associations, and states in the application of political power. These sub-fields are: American Government and Politics, Comparative Government and Politics, International Relations, Political Philosophy, and Public Policy/Public Administration. Within a given sub-field, students will be exposed to advanced courses that build on relevant introductory courses. These advanced courses will provide students with in-depth treatments of topics relevant to issues dealt with in their major field of study.

Code	Title	Hours
Select one of the following:		3
PS 100 or PS 200	Intro to Political Science ¹ Foundations of Pol Sci	
PS 101	Intro to US Gov & Pol	
Select at least two of the following courses:		6
PS 201	US Racial & Ethnic Politics	
PS 220	Intro to Public Policy	

PS 230	Intro to Pol Research	
PS 240	Intro to Comp Politics	
PS 270	Intro to Political Theory	
PS 280	Intro to Intl Relations	
Select at least three courses at the 300-level. These courses must be selected from sub-fields in which credit already has been completed. For a listing of courses by sub-field see the Curriculum Planning Map. (https://pol.illinois.edu/academics/undergraduate-program/political-science-minor)		9
Total Hours		18

¹ Credit is not given for both PS 100 and PS 200.

Minor in Political and Civic Leadership

The Minor in Political and Civic Leadership is for students who are not political science majors. Minors must be admitted to the Civic Leadership Program and meet all of its requirements (17 hours). At least three courses (nine hours) must be at the advanced level.

Code	Title	Hours
One Foundation Course, chosen from the following:		3
PS 100 or PS 200	Intro to Political Science ¹ Foundations of Pol Sci	
PS 101	Intro to US Gov & Pol	
GLBL 100	Intro to Global Studies	
GLBL 220	Governance	
An intermediate (200 level) or advanced (300 level) course in public policy ²		3
A course examining the construction and consequences of social identity relating to race, religion, ethnicity, or gender ²		3
A course exploring different perspectives on a just, ordered, and moral society ²		3
PS 491 or approved internship course in another department		3
At least two sections of PS 199 designated as pertaining to the Civic Leadership Program. A list of such sections is available in the Undergraduate Studies Office of the Department of Political Science. ³		2
Total Hours		17

¹ Credit is not given for both PS 100 and PS 200.

² Choose from a list maintained by the Department of Political Science.

³ PS 199 is a temporary designation. As these courses are developed and receive PS numbers, these new course numbers will take the place of PS 199.

Psychology

Wendy Heller, Head of Department
315 Psychology Building, 603 East Daniel, Champaign
PH: (217) 333-0631
<http://www.psychology.illinois.edu>

Psychology is the scientific investigation of human and animal behavior. Psychologists study behavior in systems ranging from single cells to the individual person, from small groups of people to communities.

Psychologists strive to describe behavior and to understand its underlying biological and social mechanisms. This enterprise, designed to better understand the human condition, accumulates knowledge that can help solve problems faced by individuals and by communities. Students that graduate with a major in psychology acquire a wide range of knowledge and useful skills that allows them to find employment in many different areas.

Areas of interest in psychology, and many of these are reflected in the similarly-titled concentrations that are available within the major:

- Behavioral Neuroscience is the study of the biological mechanisms underlying behavior. Biological psychologists generally are interested in the brain and the nervous system, in the endocrine system, and in other organismic processes.
- Clinical psychology is the study of problems encountered by individuals, groups, and families — especially problems involving psychopathology. Clinical psychologists are interested in the application of psychological knowledge and techniques for the alleviation of these problems.
- Community psychology is the study of the social processes and problems of groups, organizations, and neighborhoods, and the development and evaluation of progress for social change and social policy based on psychological understanding.
- Cognitive neuroscience is concerned with understanding the neuroscientific bases of cognition. Various methods are employed to assess the roles of different brain systems in psychological functions such as memory, attention, language, executive control, decision making, response processing, and emotion.
- Cognitive psychology is the study of basic behavioral and cognitive processes, including learning, memory, problem-solving, motivation, and language.
- Developmental psychology is the study of intellectual development, emerging personality, and the acquisition of language, as well as psychophysiological and social development processes as individuals develop from birth through old age.
- Engineering psychology is the study of human behavior in the context of interactions between humans and machines.
- Organizational psychology is the application of techniques of assessment, prediction, and intervention to areas of human resources in organizations, including, but not limited to, standard personnel selection and training, attitude assessments and interventions, and program evaluations.
- Personality psychology focuses on individual behavior. It is the study of ways to understand and describe an individual's behavior and to predict an individual's future behavior.
- Quantitative psychology specialists develop mathematical models of psychological processes and devise methods for quantitative representation and analysis of data about behavior. These are used in the study of differences between individuals in ability, personality, preferences, and other psychological phenomena.
- Social psychology is the study of attitudes, social perception and cognition, interpersonal relations, interpersonal interactions, and social and cultural factors affecting human behavior.
- Visual cognition and human performance is the study of attention, visual perception, visual memory, and human performance. Visual cognition research uses tools drawn from cognitive psychology and cognitive neuroscience to better understand how visual information is perceived and remembered.

Prescribing Psychologists:

The states of Illinois, New Mexico and Louisiana now allow appropriately qualified psychologists to write prescriptions for psychotropic medications, if they have the necessary training. There are many other states that currently have pending prescriptive authority legislative initiatives. One component of becoming a prescribing psychologist is completion of the following undergraduate courses:

- 2-semester course sequence in chemistry or biochemistry with lab
- 1 semester microbiology with lab
- 1 semester general biology for science majors
- 1 semester physiology
- 1 semester human anatomy
- 1 semester physiology and anatomy
- Medical terminology (class or proficiency)

For more information on becoming a prescribing psychologist and a detailed list of which courses meet these requirements, please consult with one of the academic advisors in psychology.

Undergraduate Program

The Psychology program of study is a broad-based curriculum within a research-focused department. The program is designed both for students interested in a liberal arts education with psychology as a focal area and for students who plan to attend graduate or professional school either in psychology or in a different field such as medicine, law, social work, business administration, counseling, labor relations and many others.

The Psychology major provides both depth and breadth of knowledge in Psychology. The major consists of an introductory course, a statistics course, a breadth of knowledge or foundation in the different areas of psychology that comes from a set of core courses, a research methods course, and elective courses that give students a depth of knowledge. Each concentration, except for intradisciplinary psychology, has a core course specific to that area of psychology with a research methods course designed for that concentration. In formulating their Plan of Study, students can decide either to undertake a concentration in Intradisciplinary Psychology and select courses that focus on their own unique interests or to specialize in a particular area of Psychology by fulfilling the requirements for one of the other concentrations listed below. As undergraduate students fulfill the requirements, they also have the opportunity to participate in current research projects by working in labs. Students should contact our Undergraduate Advising Office for help in creating a plan of study and research that best meets their goals and interests.

Departmental Distinction: To be eligible for graduation with Distinction in Psychology, a student must complete a two-semester research sequence in PSYC 494, submit a Senior Thesis that must be approved by the department, and maintain an overall 3.0 GPA at the time of submission. A student can also enroll in PSYC 492 to facilitate the preparation of a Bachelor's thesis.

To be eligible for High or Highest Distinction, a student must first be admitted to the Honors Program (requirements: junior standing, 3.5 GPA in Psychology overall, and completion of the statistics and laboratory requirements). The student then has to complete the three semester

Honors sequence (PSYC 398, PSYC 498, PSYC 499), submit a Senior Thesis that must be approved by the department, and maintain an overall GPA of at least 3.0 to be awarded High Distinction or a GPA of 3.5 for Highest Distinction.

Academic Advising

The Psychology Undergraduate Advising Office is open to help students choose patterns of courses relevant to their interests, as well as to help students explore graduate school, professional school, and career options. Advising is done by an award-winning staff of academic professionals along with mentoring by faculty for students with research interests. Peer registration assistants are also available to help with the registration process.

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Students must meet the requirements for one of the concentrations as listed below. Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses, including at least 12 hours of advanced coursework in Psychology. Please see your academic advisor. Concentrations can be declared during the second semester of the junior year. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

For all concentrations, twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) including the campus general education language requirement.

Concentrations

- Intradisciplinary Psychology (p. 540)
- Behavioral Neuroscience (p. 540)
- Clinical/Community Psychology (p. 541)
- Cognitive Neuroscience (p. 542)
- Cognitive Psychology (p. 541)
- Developmental Psychology (p. 543)
- Diversity Science (p. 543)
- Organizational Psychology (p. 544)
- Personality Psychology (p. 544)
- Social Psychology (p. 545)

Minor in Psychology

The minor in psychology should be tailored to each student's individual needs. The Psychology minor is suitable for students who intend to pursue careers in a wide variety of fields including business, medicine, law, political science, and education. Students should work with their major advisor to determine the Psychology courses that best fit their interests and career goals.

Email: psychology@illinois.edu

Department website: <http://www.psychology.illinois.edu>

Code	Title	Hours
PSYC 100	Intro Psych ¹	3-4
PSYC 235	Intro to Statistics (or equivalent) ²	3
Biological/Cognitive Psychology Course		3
Select one from the following:		
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Clinical/Developmental/Social Psychology Course		3
Select one from the following:		
PSYC 201	Intro to Social Psych	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Select two 300- or 400- level Psychology courses		6
Total Hours		18-19

The Psychology Minor requires 18 hours of Psychology courses. PSYC 290, PSYC 340, PSYC 341, PSYC 398, PSYC 492, PSYC 494, PSYC 495, PSYC 498, and PSYC 499 credit hours cannot be counted toward the minor requirement.

- ¹ Students who transfer credit from another institution only receive 3 credits for PSYC 100.
- ² Current equivalent courses include: STAT 100, ECON 202, EPSY 480, PSYC 301, and SOC 485. Contact the Psychology Advising Office to consult on other equivalents. Students who do not take PSYC 235 or PSYC 301 to satisfy their statistics requirement will need to take an additional Psychology course to meet the minimum of 18 hours of Psychology courses.

PSYC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PSYC>)

Courses

PSYC 100 Intro Psych credit: 4 Hours.

Study of human behavior with special reference to perception, learning, memory, thinking, emotional life, and individual differences in intelligence, aptitude, and personality; emphasis on the scientific nature of psychological investigations; and discussion of research methods and the relation of their results to daily life and everyday problems. Lectures, discussions, and six hours of participation as a subject in psychological experiments. Credit is not given for both PSYC 100 and either PSYC 103 or PSYC 105.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 102 Psych Orientation credit: 0 Hours.

Lectures designed to acquaint the psychology major with the various specializations available in the field, career exploration procedures, and a wide range of opportunities of special interest to psychology students. Recommended for freshmen in psychology. Approved for S/U grading only.

PSYC 103 Intro Experimental Psych credit: 4 Hours.

Surveys the field of psychology with an emphasis on experimental approaches to understanding the mind and human behavior; addresses perception, learning, memory, thinking, motivation, emotions, personality, development, intelligence, and other topics in psychology. Credit is not given for both PSYC 103 and either PSYC 100 or PSYC 105. Lectures with discussion, debates, and laboratory experiments in weekly sections.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 105 Psych Introduction credit: 4 Hours.

Study of human behavior with special reference to perception, learning, memory, thinking, emotional life, and individual differences in intelligence, aptitude, and personality; emphasis on the scientific nature of psychological investigations; and discussion of research methods and the relation of their results to daily life and everyday problems. Lectures, discussions, and six hours of participation as a subject in psychological experiments. Lectures meet four days per week. See class schedule for enrollment restrictions. Credit is not given for both PSYC 105 and either PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PSYC 201 Intro to Social Psych credit: 3 Hours.

Systematic study of social factors in individual and group behavior; attention to social perception, motivation, and learning; attitudes, norms, and social influence processes; the development and dynamics of groups; and the effects of social and cultural factors on the individual. Prerequisite: PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 204 Intro to Brain and Cognition credit: 3 Hours.

Introduction to the interdisciplinary field of cognitive neuroscience, which is concerned with how the cognitive systems supporting a broad range of capacities including memory, attention, and social and emotional processing, arise from the functioning of specific brain modules and brain mechanisms. Emphasizes how functional brain imaging and other cognitive neuroscience methods can be brought to bear on answering these questions. Prerequisite: PSYC 100 or PSYC 103 or PSYC 105.

PSYC 207 Psychology of Prejudice and Discrimination credit: 3 Hours.

Examines the psychological causes and social consequences of prejudice and discrimination in society. Learn about the current state of prejudice and discrimination in the U.S., empirical methods for studying prejudice and discrimination, and psychological interventions for reducing prejudice and discrimination. Topics include stereotyping, cognitive biases, group conflict, ideology, implicit associations, subtle and benevolent forms of prejudice, and microaggressions.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 210 Behavioral Neuroscience credit: 3 Hours.

Survey of current knowledge and speculation regarding the brain's role in perception, motivation, sexual behavior, thinking, memory, and learning, based upon human clinical data and research in animal models. Prerequisite: PSYC 100, PSYC 103, or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

PSYC 216 Child Psych credit: 3 Hours.

Study of the psychological development of the child. Credit is not given for both PSYC 216 and EPSY 236. Prerequisite: PSYC 100 or PSYC 103.

PSYC 220 Images of Mind credit: 3 Hours.

Introduction to neuroimaging and cognitive neuroscience, with a particular emphasis on critically evaluating neuroscience in the media. In addition to surveying reports in the popular press and their corresponding science articles, covers basic neuroanatomy, neuroimaging techniques, and a range of topics from cognitive neuroscience. Prerequisite: PSYC 100, PSYC 103, PSYC 105 or consent of instructor.

PSYC 224 Cognitive Psych credit: 3 Hours.

Introduction to the psychological study of human information processing and memory; acquisition, retrieval, and forgetting; and general knowledge, concepts, reasoning, and related issues in cognition. Prerequisite: PSYC 100 or PSYC 103.

PSYC 230 Perception & Sensory Processes credit: 3 Hours.

Survey of the experimental psychology of sensory and perceptual processes and behavior; emphasis on the contribution of behavior science to understanding subjective experience of the physical and social environment. Prerequisite: An introductory course in psychology, physiology, or animal biology.

PSYC 235 Intro to Statistics credit: 3 Hours.

Development of skill and understanding in the application of statistical methods to problems in psychological research; topics include descriptive statistics, probability theory and distributions, point and interval estimation, and hypothesis testing. Credit is not given for both PSYC 235 and any of STAT 100, ECON 202, EPSY 480, PSYC 301, SOC 485. Prerequisite: PSYC 100 or PSYC 103; college algebra or equivalent; or consent of academic advisor.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

PSYC 238 Psychopathology and Problems in Living credit: 3 Hours.

Conceptions and facts about disordered behavior, including psychoses, neuroses, and other patterns of psychological disturbance. Prerequisite: PSYC 100 or PSYC 103.

PSYC 239 Community Psych credit: 3 Hours.

Redefines human and social problems and the implications for social programs and policies; reviews the historical antecedents, conceptual models, strategies and tactics of social and community programs; and employs examples from selected social systems (e.g., criminal justice, education, employment, and mental health). Prerequisite: PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PSYC 245 Industrial Org Psych credit: 3 Hours.

Systematic study of the application of psychological methods and principles in business and industry; emphasis on personnel selection and factors influencing efficiency. Prerequisite: PSYC 100 or PSYC 103; credit or concurrent registration in a statistics course.

PSYC 248 Learning and Memory credit: 3 Hours.

Survey of basic phenomena in learning and memory emphasizing experimental data from animal and human research. Prerequisite: PSYC 100 or PSYC 103.

PSYC 250 Psych of Personality credit: 3 Hours.

Study of personality from various points of view: biological, experimental, social, and humanistic; surveys theory and empirical research in the study of personality. Prerequisite: PSYC 100 or PSYC 103.

PSYC 265 Power, Status, and Influence credit: 3 Hours.

Explores how individuals experience power, status, and influence. The course will focus on the personality and social factors that lead people to attain an elevated rank in society. We will examine how social position shapes basic psychological processes including social perception, relationship strategies, emotion, and well-being across the life course. Multiple forms of power and status will be studied, including those based on peer respect, class, race, gender, and physical dominance.

PSYC 290 Research Experience in Psych credit: 1 to 4 Hours.

Supervised participation in research and scholarly activities, usually as an assistant to an investigator. Approved for S/U grading only. May be repeated to a maximum of 9 hours. Prerequisite: Ten hours of psychology or cognate area, or written consent of instructor.

PSYC 296 Introduction to Current Topics in Psychology credit: 0 to 3 Hours.

Introductory treatment of current topics in the field of psychology. May be repeated up to 6 hours in the same semester, to a total of 9 hours in subsequent semesters. Prerequisite: PSYC 100 or consent of instructor.

PSYC 301 Psychological Statistics credit: 5 Hours.

Development of skill and understanding of statistical methods for problems in psychological research; topics include descriptive statistics, probability theory and distributions, point and interval estimation, and hypothesis testing. The class also involves a computer laboratory. Strongly recommended to students who plan to pursue graduate studies in Psychology. Credit is not given for both PSYC 301 and any of STAT 100, ECON 202, EPSY 480, PSYC 235, SOC 485.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

PSYC 302 Applied Neuroscience credit: 3 Hours.

Examines topics in neuroscience highly relevant to our daily lives, especially as it pertains to mental health. Topics include neurobiology related to anxiety, depression, addiction, exercise, learning, memory, and personality characteristics. Special attention will be paid to race, sex, and socioeconomic differences and their influence on both genetic risk and environmental stress. The class will emphasize critical thinking and conceptualization and will frequently include open discussions. Same as NEUR 302. Prerequisite: PSYC 100 or equivalent.

PSYC 306 Psychology of Morality credit: 3 Hours.

Presents an overview and analysis of historical and current theory and research on moral psychology. Explores development of morality, moral reasoning and decision-making, rational and biased inputs to moral judgments, moral emotions, moral impression formation and person perception. Emphasis is on the social psychology of morality, but other perspectives such as developmental, cognitive, political, and individual differences will be explored. Prerequisite: PSYC 100 or equivalent.

PSYC 308 Psychology of Religion and Spirituality credit: 3 Hours.

Examines major topics in the psychology of religion and spirituality to promote reflection on how religion shapes attitudes, behavior, and contemporary U.S. society. Through the lens of psychology, we explore questions such as: Why are some people religious and spiritual? How do we study religion and spirituality from a psychological perspective? What do religion and spirituality look like across the lifespan? Does religion shape prejudice, morality, violence, or altruism? What is the role of religion in promoting health? Overall, we will examine these and other questions to promote greater understanding regarding the role of religion and spirituality in the lives of individuals and larger society. Same as REL 308. Prerequisite: PSYC 100 or equivalent.

PSYC 311 Behavioral Neuroscience Lab credit: 4 Hours.

Introduction to the research techniques used in behavioral neuroscience: includes behavioral analysis of drug effects, anatomy of the brain, hormones and behavior, neural circuits and related topics. Students will have direct experience working with laboratory rats to understand their importance in the advancement of our knowledge about how the brain functions. Prerequisite: Credit or concurrent registration in PSYC 210, or consent of instructor.

PSYC 312 Psychology of Race & Ethnicity credit: 3 Hours.

Exploration of the theoretical, empirical, and experiential writings concerning the issues of race and ethnicity as they relate to human behavior from the perspective of the individual in various social contexts. Same as AFRO 312. Prerequisite: PSYC 100.

PSYC 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, HDFS 314, RST 314, and REHB 314. See CHLH 314.

PSYC 316 Intro to Psych of Hearing credit: 3 Hours.

Examines the physiology and psychophysics of hearing from the micromechanics of the cochlea to the localization of sound and the acoustics of concert halls, to understand how the auditory system processes information to create perceptions of acoustic events. Prerequisite: PSYC 210.

PSYC 318 Psych of the Infant credit: 3 Hours.

Early infant behavior, emphasizing critical evaluation of the various research techniques; prenatal and perinatal influences, ontogeny of psychological processes, environmental determinants, and infant assessment. Prerequisite: PSYC 216.

PSYC 320 The Teenage Years credit: 3 Hours.

An introduction to development during the teenage years (12-18). The course will cover research on biological, cognitive, social, and emotional development. Topics will include pubertal development and its social consequences, changing relationships with parents, identity development, the increasingly important role of peers, school adjustment, the emergence of psychopathologies, and high risk behaviors such as substance use. The course will focus on normative development in the U.S., but it will also cover cross-cultural development. Prerequisite: PSYC 100 and PSYC 216.

PSYC 321 Human Memory credit: 3 Hours.

Advanced treatment of human memory. Examines basic theory and methodology; types of memory; semantic, episodic, procedural, memory for language, places, and events; knowledge and memory; autobiographical memory; exceptional memory; mnemonics. Prerequisite: Six hours in psychology at or above the 200 level, such as PSYC 224 or PSYC 248.

PSYC 322 Intro Intellectual Disability credit: 3 Hours.

Same as REHB 322 and SPED 322. See SPED 322.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 324 Developmental Psychopathology credit: 3 Hours.

Overview of major theories and research in the field of developmental psychopathology. An emphasis will be placed on understanding how psychopathology is conceptualized from a developmental perspective. Topics will involve issues related to etiology, assessment, classification/diagnosis, and intervention. A range of psychological problems in childhood and adolescence will be discussed to illustrate the central themes. Prerequisite: PSYC 100 and either PSYC 216 or PSYC 238, or consent of instructor.

PSYC 326 Development and Relationships credit: 3 Hours.

Advanced overview of theory and research on interpersonal relationships across the life course and their implications for emotion, cognition, and behavior. Particular emphasis is placed on close relationships, i.e., romantic partners, family members, and mentors. Same as EPSY 330. Prerequisite: PSYC 216.

PSYC 328 Psychology of Gender credit: 3 Hours.

Discusses the similarities and differences between males and females across the lifespan, looking at possible biological and social explanations. Some of the topics covered include how children learn gender roles, similarities and differences across cognitive and social abilities, mental and physical health, and gender in different settings, including at work, at school, and at home. The course will also focus on agents of socialization, including the media, peers, and family. Prerequisite: PSYC 100 or equivalent.

PSYC 331 Cognitive Psych Lab credit: 4 Hours.

Examination of the methods used to study human thought processes, including attention, memory, decision-making, language and concepts. Students will learn to design, carry out, and report research in cognitive psychology. Prerequisite: PSYC 224 or PSYC 248; PSYC 235.

PSYC 332 Social Psych Methods Lab credit: 4 Hours.

Lecture and laboratory in the methods and techniques of social psychology research in laboratory settings. Same as SOC 382. Prerequisite: PSYC 201; PSYC 235 or SOC 280.

PSYC 333 Social Psych in Society Lab credit: 4 Hours.

Methods and techniques of social psychological research in natural settings. Students formulate and carry out research problems using procedures appropriate for research in natural settings. Prerequisite: PSYC 201; PSYC 235 or SOC 280.

PSYC 334 Perception Lab credit: 4 Hours.

Examination of the research methods used to study human visual and spatial processes, including visual illusion, attention, imagery, navigation and spatial memory. Students will learn to design, carry out, and report psychological research. Prerequisite: PSYC 230 and statistics (PSYC 235 or equivalent).

PSYC 336 Topics in Clin/Comm Psych credit: 3 Hours.

Survey and critical review of subdisciplines in clinical/community psychology; concepts, methods, and assessments, intervention strategies and tactics. Subdisciplines addressed will vary. See Class Schedule for current titles. May be repeated with approval to a maximum of 6 undergraduate hours in same term, or to a maximum of 9 undergraduate hours in subsequent terms. Prerequisite: PSYC 238 or PSYC 239 or both depending on topic.

PSYC 340 Community Projects credit: 4 Hours.

Principles of psychology applied to service problems in the community; students serve as nonprofessional mental health workers in supervised experiences in schools, hospitals, and other nontraditional settings. May be repeated in the same or subsequent terms to a maximum of 8 undergraduate hours. Prerequisite: PSYC 100; junior or senior standing; and consent of instructor. Individual sections may require additional courses and prerequisites - consult the instructor.

PSYC 341 Advanced Community Projects credit: 4 Hours.

Advanced discussion and practicum on principles of psychology which may supplement mental health and other human services in a community. Students serve as nonprofessional mental health workers in supervised experiences in school hospitals and other nontraditional settings. May be repeated in the same or subsequent terms to a maximum of 8 undergraduate hours. Prerequisite: PSYC 340 and consent of instructor.

PSYC 350 Personality Lab credit: 4 Hours.

Study of personality emphasizing active participation in designing, conducting, analyzing, and presenting of research; lectures concern the practical aspects of research methodology and the philosophy of personality research; and laboratory involves conducting original research in small groups. Prerequisite: PSYC 235 or equivalent; and PSYC 250 or consent of instructor; completion of campus Composition I general education requirement.

PSYC 351 Thinking and Reasoning credit: 3 Hours.

An overview of historical and contemporary research on thinking, reasoning, and problem-solving. Topics will include normative systems of logic, defeasible/non-monotonic reasoning, psychological models of reasoning, heuristic problem-solving, insight and creativity, Bayesian decision-making, decision-making biases, and fast-and-frugal heuristics. Same as PHIL 351. Prerequisite: Either PSYC 100 and PSYC 224, or PHIL 101 and PHIL 102, or consent of instructor.

PSYC 352 Attitude Theory and Change credit: 3 Hours.

Comprehensive analysis of theories of attitude acquisition, organization, and change; emphasis on attitude change through communication and effects of persuasive communication on public opinion. Same as MACS 352 and SOC 300. Prerequisite: PSYC 201 or equivalent.

PSYC 353 Social Cognition credit: 3 Hours.

Analysis of theory and research on problems related to the manner in which persons judge themselves and others on the basis of information received; topics include impression formation integration, determinants of interpersonal attractions, and attribution processes. Prerequisite: PSYC 201 and PSYC 235, or consent of instructor.

PSYC 356 Evolution of Mind credit: 3 Hours.

Interpretation of human thought and behavior through the lens of evolutionary theory. Presents the basics of evolutionary theory as applied to human and animal psychology, describes the results of research on selected subtopics, and evaluates alternative explanations of human behavior that historically have been offered and continue to influence the social sciences today. The goal is to enhance understanding of why we behave the way we do. Special emphasis will be placed on philosophical analysis of the presented material. Same as PHIL 356. Prerequisite: PSYC 100 or PHIL 101 or MCB 150 or consent of instructor.

PSYC 357 Intro Cognitive Science credit: 3 Hours.

In-depth introduction to cognitive science: the study of mind and intelligence, natural and artificial. Covers major integrative themes including inverse optics and vision; induction and reasoning; learnability; language; philosophy; minds and brains; evolution; computation and computability; experimental and modeling techniques; information theory; knowledge representation; interrelations among these topics. Same as PHIL 357. Prerequisite: One of PSYC 224, PSYC 248, PHIL, 202, PHIL 270, or consent of instructor.

PSYC 358 Human Factors credit: 4 Hours.

Same as IE 340. See IE 340.

PSYC 361 The Psychology of Aging credit: 3 Hours.

Survey of changes in behavioral function in later adulthood, with emphasis on methodologies for studying aging, cognitive function, personality, social psychology, and psychopathology. Prerequisite: PSYC 100; Recommended: PSYC 216 or PSYC 224.

PSYC 363 Developmental Child Psych Lab credit: 4 Hours.

Provides students with a background in developmental research methodology, such as observational techniques used with children. Students will gain experience collecting data and learn how to write research papers. Prerequisite: PSYC 216 and PSYC 235, or equivalent.

PSYC 365 Stress, Trauma and Resilience credit: 3 Hours.

Provides an overview of traumatic stress, with a particular emphasis on the biological and social factors that shape human responses to trauma. Students will become familiar with the definition and range of potentially traumatic events in various social contexts (e.g. military vs. civilian), as well as the genetic and environmental features that influence vulnerability vs. resilience to trauma. Prerequisite: PSYC 100 or equivalent.

PSYC 370 Understanding Suicide credit: 3 Hours.

Exploration of the enigma of suicide, covering its many dimensions including the historical, literary, neurobiological psychological, sociological, cultural, public health, and personal/subjective. Suicide has been studied from each of these perspectives, and while there is agreement that it is a "multidimensional malaise," bringing these dimensions together has been extremely challenging. Explores this challenge through lectures and discussions. Prerequisite: PSYC 238.

PSYC 373 Culture & Psychology credit: 3 Hours.

Centers on cross-cultural study of substantive areas such as personality, motivation, socialization, interpersonal behavior, psychological environments, cognition and cognitive development, ethnocentrism and stereotypes, and visual perception; emphasis on methodological limitations and contributions of cross-cultural study; and discussion of current problems and research. Same as ANTH 373. Prerequisite: Six hours of psychology or anthropology, or consent of instructor.

PSYC 379 Clinical/Abnormal Psych Lab credit: 4 Hours.

Introduction to research methods used in clinical psychology covering research concerned with psychopathology. Students will learn concepts and key terms; read and discuss research reports; and obtain first-hand experience designing, carrying out, and reporting on their own research. Students in the class will be the participants for all student-developed research. Prerequisite: PSYC 238.

PSYC 381 Beg Prac in Mental Hlth credit: 4 Hours.

Didactic instruction and supervised practicum experience in a community treatment agency; self-report, observational, and physiological approaches to client assessment; and lecture-discussion and direct agency experience each week.

PSYC 383 Adv Prac in Mental Hlth I credit: 4 Hours.

Supervised practicum experiences in a community agency.

PSYC 385 Adv Prac in Mental Hlth II credit: 4 Hours.

Supervised practicum experiences in a community agency.

PSYC 396 Intermediate Current Topics in Psychology credit: 0 to 3 Hours.

Intermediate treatment of current topics in the field of psychology. May be repeated to a maximum of 6 hours in a semester, to a maximum of 12 hours in subsequent semesters. Prerequisite: PSYC 100 or consent of instructor; particular sections may have additional 200-level prerequisites.

PSYC 398 Junior Honors Seminar credit: 3 Hours.

Seminar on experimental methods and contemporary psychological research. Prerequisite: Junior standing and admission to departmental honors program.

PSYC 402 Intro Clin Neuropsych credit: 4 Hours.

Fundamental concepts of clinical neuropsychology will be introduced, and students will learn the neuropsychological measures that are typically employed in assessment. The course will take a developmental perspective, and readings will address assessment issues in children and adolescents as well as adults. The course will be conducted as a lecture/seminar, with a focus on class participation. Actual testing data will be distributed to the class, and discussion will focus on interpretation and case conceptualization. Students will also be required to learn about and administer tests. 4 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and PSYC 238 or consent of instructor.

PSYC 403 Memory and Amnesia credit: 3 or 4 Hours.

Examination of the nature of amnesia and what it teaches us about the organization of normal human memory. Coverage will include studies of amnesia and other circumscribed memory impairments in human patients, taken from the scientific literature, which will be compared to the descriptions of amnesia in movies, literature, and the media. Same as NEUR 403. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and/or PSYC 224, or consent of instructor.

PSYC 404 Cognitive Neuroscience credit: 3 or 4 Hours.

Examination of research concerned with identifying and characterizing the cognitive systems supporting such capacities as memory, attention, and visual processing, and with understanding how such cognitive activities arise from the functioning of specific brain modules and brain mechanisms. Same as NEUR 405. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and/or PSYC 224, or consent of instructor.

PSYC 410 Hate Crimes credit: 3 Hours.

Same as AFRO 410. See AFRO 410.

PSYC 413 Psychopharmacology credit: 3 or 4 Hours.

Behavioral and physiological effects of chemicals either used therapeutically to treat psychological disorders or that may be abused for their psychotropic effects; emphasizes mechanisms and models for the study of drug action. Same as NEUR 413. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PSYC 210, MCB 150, or consent of instructor.

PSYC 414 Brain, Learning, and Memory credit: 3 or 4 Hours.

Conveys a knowledge of current research on the physiological bases of learning and memory; considers a wide range of topics from molecular (e.g., cellular morphological and functional plasticity) to relatively molar (e.g., effects of clinical and experimental brain damage on learning and memory processes). Same as NEUR 414. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210, MCB 150, or consent of instructor.

PSYC 416 African American Psychology credit: 3 or 4 Hours.

Same as AFRO 411. See AFRO 411.

PSYC 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Eating and drinking are critical to survival. Despite complex and redundant mechanisms, aberrant ingestive behaviors occur and can result in extreme body weights. This course is designed to critically probe and review the current understanding of neural and behavioral mechanisms of eating and drinking. Students will learn how eating and drinking are closely related to physical and mental health, and how to apply this knowledge to live a healthier life. Same as FSHN 417 and NEUR 417. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 100 or equivalent.

PSYC 420 Theories of Psychotherapy credit: 4 Hours.

Same as EPSY 420. See EPSY 420.

PSYC 421 Principles of Psychophysiology credit: 3 or 4 Hours.

Theoretical and practical aspects of human psychophysiology; measurement techniques and the application of psychophysiological principles to problems in developmental, clinical, social, and experimental psychology. Same as NEUR 421. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 235, six hours of psychology, and an introductory course in physiology.

PSYC 423 Language Acquisition credit: 3 or 4 Hours.

Survey of theory and research on the acquisition of language, concentrating on the acquisition of a first language by the young child. Same as LING 423 and MACS 423. 3 undergraduate hours. 4 graduate hours. Prerequisite: Six hours of psychology or linguistics above the 100-level, or consent of instructor.

PSYC 425 Psych of Language credit: 3 or 4 Hours.

Survey of theory and research in the psychology of language; topics include relation of linguistics and psychology, language development, and influence of language on perception, memory, and thought. 3 undergraduate hours. 4 graduate hours. Credit is not given for both PSYC 425 and LING 425. Prerequisite: Six hours of psychology or consent of instructor.

PSYC 427 Language and the Brain credit: 3 or 4 Hours.

Same as LING 427 and SHS 427. See SHS 427.

PSYC 432 Genes and Behavior credit: 3 Hours.

Same as ANTH 432, IB 432 and NEUR 432. See IB 432.

PSYC 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Current methods, tools, and progress in evolutionary biology and quantitative genetics of brain and behavior of vertebrates. Same as NEUR 433 and PHIL 433. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 or PSYC 210.

PSYC 437 Advanced Psychology Lab credit: 4 Hours.

An advanced laboratory course in different areas of psychology. Detailed descriptions are provided under the individual sections. 4 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 8 undergraduate hours. Prerequisite: PSYC 100, additional courses and prerequisites may be required depending on the lab.

PSYC 443 Psychophysiology in Ex & Sport credit: 3 or 4 Hours.

Same as KIN 443. See KIN 443.

PSYC 445 Cognitive Neuroscience Lab credit: 4 Hours.

Study of the basic principles underlying scanning of the brain using functional Magnetic Resonance Imaging (fMRI). The lectures introduce how to use an MRI scanner, the basic biophysics that makes functional imaging possible, experimental design for fMRI, and basic data analysis. During the labs, students will get hands on experience analyzing fMRI data. Same as NEUR 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of the following: PSYC 204, PSYC 210, PSYC 220, or consent of the instructor. PSYC 235 or equivalent is recommended.

PSYC 447 Psych of Sport Performance credit: 3 or 4 Hours.

Same as KIN 447. See KIN 447.

PSYC 450 Cognitive Psychophysiology credit: 3 or 4 Hours.

Survey of the theory and practice of using recordings of brain electrical activity to study normal and abnormal perception, attention, decision-making, memory, response preparation, and language. Same as NEUR 450. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 224 or equivalent; PSYC 210 recommended.

PSYC 451 Neurobio of Aging credit: 0 to 4 Hours.

Study of the neurobiological consequences of aging with an emphasis on brain changes at the cellular and systems level, using animal models of healthy and pathological aging. Same as KIN 458 and NEUR 451. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 or related courses or consent of instructor.

PSYC 453 Cog Neuroscience of Vision credit: 3 or 4 Hours.

Overview of the neuroscience of the visual system, the eye and subcortical structures, with a focus on the visual cortex and higher-level vision (e.g. attention and object perception). Same as NEUR 453. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210, PSYC 220, PSYC 224, PSYC 230 or consent of instructor.

PSYC 455 Organizational Psych credit: 2 to 4 Hours.

Social psychological research and theory applied to industrial problems; emphasis on interaction and communication theory, role theory, leadership theory, motivational and perceptual theory, and group structure theory as an aid in understanding and analyzing industrial problems. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: PSYC 201 or PSYC 245.

PSYC 456 Human Performance and Cognition in Context credit: 3 or 4 Hours.

Same as EPSY 456 and IE 445. See EPSY 456.

PSYC 462 How Children Think credit: 3 or 4 Hours.

Examines the development of children's thinking from birth through the preschool and elementary school years. Addresses questions such as the following: What do babies know about the world? What can they perceive, and how do their perceptual abilities develop? How do children come to understand other people's actions and mental states? How do they think about biological categories (such as animals and plants) and social categories (such as boys and girls)? When and how do children learn what numbers mean? How is children's development influenced by culture? 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 216.

PSYC 465 Personality and Soc Dev credit: 3 or 4 Hours.

Major theories of personality and social development, with attention to processes of social learning, individual differences in personality development, and outcomes of social development; applications to school, home, and other field settings. Same as EPSY 405. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 216 or EPSY 236 or equivalent.

PSYC 466 Image and Neuroimage Analysis credit: 3 or 4 Hours.

Fundamental concepts, techniques/algorithms, and emerging directions of research in image and neuroimage analysis: image enhancement, image and brain image segmentation, neuroimage registration, functional magnetic resonance imaging (fMRI) time series analysis, and brain connectivity, etc. Same as STAT 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One of STAT 400, PSYC 406, an equivalent, or consent of instructor; basic programming experience in Matlab, or C/C++, or similar.

PSYC 468 Psych and Law credit: 2 to 4 Hours.

Examines relationship of the administrative, civil, and criminal justice systems to educational and mental health institutions; individual rights, social issues, and psychological well being. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: Six hours of social science.

PSYC 472 Environmental Psychology credit: 4 Hours.

Same as NRES 472. See NRES 472.

PSYC 475 Personnel Psych credit: 3 or 4 Hours.

Introduces problems and research relevant to personnel issues in organizations. Topics include: individual differences; selection of personnel; test theory; performance appraisal; equal employment opportunity legislation, regulation, and litigation; assessing bias in selection. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PSYC 235 or equivalent, and either PSYC 245 or BADM 313.

PSYC 477 Philosophy of Psychology credit: 3 or 4 Hours.

Same as PHIL 477. See PHIL 477.

PSYC 484 Ethical Practice of Statistics credit: 3 or 4 Hours.

Study of the ethical practice of statistics, defined as being in accord with the accepted rules and standards for right conduct that govern the discipline of statistics and its many areas of application. An emphasis is placed on the use of statistical and probabilistic reasoning in the social, behavioral, and biomedical sciences, with particular stress on the relation to law and the judiciary. Same as STAT 484. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory statistics class, e.g., PSYC 235, PSYC 301, STAT 100, ECON 202, EPSY 480, SOC 280.

PSYC 489 Neural Network Modeling Lab credit: 3 or 4 Hours.

Introduction to neural network modeling, the principles of neural computation, learning algorithms and the evaluation of neural networks as models of human perception and cognition. 3 undergraduate hours. 4 graduate hours. Prerequisite: College algebra or equivalent; computer programming experience, or consent of instructor.

PSYC 490 Measurement & Test Develop Lab credit: 4 Hours.

The measurement of human behavior in psychological studies; the construction and use of psychological tests; introduction to tests of intelligence, achievement, personality, and interest; and practice in test construction, administration, and validation. Lectures and laboratory. 4 undergraduate hours. 4 graduate hours. Prerequisite: A knowledge of statistics equivalent to that from PSYC 235.

PSYC 492 Capstone Undergrad Research credit: 3 Hours.

Capstone experience for undergraduate students doing advanced research in any area of psychology. Provides in-depth background knowledge of their research, and teaches students to make effective oral and written presentations of their findings. In conjunction with PSYC 494, will facilitate the preparation of a Bachelor's thesis that can be submitted for the awarding of the departmental distinction at graduation. May be taken for two semesters with the first semester emphasizing a review of the literature and the second semester concentrating on the presentation of the results. 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Senior standing in Psychology, consent of instructor, and students must arrange to do a research project with a faculty member.

PSYC 494 Advanced Research in Psych credit: 1 to 4 Hours.

Supervised independent investigation of special topics in psychology; requires a written report with a final copy submitted for departmental records. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 12 hours. Prerequisite: Ten hours of psychology or cognate area, or written consent of instructor.

PSYC 495 Internship Capstone Experience credit: 3 Hours.

This capstone seminar will connect students' summer internship experiences to their academic major in Psychology and to their career goals. Students will reflect, discuss and build on their internship experiences to help them identify the skills and abilities they have and need to be successful. They will participate in both individual assignments and team projects that will facilitate their ability to communicate in the many different careers available to students with a degree in psychology. 3 undergraduate hours. No graduate credit. Prerequisite: Completion of an internship during previous summer.

PSYC 496 Adv Current Topics in Psych credit: 2 to 4 Hours.

Advanced treatment of current topics in the field of psychology. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: PSYC 100 and junior standing, or consent of instructor; particular sections may have additional 200-level and/or 300-level prerequisites.

PSYC 498 Senior Honors Seminar credit: 3 Hours.

Continuation of PSYC 398, this course assists students in the Psychology Honors Program with the researching and writing of an undergraduate honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. 3 undergraduate hours. No graduate credit. Prerequisite: PSYC 398.

This course satisfies the General Education Criteria for:

Advanced Composition

PSYC 499 Senior Honors Seminar II credit: 3 Hours.

The completion of writing of an undergraduate honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. Students also create posters describing their work for presentation at the Psychology Honors Poster Fair and the Campus Undergraduate Research Symposium. 3 undergraduate hours. No graduate credit. PSYC 398 and PSYC 499 are approved for General Education credit only as a sequence. All courses must be completed to receive Advanced Composition credit. Prerequisite: PSYC 498.

This course satisfies the General Education Criteria for:

Advanced Composition

Intradisciplinary Psychology Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following: 4		
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course: 3		
PSYC 235	Intro to Statistics (or equivalent)	
Select two foundation courses from the following: 6		
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select two foundation courses from the following: 6		
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Select one research methods courses from the following: 3-4		
PSYC 311	Behavioral Neuroscience Lab	
PSYC 331	Cognitive Psych Lab	
PSYC 332	Social Psych Methods Lab	
PSYC 333	Social Psych in Society Lab	
PSYC 334	Perception Lab	
PSYC 350	Personality Lab	
PSYC 363	Developmental Child Psych Lab	
PSYC 379	Clinical/Abnormal Psych Lab	

PSYC 437	Advanced Psychology Lab	
PSYC 445	Cognitive Neuroscience Lab	
PSYC 489	Neural Network Modeling Lab	
PSYC 490	Measurement & Test Develop Lab	
Select any 300- or 400-level Psychology elective courses		9-10
Total Hours		32

Behavioral Neuroscience Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following: 4		
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics: 3-5		
PSYC 235	Intro to Statistics (or equivalent)	
Select one foundation course from the following: 3		
PSYC 204	Intro to Brain and Cognition	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select two foundation courses from the following: 6		
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
Concentration core course: 3		
PSYC 210	Behavioral Neuroscience	
Concentration research methods course: 4		
PSYC 311	Behavioral Neuroscience Lab	

Select 4 elective courses from the following:	12
PSYC 316	Intro to Psych of Hearing
PSYC 365	Stress, Trauma and Resilience
PSYC 396	Intermediate Current Topics in Psychology ¹
PSYC 413	Psychopharmacology
PSYC 414	Brain, Learning, and Memory
PSYC 417	Neuroscience of Eating & Drinking
PSYC 432	Genes and Behavior
PSYC 433	Evolutionary Neuroscience
PSYC 496	Adv Current Topics in Psych ¹
Total Hours	35

¹ PSYC 396 & 496 seminars taught by faculty members in the Behavioral Neuroscience program area.

Clinical/Community Psychology Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3-5
PSYC 235	Intro to Statistics (or equivalent)	
Select two foundation courses from the following:		6
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select one foundation course from the following:		3
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	

PSYC 216	Child Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Select one concentration core course:		3
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
Concentration research methods course		4
PSYC 379	Clinical/Abnormal Psych Lab	
Select one course on race/ethnicity:		3
PSYC 312	Psychology of Race & Ethnicity	
PSYC 416	African American Psychology	
Select 3 elective courses from the following:		9
PSYC 238 or PSYC 239 if not taken to satisfy core course requirement		
PSYC 312 or PSYC 416 if not taken to satisfy the race/ethnicity course requirement		
PSYC 336	Topics in Clin/Comm Psych	
PSYC 340	Community Projects	
PSYC 341	Advanced Community Projects	
PSYC 370	Understanding Suicide	
PSYC 410	Hate Crimes	
PSYC 420	Theories of Psychotherapy	
Any PSYC 396 or PSYC 496 seminar taught by faculty members in the Clinical/Community Psychology Program area		
Total Hours		35

Cognitive Psychology Concentration Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3
PSYC 235	Intro to Statistics (or equivalent)	

Select one foundation course from the following: 3

PSYC 204	Intro to Brain and Cognition
PSYC 210	Behavioral Neuroscience
PSYC 220	Images of Mind
PSYC 230	Perception & Sensory Processes

Select two foundation courses from the following: 6

PSYC 201	Intro to Social Psych
PSYC 207	Psychology of Prejudice and Discrimination
PSYC 216	Child Psych
PSYC 238	Psychopathology and Problems in Living
PSYC 239	Community Psych
PSYC 245	Industrial Org Psych
PSYC 250	Psych of Personality

Select one concentration core course: 3

PSYC 224	Cognitive Psych
PSYC 248	Learning and Memory

Concentration research methods course: 4

PSYC 331	Cognitive Psych Lab
----------	---------------------

Take 4 elective courses from any of the following: 12

PSYC 321	Human Memory
PSYC 351	Thinking and Reasoning
PSYC 356	Evolution of Mind
PSYC 357	Intro Cognitive Science
PSYC 396	Intermediate Current Topics in Psychology (taught by faculty members in the Cognitive Psychology program area)
PSYC 425	Psych of Language
PSYC 427	Language and the Brain
PSYC 450	Cognitive Psychophysiology
PSYC 468	Psych and Law
PSYC 489	Neural Network Modeling Lab
PSYC 496	Adv Current Topics in Psych (taught by faculty members in the Cognitive Psychology program area)

Total Hours 35

Cognitive Neuroscience Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3-5
PSYC 235	Intro to Statistics	
Select one foundation course from the following:		3
PSYC 210	Behavioral Neuroscience	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select two foundation courses from the following:		6
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Select one concentration core course:		3
PSYC 204	Intro to Brain and Cognition	
PSYC 220	Images of Mind	
Concentration research methods course:		4
PSYC 445	Cognitive Neuroscience Lab	
Select 4 elective courses from any of the following:		12
PSYC 204	Intro to Brain and Cognition (if not chosen as the core course)	
PSYC 220	Images of Mind (if not chosen as the core course)	
PSYC 361	The Psychology of Aging	
PSYC 403	Memory and Amnesia	
PSYC 404	Cognitive Neuroscience	
PSYC 421	Principles of Psychophysiology	
PSYC 427	Language and the Brain	
PSYC 433	Evolutionary Neuroscience	
PSYC 450	Cognitive Psychophysiology	
PSYC 451	Neurobio of Aging	
PSYC 453	Cog Neuroscience of Vision	
PSYC 396	Intermediate Current Topics in Psychology (taught by faculty members in the Cognitive Neuroscience program area)	

PSYC 496	Adv Current Topics in Psych (taught by faculty members in the Cognitive Neuroscience program area)	
Total Hours		35

Developmental Psychology Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3
PSYC 235	Intro to Statistics (or equivalent)	
Select three foundation courses from the following two groups including at least one from each group:		9
Select one or two foundation courses from the following group:		
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select one or two foundation courses from the following group:		
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Concentration core course:		3
PSYC 216	Child Psych	

Concentration research methods course:		4
PSYC 363	Developmental Child Psych Lab	
Select 4 elective courses from any of the following:		12
PSYC 318	Psych of the Infant	
PSYC 320	The Teenage Years	
PSYC 324	Developmental Psychopathology	
PSYC 326	Development and Relationships	
PSYC 328	Psychology of Gender	
PSYC 336	Topics in Clin/Comm Psych (Stress & Resiliency in Childhood)	
PSYC 361	The Psychology of Aging	
PSYC 396	Intermediate Current Topics in Psychology (taught by faculty members in the Developmental Psychology Program area)	
PSYC 423	Language Acquisition	
PSYC 462	How Children Think	
PSYC 465	Personality and Soc Dev	
PSYC 496	Adv Current Topics in Psych (taught by faculty members in the Developmental Psychology program area)	
Total Hours		35

Diversity Science Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3-5
PSYC 235	Intro to Statistics	
Select two foundation courses from the following:		6
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	

PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select one foundation course from the following:		3
PSYC 201	Intro to Social Psych	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
PSYC 250	Psych of Personality	
Concentration core course:		3
PSYC 207	Psychology of Prejudice and Discrimination	
Select a concentration research methods course from the following:		4
PSYC 332	Social Psych Methods Lab	
PSYC 333	Social Psych in Society Lab	
PSYC 379	Clinical/Abnormal Psych Lab	
Select four elective courses from any of the following:		12
PSYC 239	Community Psych (if not taken as the foundation course)	
PSYC 265	Power, Status, and Influence	
PSYC 312	Psychology of Race & Ethnicity	
PSYC 322	Intro Intellectual Disability	
PSYC 328	Psychology of Gender	
PSYC 353	Social Cognition	
PSYC 373	Culture & Psychology	
PSYC 410	Hate Crimes	
PSYC 416	African American Psychology	
PSYC 468	Psych and Law	
PSYC 396	Intermediate Current Topics in Psychology (approved for the concentration by the Psychology Department Diversity committee)	
PSYC 496	Adv Current Topics in Psych (approved for the concentration by the Psychology Department Diversity committee)	
Total Hours		35

Organizational Psychology Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following:		4
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course:		3-5
PSYC 235	Intro to Statistics (or equivalent)	
Select two foundation courses from the following:		6
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select two foundation courses from the following:		6
PSYC 201	Intro to Social Psych	
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 250	Psych of Personality	
Concentration core course:		3
PSYC 245	Industrial Org Psych	
Select two concentration research methods courses:		8
PSYC 332	Social Psych Methods Lab	
PSYC 333	Social Psych in Society Lab	
PSYC 350	Personality Lab	
PSYC 490	Measurement & Test Develop Lab	
Select 2 elective courses from any of the following:		6
PSYC 455	Organizational Psych	
PSYC 475	Personnel Psych	
PSYC 396	Intermediate Current Topics in Psychology (taught by faculty members in the Organizational Psychology program area)	
PSYC 496	Adv Current Topics in Psych (taught by faculty members in the Organizational Psychology program area)	
Total Hours		36

Personality Psychology Concentration

Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one foundation course from the following: 4		
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course: 3		
PSYC 235	Intro to Statistics (or equivalent)	
Select two foundation courses from the following: 6		
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select one foundation course from the following: 3		
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
Concentration core course: 3		
PSYC 250	Psych of Personality	
Concentration research methods course: 4		
PSYC 350	Personality Lab	
Take 4 elective courses from any of the following: 12		
PSYC 201	Intro to Social Psych	
PSYC 265	Power, Status, and Influence	
PSYC 328	Psychology of Gender	
PSYC 352	Attitude Theory and Change	
PSYC 353	Social Cognition	
PSYC 373	Culture & Psychology	
PSYC 396	Intermediate Current Topics in Psychology (if taught by faculty members in the Personality Psychology program area)	
PSYC 465	Personality and Soc Dev	

PSYC 496 Adv Current Topics in Psych (if taught by faculty members in the Personality Psychology program area)

Total Hours 35

Social Psychology Concentration Major in Sciences and Letters Curriculum

E-mail: psych-advising@illinois.edu (psych-advising@illinois.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences.

Minimum required concentration and supporting course work equates to 32-36 hours of Psychology courses. Please see your academic advisor. A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours).

Twelve hours of 300- and 400-level courses in Psychology must be taken on this campus.

Minimum hours required for graduation is 120.

Students must also complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Code	Title	Hours
Select one introductory course from the following: 4		
PSYC 100	Intro Psych	
PSYC 103	Intro Experimental Psych	
PSYC 105	Psych Introduction	
Statistics course: 3		
PSYC 235	Intro to Statistics (or equivalent)	
Select two foundation courses from the following: 6		
PSYC 204	Intro to Brain and Cognition	
PSYC 210	Behavioral Neuroscience	
PSYC 220	Images of Mind	
PSYC 224	Cognitive Psych	
PSYC 230	Perception & Sensory Processes	
PSYC 248	Learning and Memory	
Select one foundation course from the following: 3		
PSYC 207	Psychology of Prejudice and Discrimination	
PSYC 216	Child Psych	
PSYC 238	Psychopathology and Problems in Living	
PSYC 239	Community Psych	
PSYC 245	Industrial Org Psych	
Concentration core course: 3		
PSYC 201	Intro to Social Psych	
Select a concentration research methods course: 4		
PSYC 332	Social Psych Methods Lab	
PSYC 333	Social Psych in Society Lab	
Select 4 elective courses from any of the following: 12		
PSYC 250	Psych of Personality	
PSYC 265	Power, Status, and Influence	

PSYC 328	Psychology of Gender
PSYC 332	Social Psych Methods Lab (if not chosen as the research methods course)
PSYC 333	Social Psych in Society Lab (if not chosen as the research methods course)
PSYC 352	Attitude Theory and Change
PSYC 353	Social Cognition
PSYC 365	Stress, Trauma and Resilience
PSYC 373	Culture & Psychology
PSYC 396	Intermediate Current Topics in Psychology (if taught by faculty members in the Social Psychology program area)
PSYC 465	Personality and Soc Dev
PSYC 496	Adv Current Topics in Psych (if taught by faculty members in the Social Psychology program area)
<hr/>	
Total Hours	35

Religion

Valerie Hoffman

3080 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 333-2022

<http://www.religion.illinois.edu>

A major and minor are sponsored by the Department of Religion.

Major in Religion Major in Sciences and Letters Curriculum

E-mail: religion@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

A minimum of 30 hours of coursework is required for the major. This includes (a) REL 230 or REL 231, and (b) completing a Capstone course, as explained below.

At least 15 of the 30 hours must be at the 300 or 400 level, and no more than 9 hours may be at the 100 level. Twelve hours of 300 or 400-level courses in your major must be taken on this campus.

Each student must complete two courses in any of the following: Hinduism, Buddhism, Chinese and Japanese Religions, or indigenous American religious practices, chosen from a list maintained in the departmental adviser's office. And each student must complete two courses in any of the following: Judaism, Christianity, Islam, or religious practices of the ancient Near East, chosen from a list maintained in the departmental adviser's office.

Additionally, each student will establish a primary and secondary field of study. For the primary area of study, a student must complete a minimum of three courses (nine credit hours), and for the secondary area two courses (six credit hours) are required. An individual course may not be counted twice toward fulfilling the requirements of the primary and secondary areas of interest. (Students are encouraged to complete more than the minimum of three courses in the primary area of study.)

The following are the areas of study: Buddhism, Christianity, Hinduism, Islam, Judaism, Philosophy of Religion, Religion in America, or individually designed area of study chosen with the approval of the departmental adviser.

Capstone Experience

Research paper for one 400-level course in Religion (REL): Each major must make special arrangements with a professor teaching a 400-level REL course to conduct a significant research project that results in a research paper of 20 pages (minimum). The goal of this requirement is to ensure that each Religion major has conducted a significant research project. REL 493 can be used to satisfy this requirement.

Students considering graduate study in Religion are urged to consult with professors on the necessary preparation for graduate study in their area of interest.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements.

Language Requirements: The major in Religion does not require any language study beyond meeting the University's general education language requirement. However, majors are strongly encouraged to learn the languages relevant to their primary field of study and to begin that course of study as soon as possible. Please consult with the Director of Undergraduate Studies in Religion or a professor in your area of interest about appropriate language study.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To be considered for departmental distinction a student must have an overall GPA of at least 3.5. Distinction is granted on the basis of a senior thesis written in the context of REL 493. The level of distinction is based on evaluation of the thesis.

Code	Title	Hours
Minimum of 30 hours of Religion courses including:		
PHIL/REL 230 or REL 231	Philosophy of Religion Intro Religion and Philosophy	3
Distribution Requirement: Courses taken must include:		12
(a) Two courses in the following: Judaism, Christianity, Islam, or religious practices of the ancient Near East, chosen from a list maintained in the departmental adviser's office and		
(b) Two courses in the following: Hinduism, Buddhism, Chinese and Japanese Religions, or indigenous American religious practices, chosen from a list maintained in the departmental adviser's office.		
Three courses in a primary area of study ¹		9
Two courses in a secondary area of study ¹		6
Capstone Experience: a 400-level REL course in which a research project is undertaken and a 20 page research paper is written. This course can be REL 493 and can also be used to fulfill part of the distribution or primary or secondary area of study requirement.		3

¹ Areas of study include: Buddhism, Christianity, Hinduism, Islam, Judaism, Philosophy of Religion, Religion in America, or an individually designed area of study approved by the departmental advisor. Courses chosen to fulfill the primary area of study cannot also be used to fulfill the secondary area of study.

Minor in Religious Studies

E-mail: religion@illinois.edu

Web address for department: www.religion.illinois.edu (<http://www.religion.illinois.edu>)

Code	Title	Hours
REL 110	World Religions	3
One course in Ethics or Philosophy of Religion		3
Recommended courses are as follows:		
REL 230	Philosophy of Religion Intro	
REL 424	Philosophy of Religion	
Five additional courses:		15
Two courses (6 hours) must be from an Asian religious tradition (Hinduism, Buddhism, or Islam, with at least one course in Hinduism and Buddhism)		
Two courses (6 hours) must be from the Western religious traditions (Biblical Studies, Judaism, Christianity, Islam, with at least one course in Biblical Studies, Judaism, or Christianity)		
Total Hours		21

No more than nine (9) hours may be selected from courses at the 100 level.

At least six (6) hours must be selected from courses at the 300 or 400 level.

RLST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RLST>)

Russian, East European, and Eurasian Studies Center

John Randolph, Director of Center

104 International Studies Building, 910 South Fifth Street, Champaign
PH: (217) 333-1244

<http://www.reeec.illinois.edu>

The Russian, East European, and Eurasian Center offers an interdisciplinary major and minor in Russian, East European, and Eurasian Studies (REEES). These programs involve students in the study of an important and complex world area in a manner that draws together the approaches of different disciplines, while at the same time building knowledge in a single discipline. A student will construct an individual program of study, depending on the student's interests and career goals, in consultation with the undergraduate advisor of the Center.

The major in Russian, East European, and Eurasian Studies consists of three components: 1) language study (Russian, Polish, Czech, Ukrainian, Bosnian-Croatian-Serbian, Turkish, and more); 2) a multidisciplinary area studies focus; and 3) concentration in a single discipline. Language study can be in Russian or in any of the other languages of the region offered at the University. Students also take courses in a variety of disciplines (history, sociology, political science) and develop a broad expertise in the

history, politics, and culture of the region that includes Russia, but also many other countries, from the Czech Republic to Estonia to Uzbekistan. In addition, the concentration in a single discipline provides students with deep knowledge of a specific field that can qualify them for graduate or professional study. Many students also use this concentration to double major. With this program, the REEES major provides students with an interdisciplinary focus on issues critical to the region and foundational language training necessary for professional specialization in the area.

Students often go on to careers in government service (foreign service, FBI, CIA) or to work at NGOs (environment, human rights, and other international careers) in addition to publishing, editing, writing, translation, international business, law, teaching, and research.

REEES is one of two "Russian" majors (and minors) at the University of Illinois. What is the difference between them and which is the right one for you?

The REEES major has a current affairs focus and multidisciplinary area studies that develops students' skill sets in the humanities, social sciences, and other fields. The major in Slavic Studies emphasizes the study of language and literature, and students develop intensive cultural literacy and communication skills through humanities-oriented training. Many Slavic Studies majors go on to careers in writing and editing, media, or work with international cultural foundations and organizations. Both majors are excellent preparation for law school or graduate school and careers in teaching or research.

Major in Russian, East European, and Eurasian Studies

Major in Sciences and Letters Curriculum

E-mail: reec@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting courses equate to 48 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: To qualify for departmental distinction, a student must have at least a 3.5 GPA in the courses taken for Component 2 (see below) and must complete a senior thesis in consultation with a faculty member affiliated with the center. Students who wish to qualify for distinction in this major should consult with the center director at the beginning of the junior year or earlier to prepare a suitable plan.

Code	Title	Hours	Code	Title	Hours	
Component 1: Completion of three years of college-level study of Russian or another language of Eastern Europe or Eurasia, or equivalent proficiency. This stipulation may be partially satisfied through fulfillment of the LAS two-year language requirement if a regionally appropriate language is chosen for that purpose. A third year of study, however, is demanded beyond this. If a non-Russian, East European or Eurasian language is selected to meet the LAS requirement, then the three years of Russian, East European or Eurasian language study specified here must be taken in addition to those completed to satisfy the LAS requirement. Only the hours earned in the third, most advanced year of language study are calculated into the degree here, as these represent proficiency beyond that required by all LAS BA degree programs and as the first two years of language study are a prerequisite for the third.			6	The equivalent of three semesters of college-level language study in Russian or another language of Eastern Europe or Eurasia. This stipulation may be satisfied through partial fulfillment of the LAS two-year language requirement if a regionally appropriate language is chosen for that purpose. If a non-REEE language is selected to meet the LAS requirement, then the three semesters of REEE language study specified here must be taken in addition to those completed to satisfy the LAS requirement. Only those hours earned in the second and third semester of language study are calculated into the degree, as the first semester represents a prerequisite for the other two.	6-8	
Component 2: Russian and East European studies core courses, including:			Courses on Russia, Eastern Europe, or Eurasia from at least three different academic units. (Literature courses are acceptable for this requirement; language courses are not.) No more than 6 hours may be counted from any one unit; 6 hours must be at the 300- or 400-level.			
REES 200	Intro to Russia and Eurasia	24	Total Hours ²			21
REES 201	Introduction to Eastern Europe					
REES 495	Senior Seminar					
15 hours: Choose one course from each of three departments other than the department used for component 3 below. The courses comprising the remaining hours of component 2 may be from the same discipline as those under component 3; however, a course may be counted toward the total for only one component. Language courses that concentrate on the basic skills of speaking, listening, reading, and writing cannot be counted as part of this component.						
Component 3: Courses in a single discipline. Among those disciplines that are most commonly used with this specialization are anthropology, economics, geography, history, political science, Russian language and literature, and sociology. Among disciplines also used are business administration, comparative literature, education, English, fine arts, French, German, journalism, linguistics, mathematics, music, philosophy, psychology, and various natural sciences. Others are permitted. Consult your advisor. ²			18			
¹ The Center maintains a list of applicable courses on its web site.						
² If the study of a language is used for this component, 20 hours must be taken beyond the requirement of 6 additional hours outlined under component 1 above.						

¹ The Center maintains a list of applicable courses.

² No more than 9 hours may be taken at the 100-level.

REES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/REES>)

Courses

REES 115 Intro to Polish Culture credit: 3 Hours.

Same as POL 115. See POL 115.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

REES 116 Intro to Russian Culture credit: 3 Hours.

Same as RUSS 115. See RUSS 115.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

REES 200 Intro to Russia and Eurasia credit: 3 Hours.

Survey of the societies and states formerly constituted as the Soviet Union. Interdisciplinary and team-taught. Combines lectures, discussions, and films covering the history, political science, economics, sociology, and culture of the area.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

REES 201 Introduction to Eastern Europe credit: 3 Hours.

Interdisciplinary survey of Eastern Europe focusing mostly on the 20th century to the present, exploring issues of nationalism, socialism, post socialism and EU accession. Focuses on Central Europe and the Balkans, but also references the Baltic States, Belarus, Ukraine, and Russia. Students will learn about the region using perspectives and methodology from historical, economic, political, sociological and anthropological texts.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

REES 296 Special Topics credit: 3 Hours.

Topics in the interdisciplinary study of Russia, Eastern Europe, and Eurasia. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours.

Interdisciplinary Minor in Russian, East European, and Eurasian Studies

The interdisciplinary minor in Russian, East European, and Eurasian studies allows students in diverse fields to complement their programs with a study of Russia, Eastern Europe, and Eurasia. Programs of study can be tailored to the needs and interests of individual students, in consultation with the undergraduate advisor.

E-mail: reec@illinois.edu

Web address for department: www.reec.uiuc.edu (<http://www.reec.uiuc.edu>)

REES 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, INFO 325, LAST 325, and SAME 325. See EPS 325.

REES 390 Individual Study or Research credit: 3 Hours.

Directed reading or research on selected topics. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor supervising the work.

REES 477 Post-Communist Fiction credit: 3 or 4 Hours.

Same as SLAV 477 and CWL 477. See SLAV 477.

REES 493 Honors Senior Thesis credit: 3 Hours.

Undergraduate honors thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: REES major with senior standing and 3.5 grade-point average; consent of instructor supervising the work and the REEEC director.

REES 495 Senior Seminar credit: 3 Hours.

Interdisciplinary seminar normally taken in the senior year. Involving faculty in a number of disciplines, this course approaches understanding Russia, Eastern Europe, and Eurasia and the methodologies of its study through questions of identities, cultural values, and change. Taught in conjunction with REES 550. 3 undergraduate hours. No graduate credit. Prerequisite: Declared major in Russian, East European, and Eurasian Studies or consent of instructor; junior or senior standing.

REES 496 Topics in REEE Studies credit: 3 or 4 Hours.

Topics in the interdisciplinary study of Russia, Eastern Europe, and Eurasia. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours.

School of Earth, Society, and Environment

Stephen Marshak, Director of School

3086 Natural History Building

1301 W. Green St.

Urbana

PH: (217) 333-3440

<http://www.earth.illinois.edu/students/>

The major in Earth, Society, and Environmental Sustainability (ESE) offers a unique, multidisciplinary program in the College of Liberal Arts and Sciences (LAS). Students will learn about the interconnectedness of environmental, economic, and social systems of the world; the implications of our actions on the environment; factors that determine the sustainability of human institutions, organizations, cultures, and technologies; finding solutions through innovative approaches; and expanding future options by practicing environmental stewardship. Following the classical definition of sustainability, the aim is to develop citizens, businesses, and societies that meet the needs of the present without compromising the ability of future generations to do the same.

Required introductory coursework provide breadth in the essential natural and social sciences needed for interdisciplinary environmental sustainability study. The major offers two concentrations within which majors gain content expertise: Science of the Earth System, and Society and the Environment. Depth of knowledge is achieved by requiring a minimum of five advanced classes in a coherent field of study.

The major is available to both on-campus and off-campus students. On-campus students need only be eligible to be in LAS to transfer to the degree. The program is also designed so that students with an

associates (or equivalent) degree, or who have sufficient previous coursework, can transfer to the University and complete a Bachelor of Science degree entirely off-campus. Students interested in completing the course off-campus, but have less than 60 hours of coursework, should consult with the program advisor.

The degree will prepare students for a variety of career paths in either the private or the public sector, as well as for graduate study. The interdisciplinary background in both scientific and human aspects of environmental problems will prepare students for a variety of positions with businesses, state and federal regulatory agencies, research institutions, consulting firms and nongovernmental education and advocacy organizations. The major also provides a platform for entry into professional schools (e.g. law, business, and public policy programs) as well as graduate study in a variety of physical science and social science disciplines, and in interdisciplinary programs related to the environment.

For the Degree of Bachelor Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: sese-info@illinois.edu

Earth, Society, and Environmental Sustainability

On-campus UIUC students can transfer to this degree without any special requirements.

Off-campus students who plan to transfer to this degree should have completed, or have in progress, the following:

- the Composition 1 requirement.
- the third level of high school foreign language or second level of college foreign language.

It is highly recommended that off-campus students complete the following requirements before transferring to the online degree - students who have not completed the following requirements may have to take additional coursework (either at UIUC or elsewhere) and should consult the program advisor:

- the UIUC LAS language requirement should be satisfied.
- the General Education Distribution Requirements of the College of Liberal Arts and Sciences should be completed.
- the Cognate Coursework should be completed.

Students must complete the ESE Core requirements listed below and select one concentration in consultation with an academic advisor.

- **Society and the Environment (SAE) Concentration** (p. 553)
- **Science of the Earth System (SES) Concentration** (p. 554)

Code	Title	Hours
ESE Core Requirements		
ESES Introductory Core:	Students take one approved introductory or advanced course from at least four of the following five areas. Approved courses within these areas are available from the ESE advisor ¹	12-14
	Environment and the Human Response	
	Sustainability, Policy, and Global Change	
	Earth's Physical Systems, Resources, and Hazards	
	Visualizing the Earth System	

Earth's Biosphere and Ecology		
ESE coursework		6
GEOG 379	Intro to GIS Systems	
ESE 200	Earth Systems	
Advanced Courses		15-20
A minimum of five 300- and 400-level courses, from the approved list and in an academically coherent program approved by the advisor, are required. At least three of these five advanced courses must be listed or cross-listed as an ESE or ENSU course. Courses taken to satisfy the "ESE Introductory Core" requirement cannot simultaneously be used to satisfy the Advanced Course requirement. These courses should be used to help meet the LAS requirement of 21 hours of 300- or 400-level courses overall, and the 12 hours of 300- or 400- level courses in the major. It is strongly recommended that students complete the LAS requirement with 21 hours of 300- or 400-level courses related to the ESE curriculum.		
Select a Concentration (hours required depend on concentration chosen):		15-18
Total Hours		48-58

¹ OR in the ESE School office OR at <http://www.earth.illinois.edu/students/guides>

Minor in Earth, Society, and Environment

The ESE minor is designed for students who desire to obtain a background in topics related to environmental studies, in order to support study and practice of their major field. A minimum of 18 hours is required.

For more information and a list of approved courses visit: www.earth.illinois.edu. (<http://www.earth.illinois.edu>)

Questions may be addressed to Jonathan Tomkin, tomkin@illinois.edu.

Code	Title	Hours
	Introductory course from the Earth's Physical Systems, Resources, and Hazards Area course list.	3-4
	Introductory course from either the Environment and the Human Response or Sustainability, Policy, and Global Change Area course lists	3-4
ESE 200	Earth Systems	3
	Three Advanced Courses from a list maintained by the minor advisor, at least two of which must be listed or cross listed as ESE courses	9-12
Total Hours		18-23

ENUS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENSU>)

Environmental Sustainability Courses

ENUS 300 Environmental Sustainability credit: 3 Hours.
Same as LA 370 and NRES 370. See LA 370.

ENUS 301 Soc Impacts Weather & Climate credit: 3 Hours.
Same as ATMS 322. See ATMS 322.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ENUS 302 Air Pollution to Global Change credit: 3 Hours.
Same as ATMS 323. See ATMS 323.

ENUS 303 Sustainable Business I credit: 4 Hours.

At the dawn of the 21st century, business and society is confronted with a confluence of factors, including environmental degradation, widespread poverty, and the need for renewable sources of energy. The diverse sources of information that point to an uncertain future suggests that a 'business as usual' approach has to be replaced with more proactive alternatives that address the needs of the environment, consumer welfare and community development. This course on sustainable marketing management begins to address these issues and engender an appreciation among our students for the challenges that lie ahead for businesses. Looks at the relationship between sustainable business practices, societal welfare, and ecological systems. Student projects will apply marketing and business concepts to create a sustainable business plan for organizations.

ENUS 310 Renewable & Alternative Energy credit: 4 Hours.

Fossil fuel supplies are finite and growing energy demands of an ever increasing population will quickly deplete these reservoirs. Focuses on the use and availability of renewable and alternative energy sources such as wind, solar, bio-fuels, ethanol, geothermal and nuclear power as well as the impacts of using these alternative energy sources on climate, society and the global economy. Students will develop the student's perspective on human energy consumption at all scales through a complete scale analysis of energy production and consumption ? from the individual to the national government to the world economy.

ENUS 410 Sustainable Organizations credit: 4 Hours.

Explores the notion of sustainability as a core business tenant, and how entrepreneurs and their companies are working to create and capture financial, social, and environmental value. The focus is on on large, for profit companies, but lessons will extend to smaller, non-profit, and governmental organizations. The aim is to prepare participants for the green challenge of adopting and implementing socially responsible practices in the workplace. 4 undergraduate hours. 4 graduate hours.

ENVS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENVS>)

Environmental Studies Courses

ENVS 101 Introduction to Energy Sources credit: 3 Hours.
Same as NPRES 101. See NPRES 101.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ENVS 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ECON 210, NRES 210, and UP 210. See ACE 210.
This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ENVS 220 Communicating Agriculture credit: 3 Hours.

Same as AGCM 220 and NRES 220. See AGCM 220.
This course satisfies the General Education Criteria for: Advanced Composition

ENVS 299 Ind Studies of Env. Topics credit: 0 to 4 Hours.

Approved for letter and S/U grading. Prerequisite: Consent of instructor.

ENVS 301 Tools for Sustainability credit: 3 Hours.

Develops systems-thinking skills needed to make connections between different disciplines to better understand problems and trade-offs related to sustainability. Students will gain competence in conducting cost-benefit and life-cycle analyses and learn about sustainability metrics while improving their ability to communicate about the integrated dimensions of sustainability within an interdisciplinary setting. Prerequisite: For students enrolled in the Sustainability, Energy and Environment Fellows Program.

ENVS 310 Natural Resource Economics credit: 3 Hours.

Same as ACE 310, and NRES 310. See ACE 310.

ENVS 330 Environmental Communications credit: 3 Hours.

Same as AGCM 330 and NRES 330. See AGCM 330.

ENVS 336 Tomorrow's Environment credit: 3 Hours.

Same as CHLH 336 and CPSC 336. See CPSC 336.

ENVS 380 Environmental Geology credit: 4 Hours.

Same as GEOL 380. See GEOL 380.

ENVS 406 Urban Ecology credit: 4 Hours.

Same as UP 406. See UP 406.

ENVS 420 Conservation Biology credit: 4 Hours.

Same as CPSC 436 and IB 451. See IB 451.

ENVS 430 Comm in Env Social Movements credit: 3 Hours.

Same as AGCM 430, NRES 430, and SOC 464. See AGCM 430.

ENVS 431 Environ Toxicology & Health credit: 3 Hours.

Same as CHLH 461 and IB 485. See IB 485.

ENVS 433 Pesticide Toxicology credit: 3 or 4 Hours.

Same as CB 434 and IB 486. See IB 486.

ENVS 447 Environmental Sociology credit: 3 or 4 Hours.

Same as RSOC 447 and SOC 447. See SOC 447.

ENVS 469 Environmental Health credit: 3 or 4 Hours.

Same as CHLH 469. See CHLH 469.

ENVS 474 Principles of Epidemiology credit: 4 Hours.

Same as CHLH 474 and PATH 474. See CHLH 474.

ENVS 480 Basic Toxicology credit: 3 Hours.

Same as CB 449, CPSC 433 and FSHN 480. See FSHN 480.

ENVS 491 Sustainability Experience credit: 1 to 4 Hours.

Students will work with faculty, staff, and/or the Student Sustainability Committee to advance campus sustainability goals and the Illinois Climate Action Plan. This course is designed to enable students to apply their disciplinary knowledge to tackle inherently interdisciplinary problems, while also developing and enhancing their critical analysis, leadership, organizational, and project management/evaluation skills and preparing them for addressing sustainability issues in their careers. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated, if topics vary. Prerequisite: Consent of instructor.

ENVS 492 Sustainability, Energy and Environment Capstone credit: 4 Hours.

Problem-focused learning and a holistic and interdisciplinary perspective to address critical sustainability-related challenges facing society. Students will gain critical thinking skills to examine the sustainability of various decisions, analyze the trade-offs between the economic, environmental and social dimensions of sustainability of alternative solutions, learn techniques to operationalize the concept of sustainability and develop practical skills in sustainability assessment. Team projects will develop team building skills, communication skills and project management skills. 4 undergraduate hours. No graduate credit. Prerequisite: ENVS 301. For students enrolled in the Sustainability, Energy and Environment Fellows Program.

ESE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ESE>)

Earth, Society, Environment Courses**ESE 103 Earth's Physical Systems credit: 4 Hours.**

Same as GEOG 103. See GEOG 103.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

ESE 104 Geology of the National Parks credit: 3 Hours.

Same as GEOL 104. See GEOL 104.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

ESE 106 Geographies of Globalization credit: 3 Hours.

Same as GEOG 106. See GEOG 106.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ESE 111 Emergence of Life credit: 3 Hours.

Same as GEOL 111. See GEOL 111.

This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

ESE 117 The Oceans credit: 3 Hours.

Same as GEOL 117. See GEOL 117.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

ESE 118 Natural Disasters credit: 3 Hours.

Same as GEOL 118 and GLOBL 118. See GEOL 118.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

ESE 120 Severe and Hazardous Weather credit: 3 Hours.

Same as ATMS 120. See ATMS 120.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ESE 140 Climate and Global Change credit: 3 Hours.

Same as ATMS 140. See ATMS 140.

This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

ESE 143 History of Life credit: 3 Hours.

Same as GEOL 143. See GEOL 143.

This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

ESE 170 Nature Religion credit: 3 Hours.

Same as REL 170. See REL 170.

ESE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics in Earth, Society, and the Environment; content is variable. May be repeated if topics vary.

ESE 200 Earth Systems credit: 3 Hours.

Interdisciplinary lecture class intended to introduce Earth Systems studies, which focuses on integrating social and natural science approaches to studying the Earth and its environments.

ESE 202 American Environmental History credit: 3 Hours.

Same as HIST 202 and NRES 202. See HIST 202.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ESE 208 History of the Earth System credit: 4 Hours.

Same as GEOL 208. See GEOL 208.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 210 Social & Environmental Issues credit: 3 Hours.

Same as GEOG 210. See GEOG 210.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ESE 215 Resource Conflicts credit: 3 Hours.

Same as GEOG 215 and GBLB 215. See GEOG 215.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ESE 222 Big Rivers of the World credit: 3 Hours.

Same as GEOG 222. See GEOG 222.

ESE 254 American People, Places, & Environments credit: 3 Hours.

Same as GEOG 254. See GEOG 254.

ESE 287 Environment and Society credit: 3 Hours.

Same as GEOG 287, NRES 287 and PS 273. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

ESE 289 Environment & Sustainability Field Study credit: 1 Hour.

Group expedition to study environment and sustainability issues at a nearby field site. Includes in-class meetings, student-led presentation, and a field trip that may be short as part of a day or as long as several days. Field trip and field trip fee required. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated in separate terms if topics vary. Prerequisite: For ESE majors, minors, and Sustainability Living Learning Community students. Non majors can apply to the waitlist.

ESE 293 The Anthropocene credit: 3 Hours.

Same as ENGL 293. See ENGL 293.

ESE 311 Environmental Issues Today credit: 3 Hours.

Seminar exposing students in the Environmental Fellows Program to different disciplinary perspectives on specific environmental issues, as revealed in the scholarly literature. Specific problems will vary from term to term. This seminar helps students make the transition from disciplinary to interdisciplinary thinking. Team-taught. Same as ATMS 311. Prerequisite: Admission to Environmental Fellows Program or consent of advisor.

ESE 320 Water Planet, Water Crisis credit: 3 Hours.

Study of the science of water on planet earth, the developing water crisis, and some possible solutions to it. Topics include water's unique physical and chemical properties; how it profoundly shapes the earth/ocean/atmosphere system; dynamics of oceans, atmosphere, lakes, rivers, groundwater, and ice masses; current fresh water supplies and their distribution on earth relative to population; current and future water crises and the compounding effects of droughts, floods, and global change; and prospects for some technological and economic approaches to easing the crisis. Same as GEOG 370 and GEOL 370.

ESE 333 Earth Materials and the Env credit: 4 Hours.

Same as GEOL 333. See GEOL 333.

ESE 350 Sustainability and the City credit: 3 Hours.

Same as GEOG 350. See GEOG 350.

ESE 360 Environmental Writing credit: 3 Hours.

Equips students to write about the environment for various audiences, with a focus on specific current efforts to promote sustainability on the Urbana-Champaign campus. We will practice effective techniques for each stage of the writing process—from defining topics, to gathering information, to crafting active, engaging prose. Readings will include models of effective environmental writing and "how to" pieces by experts. Research will include visits to campus sites and student-conducted interviews with subjects. Same as ENGL 360. Prerequisite: Completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for:
Advanced Composition

ESE 379 Intro to GIS Systems credit: 4 Hours.

Same as GEOG 379. See GEOG 379.

ESE 380 GIS II: Spatial Prob Solving credit: 4 Hours.

Same as GEOG 380. See GEOG 380.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

ESE 381 Environmental Perspectives credit: 3 Hours.

Same as GEOG 381. See GEOG 381.

ESE 386 Arctic Environmt & Society credit: 6 Hours.

Same as GBLB 386 and SCAN 386. See GBLB 386.

ESE 389 Environment and Sustainability Field Expedition credit: 3 Hours.

Group expedition to study environment and sustainability issues at a field site. Includes in-class meetings, student-led presentation, and field trip; expeditions run during spring break, winter break, in mid-May or in intercession; dates depend on location. Field Trip and field trip fee required. Additional fees may apply. See Class Schedule. May be repeated up to 12 hours in separate terms if topics vary.

ESE 401 ESE Capstone credit: 3 Hours.

Capstone experience for majors in Earth, Society, and Environment Sustainability. 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading.

ESE 410 Green Development credit: 4 Hours.

Same as GEOG 410. See GEOG 410.

ESE 411 Geomorphology credit: 4 Hours.

Same as GEOL 401. See GEOL 401.

ESE 421 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, GEOG 421, GEOL 481 and NRES 422. See ATMS 421.

ESE 439 Biogeography credit: 3 Hours.

Same as ANTH 436, GEOG 436, IB 439, and NRES 441. See IB 439.

ESE 445 Earth Resources Sustainability credit: 3 Hours.

Introduces the physical (energy, mineral, and soil) resources of the Earth, the environmental consequences of producing and using resources, the controls on resource supplies, and the alternatives to traditional supplies. Focuses on the geological origin and context of resources, the means of exploration and production, the history of production, and sustainability issues related to consumption and depletion. Provides an understanding of why resources can be scarce and expensive, why many are not renewable, and why their use impacts the Earth System. May include field trips. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ESE 445 and GEOL 380. Prerequisite: Junior standing or higher.

ESE 452 Ecosystem Ecology credit: 3 Hours.

Same as IB 452 and NRES 462. See IB 452.

ESE 462 Ecological Criticism credit: 3 or 4 Hours.

Same as CWL 460 and REL 462. See REL 462.

ESE 465 Transp and Sustainability credit: 3 or 4 Hours.

Same as GEOG 465. See GEOG 465.

This course satisfies the General Education Criteria for: Advanced Composition

ESE 466 Environmental Policy credit: 3 or 4 Hours.

Same as GEOG 466. See GEOG 466.

ESE 470 Introduction to Hydrogeology credit: 4 Hours.

Same as GEOL 470. See GEOL 470.

ESE 477 Advanced Environmental Writing credit: 3 Hours.

Same as ENGL 477. See ENGL 477.

ESE 481 Intl Environ Cooperation credit: 3 Hours.

Same as GEOG 481. See GEOG 481.

ESE 482 Challenges of Sustainability credit: 3 Hours.

An interdisciplinary approach to investigating the meaning and practice of sustainability in the contemporary Earth system. As a consequence, students explore the sustainability of crucial resources - water, soil, energy, mineral and the biota - in the context of the social and environmental systems in which these resources are used, including the moral, physical, ecological, political and economic. Same as GEOG 482 and GEOL 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior or senior standing, or consent of instructor.

ESE 497 Special Topics in ESE credit: 1 to 4 Hours.

Advanced topics course, consisting of seminar or lectures in subjects not covered by regular course offerings; for advanced undergraduates and graduate students. Possible field study in a prominent geological locality; includes in-class meetings, student-led presentations, and field trip; trips run during spring break, winter break, in mid-end May; dates depend on location. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 undergraduate hours or 8 graduate hours. Prerequisite: Consent of instructor.

ESE 498 Environmental Writing for Publication credit: 3 Hours.

Provides students with both the experience of the real-world editorial process and with a research product (the published essay) that showcases their professional development as well-informed and persuasive writers on environmental issues. Same as ENGL 498. 3 undergraduate hours. No graduate credit. Prerequisite: Consent of instructor.

Society and the Environment (SAE) Concentration

For the Degree of Bachelor Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: sese-info@illinois.edu

Earth, Society, and Environmental Sustainability

Minimum required major and supporting courses equate to 48-58 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

All students wishing to attend graduate school in any field should discuss necessary supplementary course work with their advisor as early as possible.

Twelve hours of 300- or 400-level courses must be taken on this campus.

Substitutions may be made with advisor approval.

A Major Plan of Study form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Study abroad courses may be substituted for major and minor requirements with approval of advisor.

Minimum hours required for graduation: 120 hours

Departmental distinction: Students who maintain grade point averages of at least 3.3 in all courses within the major and who undertake a faculty-guided individual research project for credit in the major are recommended for graduation with distinction.

ESE Core Requirements:

Code	Title	Hours
ESES Introductory Core: Students take one approved introductory or advanced course from at least four of the following five areas. Approved courses within these areas are available from the ESE advisor ¹		12-14
	Environment and the Human Response	
	Sustainability, Policy, and Global Change	
	Earth's Physical Systems, Resources, and Hazards	
	Visualizing the Earth System	
	Earth's Biosphere and Ecology	
ESE coursework		6
GEOG 379	Intro to GIS Systems	
ESE 200	Earth Systems	
Advanced Courses		15-20

A minimum of five 300- and 400-level courses, from the approved list and in an academically coherent program approved by the advisor, are required. At least three of these five advanced courses must be listed or cross-listed as an ESE or ENSU course. Courses taken to satisfy the “ESE Introductory Core” requirement cannot simultaneously be used to satisfy the Advanced Course requirement. These courses should be used to help meet the LAS requirement of 21 hours of 300- or 400-level courses overall, and the 12 hours of 300- or 400- level courses in the major. It is strongly recommended that students complete the LAS requirement with 21 hours of 300- or 400-level courses related to the ESE curriculum.

Society and the Environment Concentration Requirements:

Code	Title	Hours
	Cognate Course Work	16-18
	10-12 hours-Introductory Social Science (Select three courses from approved list)	
	3 hours-Statistics (Select one course from approved list)	
	3 hours-Economics: ECON 102	
	Highly recommended: CHEM 101 or CHEM 102	

¹ OR in the ESE School office OR at <http://www.earth.illinois.edu/students/guides>

Science of the Earth System (SES) Concentration

ESE Core Requirements:

Code	Title	Hours
	ESES Introductory Core: Students take one approved introductory or advanced course from at least four of the following five areas. Approved courses within these areas are available from the ESE advisor ¹	12-14
	Environment and the Human Response Sustainability, Policy, and Global Change	
	Earth’s Physical Systems, Resources, and Hazards Visualizing the Earth System	
	Earth’s Biosphere and Ecology	
	ESE coursework	6
	GEOG 379 Intro to GIS Systems	
	ESE 200 Earth Systems	
	Advanced Courses	15-20

A minimum of five 300- and 400-level courses, from the approved list and in an academically coherent program approved by the advisor, are required. At least three of these five advanced courses must be listed or cross-listed as an ESE or ENSU course. Courses taken to satisfy the “ESE Introductory Core” requirement cannot simultaneously be used to satisfy the Advanced Course requirement. These courses should be used to help meet the LAS requirement of 21 hours of 300- or 400-level courses overall, and the 12 hours of 300- or 400- level courses in the major. It is strongly recommended that students complete the LAS requirement with 21 hours of 300- or 400-level courses related to the ESE curriculum.

Science of the Earth System Concentration Requirements:

Code	Title	Hours
	Cognate Course Work	15-18
	CHEM 102 General Chemistry I or CHEM 202 Accelerated Chemistry I	
	CHEM 103 General Chemistry Lab I or CHEM 203 Accelerated Chemistry Lab I	
	MATH 220 Calculus or MATH 221 Calculus I	
	STAT 100 Statistics	
	PHYS 101 College Physics: Mech & Heat or PHYS 211 University Physics: Mechanics	
	Highly recommended: ECON 102	

All students wishing to attend graduate school in any field should discuss necessary supplementary course work with their advisor as early as possible.

Twelve hours of 300- or 400-level courses must be taken on this campus.

Substitutions may be made with advisor approval.

All foreign language requirements must be satisfied.

A Major Plan of Study form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Study abroad courses may be substituted for major and minor requirements with approval of advisor.

¹ OR in the ESE School office OR at <http://www.earth.illinois.edu/students/guides>

Slavic Languages and Literatures

Valeria Sobol

2090 Foreign Languages Building, 707 South Mathews, Urbana
PH: (217) 333-0680

<http://www.slavic.illinois.edu>

The **major in Slavic Studies** enables students to specialize in one of five concentrations:

1. Russian Language, Literature, and Culture
2. Polish Studies
3. South Slavic Studies

4. Czech Studies
5. Ukrainian Studies

Unlike the major in Russian, East European, and Eurasian Studies (p. 547), which has a multidisciplinary area studies and current affairs focus, the major in Slavic Studies emphasizes the study of language, literature, and culture in their historical context. Students develop intensive cultural literacy and communication skills through humanities-oriented training, and many go on to careers in writing and editing, media, or work with international cultural foundations and organizations. The major is an excellent preparation for law school, business school, or other graduate study, as well as careers in the N.G.O. world, teaching, or research.

The department also offers a **minor in Russian Language and Literature** and a **minor in Slavic Language, Literature, and Culture**.

The **5 Year BALAS/MA in Slavic Studies (Russian Language, Literature & Culture or Polish Studies concentrations) and European Union Studies** allows students to receive two degrees, a BALAS in Slavic Studies and an MA in European Union Studies.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Students must select one concentration in consultation with an academic advisor. Students in all concentrations must complete a) 6 hours of language beyond the second year, and b) 24 hours of literature and culture courses.

- Russian Language, Literature, and Culture Concentration (p. 560)
- Polish Studies Concentration (p. 560)
- South Slavic Studies Concentration (p. 561)
- Czech Studies concentration (p. 559)
- Ukrainian Studies Concentration (p. 562)

5 Year BALAS/MA in Slavic Studies (Russian Language, Literature & Culture or Polish Studies concentrations) and European Union Studies

The Department of Slavic Languages & Literatures with the European Union Center offers a 5-year BALAS/MA degree program in Slavic Studies (Russian Language, Literature & Culture or Polish Studies concentrations) and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS-granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the stand-alone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; the BALAS and MA degrees will be conferred separately and independently. More detailed information may be obtained from department and EUC offices.

- Minor in Russian Language and Literature (p. 559)
- Minor in Slavic Language, Literature, and Culture (p. 559)

BULG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BULG>)

Bulgarian Courses

BULG 481 Structure of Modern Bulgarian credit: 3 Hours.

Analysis of the sound system and grammar of the contemporary Bulgarian language. 3 undergraduate hours. 3 graduate hours. Prerequisite: RUSS 302 or equivalent.

BULG 482 Readings in Bulgarian Lit credit: 3 or 4 Hours.

Reading, analysis, and discussion of selected excerpts from Bulgarian literature, scientific prose, and the press. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary. Prerequisite: BULG 481 or consent of instructor.

CZCH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CZCH>)

Czech Courses

CZCH 101 Elementary Czech I credit: 4 Hours.

Develops basic proficiency in Czech in listening, speaking, reading, and writing.

CZCH 102 Elementary Czech II credit: 4 Hours.

Continuation of CZCH 101. Prerequisite: CZCH 101.

CZCH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CZCH 201 Second-year Czech I credit: 4 Hours.

Develops intermediate-level proficiency in Czech in listening, speaking, reading, and writing. Prerequisite: CZCH 102 or equivalent.

CZCH 202 Second-year Czech II credit: 4 Hours.

Continuation of CZCH 201. Prerequisite: CZCH 201 or equivalent.

CZCH 484 Readings in Czech credit: 3 or 4 Hours.

Reading and analysis of selected texts. 3 undergraduate hours. 4 graduate hours. Prerequisite: CZCH 202 or consent of instructor.

POL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/POL>)

Polish Courses

POL 101 Elementary Polish I credit: 4 Hours.

Oral and written work on basic pronunciation, grammar, and vocabulary. For students with no prior work in Polish.

POL 102 Elementary Polish II credit: 4 Hours.

Continuation of POL 101 Prerequisite: POL 101.

POL 115 Intro to Polish Culture credit: 3 Hours.

Introduction to Polish culture and literature from a broad historical perspective. Drawing on novels and plays, film, the visual arts, and works of historical research, the course provides students with the basic concepts, methodologies and theories of literary and cultural interpretation, with an emphasis on modern Polish culture (1800-2010) within a broader European context. Same as REES 115.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

POL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

POL 201 Second Yr Polish I credit: 4 Hours.

Grammar review, conversation practice, written exercises, and selected readings. Prerequisite: POL 102 or equivalent.

POL 202 Second Yr Polish II credit: 4 Hours.

Continuation of POL 201. Prerequisite: POL 201.

POL 245 Survey of Polish Literature credit: 3 Hours.

Critical survey, in translation, of Polish literature from the Middle Ages to the end of the nineteenth century; special attention given to the works in their cultural context. Same as CWL 245.

POL 301 Third-Year Polish I credit: 3 Hours.

Reading and discussion of representative prose and poetry works of Polish authors since 1863. All readings are in the original language; the course emphasis is in the development of language skills. Prerequisite: POL 202 or consent of instructor.

POL 302 Third-Year Polish II credit: 3 Hours.

Reading and discussion of representative prose and poetry works of Polish authors to 1863. All readings are in the original language; the course emphasis is in the development of language skills. Prerequisite: POL 301 or consent of instructor.

POL 401 Fourth-Year Polish I credit: 3 Hours.

Analysis of the sound system and grammar of the contemporary Polish language. 3 undergraduate hours. 3 graduate hours. Prerequisite: Knowledge of another Slavic language or consent of instructor.

POL 402 Fourth-Year Polish II credit: 3 Hours.

Reading and analysis of selected texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: POL 401 or consent of instructor.

POL 446 Problems of Polish Literature credit: 3 or 4 Hours.

Critical study, in translation, of modern Polish fiction, drama, poetry, and essay, from Young Poland to the "New Wave"; their contribution to literary styles and genres in Poland and abroad; special emphasis on Wyspianski, Witkiewicz, and Gombrowicz. Same as CWL 436. 3 undergraduate hours. 4 graduate hours.

RUSS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RUSS>)

Russian Courses

RUSS 101 First-Year Russian I credit: 4 Hours.

Oral-aural practice and elements of grammar, reading, and writing. For students who have no credit in Russian.

RUSS 102 First-Year Russian II credit: 4 Hours.

Continuation of RUSS 101. Oral-aural practice and elements of grammar, reading, and writing. Prerequisite: RUSS 101.

RUSS 115 Intro to Russian Culture credit: 3 Hours.

Introduction to the culture of Russia and the USSR. Course addresses two central themes. First, the very distinctiveness of Russian culture, and the functions of that notion within Russia and for outsiders; Second, Russia as a cultural space between East and West. We will explore Russian culture through the following, the language(s); foundational narratives of collective memory going back to the medieval times; the cultural impact of colonial subjugation both by and of peoples to the East, South, and West; Russian Orthodoxy's connection with the political and cultural spheres; peak achievements in literature, music, architecture and visual arts. Same as REES 116.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

RUSS 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

RUSS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RUSS 201 Second-Year Russian I credit: 4 Hours.

Oral-aural practice, systematic functional grammar, reading, and writing. Prerequisite: RUSS 102 or equivalent.

RUSS 202 Second-Year Russian II credit: 4 Hours.

Systematic review of the structure of Russian covered in RUSS 101, RUSS 102, and RUSS 201 through class lectures, drills, and homework exercises. Prerequisite: RUSS 201.

RUSS 219 Russian Cinema Survey credit: 3 Hours.

Survey of Russian and Soviet film, from Eisenstein to the present. Weekly film screenings. No knowledge of Russian required.

RUSS 220 Golden Age of Russian Lit credit: 3 Hours.

Survey of Russian literature in the long 19th century; romanticism, realism, nationalism, orientalism, empire; writers may include Pushkin, Gogol, Lermontov, Pavlova, Turgenyev, Dostoevsky, Tolstoy, Chekhov, and others; reading and discussion in English. Same as CWL 227.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 225 Russian Lit and Revolution credit: 3 Hours.

Major works from 1900 to the present; futurism, modernism, Stalinism, post-modernism, and after; writers may include Mayakovsky, Babel, Olesha, Akhmatova, Bulgakov, Nabokov, Solzhenitsyn, Tolstaya, and others; readings and discussion in English. Same as CWL 249.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 260 Medicine & Russian Literature credit: 3 Hours.

Examines cultural significance of medicine and the figure of the physician, and understandings of illness and health, primarily in literature of Russia and the USSR from the 1860s to present. Asks what larger issues are at stake in the literary representation of medical practice by physicians and non-physicians alike in the Russian and Soviet contexts; investigates what medicine and literature offer each other, and the bearing on this of the latter's formal, aesthetic qualities. Considers how medical practice is conditioned by the broader culture, how medical discourse, knowingly or unknowingly, 'borrows' from, is conditioned by, or otherwise reciprocally involved with other greater or peripheral discursive spheres. Reads fiction by leading literary figures who were physicians (Chekhov, Bulgakov, Veresaev, and Aksyonov); fiction by "lay" authors about doctors and medical practice (such as Solzhenitsyn); memoirs by physicians (tales of training and practice, apologies, denunciations); memoirs by patients; 'real' and fictional case histories; theoretical and methodological readings.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 261 Intro Russian-Jewish Culture credit: 3 Hours.

Introduction to the interaction of the intellectual, artistic, political, social, and religious life of the Jewish community in Russia through film, literature, art and historical record. Same as HIST 261.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

RUSS 290 Readings in Russian credit: 1 to 4 Hours.

Individual topics or projects chosen in consultation with a Slavic Department representative. May be repeated to a maximum of 8 hours. Prerequisite: RUSS 202 or equivalent proficiency.

RUSS 301 Third Year Russian I credit: 3 Hours.

Grammar review; training in writing Russian; translation from English and free composition. Prerequisite: RUSS 202 or consent of instructor.

RUSS 302 Third Year Russian II credit: 3 Hours.

Practice in intermediate-level speaking, listening, reading, and writing, based upon advanced grammar and conversation topics and upon readings from current fiction and non-fiction. Students are expected to write essays and give oral reports based on in-class assignments and outside interests. Prerequisite: RUSS 301 or consent of department.

RUSS 305 Business Russian credit: 3 Hours.

Basic tools and skills for conducting business in Russian, including introduction to Russian economy, banking, insurance, media, internet technology, advertising, law and culture, practicum in writing the c.v and business correspondence in Russian. Prerequisite: Successful completion of RUSS 301 or consent of instructor.

RUSS 320 Russian Writers credit: 3 Hours.

Focused study of the work of a single Russian writer, or the comparison of that writer with another major author, in translation. No Russian required. Same as CWL 321. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: At least one other college literature course or consent of instructor.

RUSS 322 Dostoevsky credit: 3 Hours.

Introduction to the major works of Fyodor Mikhailovich Dostoevsky. No Russian required. Same as CWL 324 and ENGL 322. May be repeated up to 6 credit hours in separate terms. Prerequisite: At least one other college literature course or consent of instructor.

RUSS 323 Tolstoy credit: 3 Hours.

Introduction to the major works of Lev Tolstoy. No Russian required. Same as CWL 323 and ENGL 323. May be repeated up to 6 credit hours in separate terms, if topics vary. Prerequisite: One other college literature course or consent of instructor.

RUSS 325 Chekhov credit: 3 Hours.

Introduction to the major works of playwright and author Anton Chekhov. Same as CWL 325 and THEA 362. Prerequisite: At least one other literature course or consent of instructor.

RUSS 335 Nabokov credit: 3 Hours.

Nabokov's Russian and American novels read in a comparative context. All works in English, no knowledge of Russian is required. Same as CWL 335. Prerequisite: At least one other college-level literature course or consent of instructor.

RUSS 401 Fourth Year Russian I credit: 3 Hours.

Practice in advanced speaking, listening, reading, and writing, based upon reading selected from current fiction and non-fiction, and covering a wide variety of styles: literary, conversational, scientific, etc. Course taught in Russian. Students are expected to write essays and give oral reports based on what they read in class and on their outside interests. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of college Russian or consent of instructor.

RUSS 402 Fourth Year Russian II credit: 3 Hours.

Practice in advanced speaking, listening, reading, and writing, based upon reading selected from current fiction and non-fiction, and covering a wide variety of styles: literary, conversational, scientific, etc. Course taught in Russian. Students are expected to write essays and give oral reports based on what they read in class and on their outside interests. 3 undergraduate hours. 3 graduate hours. Prerequisite: RUSS 401 or consent of instructor.

RUSS 418 18th Century Literature credit: 3 or 4 Hours.

Reading of texts; historical and literary background of the period. 3 undergraduate hours. 4 graduate hours.

RUSS 424 Russian Modernism credit: 3 or 4 Hours.

Representative works of the period 1880 to 1917, with emphasis on Chekhov, Gorky, and Blok; readings for non-majors and class discussions in English. Same as CWL 457. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

RUSS 438 Modern Russian Poetry credit: 3 or 4 Hours.

Study of major Russian poets and their works from romanticism to the present. Historical background, textual analysis and connections with Western European poetry. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 444 Problems in Romanticism credit: 3 or 4 Hours.

Study of major authors of the romantic period, and some lesser authors. Historical background, textual analysis, and connections with Western European romanticism. Same as CWL 444. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 445 Problems in Realism credit: 3 or 4 Hours.

Study of the major texts of nineteenth century Russian realism, including works by Turgenev, Goncharov, Nekrasov, Dostoevsky, and Tolstoy. Historical background, relevant intellectual currents, textual analysis, and connections with Western European realist authors. Same as CWL 445. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 460 Russian Culture Studies credit: 3 or 4 Hours.

Role of Russian literature in the social, political, and intellectual life of Russia from the 1840s to the present. Same as CWL 440. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing.

RUSS 461 Russia and the Other credit: 3 or 4 Hours.

Interdisciplinary and comparative topics including, but not limited to: Russia and the West, Russia and the East, the Cold War, and post-Soviet cultural studies. Same as CWL 466. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Russian course at the 200 or 300 level or consent of instructor.

RUSS 465 Russian-Jewish Culture credit: 3 or 4 Hours.

Study of Russian-Jewish cultural, social, and political life through literature and film. No Russian required. 3 undergraduate hours. 4 graduate hours. Prerequisite: One literature course in the Slavic department at the 200 or 300 level, or consent of instructor.

RUSS 466 Russian Women's Writing credit: 3 or 4 Hours.

Study of fiction and non-fiction writing by Russian women, including discussion of historical context and feminist theory. 3 undergraduate hours. 4 graduate hours. Prerequisite: One literature course in the Slavic department at the 200 or 300 level, or consent of instructor.

RUSS 474 Russian Translation credit: 3 or 4 Hours.

Theory and practice of translation in Russia from the eighteenth century to the present; "literal" versus "creative" translation; and practical work in translation into English of various Russian texts. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: RUSS 302 or equivalent.

RUSS 493 Honors Senior Thesis credit: 2 Hours.

Intended primarily for candidates for honors in Russian but open to other seniors. 2 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Senior standing.

SLAV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SLAV>)

Slavic Courses

SLAV 117 Russ & E Euro Science Fiction credit: 3 Hours.

Survey of the science fiction writing of Russia and the countries of Eastern Europe since 1750, with particular emphasis on the post-World War II period. The role of the Science Fiction tradition in the respective national cultures. The influence on Russian and East European Science Fiction of Anglo-American Science Fiction. All readings are in English. Same as CWL 117.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

SLAV 120 Russian & E Euro Folktales credit: 3 Hours.

Introduction to Russian and East European folktales, focusing on folk beliefs, fairy tales, and folk narratives in Slavic languages from a comparative perspective, with an emphasis on methods of analysis and the role of gender.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SLAV 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

SLAV 277 Slavic Literature Survey credit: 3 Hours.

Examines masterpieces of Czech, Polish, and Yugoslav literatures from medieval times to the present in English translation. Representative works are by Capek, Kundera, Mickiewicz, Milosz, Andric and others. Attention given to the European context and national traditions. Same as CWL 277. Prerequisite: One course in Slavic literature.

SLAV 399 Advanced Undergraduate Open Seminar credit: 1 to 5 Hours.

Topics will vary. May be repeated, if topics vary.

SLAV 417 11th-17thC Russ Lit & Lang credit: 3 or 4 Hours.

Historical grammar, origin, and development of the East Slavic/Russian literary language, survey of literary genres of Old Russian Literature. 3 undergraduate hours. 4 graduate hours. Credit is not given for both SLAV 417 and RUSS 517. Prerequisite: Graduate standing; for undergraduates, completion of or placement beyond RUSS 301-RUSS 302; or, consent of instructor.

SLAV 418 Language&Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, PS 418, and SPAN 418. See FR 418.

SLAV 419 Russian & East European Film credit: 3 or 4 Hours.

Study and analysis of major film makers, genres, trends, and theories, including the 1920's Soviet avant garde and the Polish and Czech "New Wave" since 1953; lectures, discussions, screenings, term paper. No reading knowledge of Russian required, except for majors in Slavic Languages and Literatures. Same as MACS 419. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: RUSS 219; or a college level course REES or in CINE; or consent of instructor.

SLAV 420 Jewish Life-Writing credit: 3 or 4 Hours.

Same as CWL 421, HIST 436, REL 420, and YDSH 420. See YDSH 420.

SLAV 430 History of Translation credit: 3 or 4 Hours.

Study of the historical development of translation ideas and practices in Europe and in particular cases across major global regions. Reading and analysis of key texts in the development of translation theory and case studies of practices and roles played by translation in different periods and geographical regions. Same as CLCV 430, CWL 430, ENGL 486, GER 405, SPAN 436, and TRST 431. 3 undergraduate hours. 4 graduate hours.

SLAV 452 Slavic Cultural Studies credit: 3 or 4 Hours.

Selected topics in the literatures of Russia and Eastern Europe. Topics covered will range from in-depth studies of specific authors, time periods, and thematic discussions of specific genre and literary traditions. Readings in English unless specified. Same as CWL 453. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours in same term; or 9 undergraduate hours or 12 graduate hours in separate terms. Prerequisite: Two years of literature, preferably Russian or East European; or consent of instructor.

SLAV 477 Post-Communist Fiction credit: 3 or 4 Hours.

Survey of the central and east European novel in the postcommunist period. Explores how fiction has responded to and creatively figured the period of the so-called "transition" to capitalism and the continuities and discontinuities in literary traditions in these societies, as well as the relevance of theories of postmodernism and postmodern literary analysis to these literatures. Same as CWL 477 and REES 477. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two courses in Slavic literature including one at the 300-level or consent of the instructor.

SLAV 480 Intro to Slavic Linguistics credit: 3 or 4 Hours.

The development of Common Slavic from Indo-European and its relationship to contemporary Slavic languages. Same as LING 480. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Knowledge of a Slavic language.

UKR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/UKR>)

Ukrainian Courses

UKR 101 Basic Ukrainian I credit: 4 Hours.

Oral and written work on basic pronunciation, grammar, and vocabulary. For students with no previous study of Ukrainian.

UKR 102 Basic Ukrainian II credit: 4 Hours.

Continuation of UKR 101. Prerequisite: UKR 101 or equivalent proficiency.

UKR 113 Ukrainian Culture credit: 3 Hours.

Course situates Ukrainian culture in the broad context of Slavic nations. Acquaints students with Ukrainian culture from the origins of Kievan Rus' in the Middle Ages to the present. Includes highlights of historical-cultural events, an overview of literature and of the arts, as well as an outline of Ukrainian folklore. No knowledge of Ukrainian required. This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

UKR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

UKR 201 Second-Year Ukrainian I credit: 4 Hours.

Completion of grammar, oral drills, and written exercises. Prerequisite: UKR 102 or equivalent.

UKR 202 Second-Year Ukrainian II credit: 4 Hours.

Selected readings in contemporary Ukrainian literature. Prerequisite: UKR 201 or equivalent.

UKR 218 Survey of Ukrainian Literature credit: 3 Hours.

Critical survey of major works in Ukrainian literature from the beginnings to the modern period in light of their historical and cultural background; lectures and readings in English. Same as CWL 218.

UKR 498 Problems in Ukrainian Lit credit: 3 or 4 Hours.

Critical survey of major works in Ukrainian literature from the beginnings to the modern period in light of their historical and cultural background; lectures and readings in English. 3 undergraduate hours. 3 or 4 graduate hours.

Czech Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Minimum required major courses equate to 30 hours including 6 hours in advanced language and 24 hours in literature and culture.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Study abroad courses may be substituted for major and minor requirements with approval of adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction may be earned by completion of one of the following two options:

- GPA in departmental courses of 3.75; or
- GPA in departmental courses of 3.50, plus successful completion of academic study trip to the region, documented by graded transcript. See a departmental adviser to work out details, preferably two semesters before graduation.

Code	Title	Hours
Language: A minimum of 6 hours beyond the second year of the Czech language: CZCH 484 Readings in Czech for 6 hours or equivalent; or Students may choose to complete the second year (200-level sequence) of a second Slavic language, including Russian, in addition to Czech		6
Literature and Culture: A minimum of 24 hours is required in the following areas:		24
6 hours of Introductory Culture courses:		
SLAV 120	Russian & E Euro Folktales (and)	
Choose one of the following:		
REES 201	Introduction to Eastern Europe	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
6 hours of Literature Survey courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		
12 hours of Upper-level (300- and 400-level) Literature and Culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		

Capstone Experience: All majors are required to complete a capstone course, project, or experience chosen from among the following: 0-3

(1) RUSS 493 Honors Senior Thesis (2 hrs); or

(2) a 300- or 400-level course in the Slavic Department in which a research project is undertaken; or

(3) Study abroad in the region.

Majors should consult with the Undergraduate Advisor to plan their capstone experience.

¹ Up to 9 hours of the literature requirement (but no more than 6 at the upper level) can be replaced by courses at the same level in other departments, chosen in consultation with and approved by the Undergraduate Advisor, that treat the history, culture, and society of the Czech region.

Minor in Russian Language and Literature

A minor in Russian language and literature may be useful and enriching for students in many disciplines, from economics and political science through comparative literature and theatre to engineering and mathematics. The 18- to 20-hour program listed below provides considerable flexibility within a general structure. Additional information may be obtained from the undergraduate adviser in the Department of Slavic Languages and Literatures.

E-mail: slavic@illinois.edu

Code	Title	Hours
Introduction to Slavic culture. Select from:		3
RUSS 115	Intro to Russian Culture	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	
Intermediate Russian Language:		6-8
RUSS 201	Second-Year Russian I	
RUSS 202	Second-Year Russian II (or equivalent)	
Russian literature and culture: Three 200-, 300- or 400-level courses from the list maintained by the undergraduate advisor, including at least one at the 300- or 400-level. Advanced Russian language (RUSS 301, 302, 305, or equivalent) can substitute for one course in this requirement.		9
Total Hours		18-20

6 hours must be advanced (300- or 400-) level courses.

Minor in Slavic Language, Literature, and Culture

A minor in Slavic language, literature, and culture may be useful and enriching for students in many disciplines, from economics and political science through comparative literature and theatre to engineering and mathematics. The 18- to 20-hour program listed below provides considerable flexibility within a general structure.

In completing the requirements for the minor, students may choose to pursue study of a particular Slavic language and culture, or may combine study of a single language with other courses that treat the region more broadly. For example, a student could specialize in Polish by taking POL 201, POL 202, POL 301 for the language and POL 115, POL 245, and

HIST 467 for the literature and culture requirements. Please consult the Undergraduate Advisor to choose coursework.

Code	Title	Hours
Introduction to Slavic culture. Select from:		3
BCS 115	South Slavic Cultures	
POL 115	Intro to Polish Culture	
REES 200	Intro to Russia and Eurasia	
REES 201	Introduction to Eastern Europe	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	
UKR 113	Ukrainian Culture	
Intermediate Slavic Language:		6-8
BCS 201 & BCS 202	Second Year Bosnian-Croatian-Serbian I and Second Year Bosnian-Croatian-Serbian II	
CZCH 201 & CZCH 202	Second-year Czech I and Second-year Czech II	
POL 201 & POL 202	Second Yr Polish I and Second Yr Polish II	
UKR 201 & UKR 202	Second-Year Ukrainian I and Second-Year Ukrainian II	
Slavic Literature and Culture: Three 200-, 300- or 400-level courses from the list maintained by the undergraduate advisor, including at least one at the 300- or 400-level. Advanced Slavic language (the 301 or 302 level of the language of specialization, or equivalent) can substitute for one course in this requirement. Also, one course at the same level in another department, chosen in consultation with the advisor, that treats the history, culture, and society of the region can count toward this requirement.		9
Total Hours		18-20

6 hours must be advanced (300- or 400-) level courses.

Polish Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Minimum required major courses equate to 30 hours including 6 hours in advanced language and 24 hours in literature and culture.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Study abroad courses may be substituted for major and minor requirements with approval of adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction may be earned by completion of one of the following two options:

- GPA in departmental courses of 3.75; or
- GPA in departmental courses of 3.50, plus successful completion of academic study trip to the region, documented by graded transcript. See a departmental adviser to work out details, preferably two semesters before graduation.

Code	Title	Hours
Language: A minimum of 6 hours beyond the second year of the Polish language: POL 301 and POL 302, or equivalent; or students may choose to complete the second year (200-level sequence) of a second Slavic language, including Russian, in addition to Polish.		6
Literature and Culture: A minimum of 24 hours is required in the following areas (POL 401 and POL 402 can count toward the requirements in any category):		24
6 hours of Introductory Culture courses:		
POL 115	Intro to Polish Culture (and)	
Choose one of the following:		
REES 200	Intro to Russia and Eurasia	
REES 201	Introduction to Eastern Europe	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	
6 hours of Literature Survey courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		
12 hours of Upper-level (300- and 400-level) Literature and Culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		
Capstone Experience: All majors are required to complete a capstone course, project, or experience chosen from among the following:		0-3
(1) RUSS 493 Honors Senior Thesis (2 hrs); or		
(2) a 300- or 400-level course in the Slavic Department in which a research project is undertaken; or		
(3) Study abroad in the region.		
Majors should consult with the Undergraduate Advisor to plan their capstone experience.		

¹ Up to 9 hours of the literature requirement (but no more than 6 at the upper level) can be replaced by courses at the same level in other departments, chosen in consultation with and approved by the Undergraduate Advisor, that treat the history, culture, and society of Poland or the region.

Russian Language, Literature, and Culture Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Minimum required major courses equate to 30 hours including 6 hours in advanced language and 24 hours in literature and culture.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Study abroad courses may be substituted for major and minor requirements with approval of adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction may be earned by completion of one of the following two options:

- GPA in departmental courses of 3.75; or
- GPA in departmental courses of 3.50, plus successful completion of academic study trip to the region, documented by graded transcript. See a departmental adviser to work out details, preferably two semesters before graduation.

Code	Title	Hours
Language: A minimum of 6 hours beyond the second year of the Russian language: RUSS 301, 302 – Third-Year Russian I, II, or equivalent		6
Literature and Culture: A minimum of 24 hours is required in the following areas (RUSS 401 and 402- Fourth Year Russian I, II- can count toward the requirements of any category):		24
6 hours of Introductory Culture courses:		
RUSS 115	Intro to Russian Culture (and)	
Choose one of the following:		
REES 200	Intro to Russia and Eurasia	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	
6 hours of Literature Survey courses: Two 200-level literature or cinema courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department.		
12 hours of Upper-level (300- and 400-level) Literature and Culture courses chosen from the following:		
Author Courses (6 hrs.):		
RUSS 320	Russian Writers	
RUSS 322	Dostoevsky	
RUSS 323	Tolstoy	
RUSS 325	Chekhov	
RUSS 335	Nabokov	
Literature and Culture Courses (6 hrs.):		
Two 400-level literature or culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department.		
Capstone Experience: All majors are required to complete a capstone course, project, or experience chosen from among the following:		0-3
(1) RUSS 493 Honors Senior Thesis (2 hrs); or		
(2) a 300- or 400-level course in the Slavic Department in which a research project is undertaken; or		

(3) Study abroad in the region.

Majors should consult with the Undergraduate Advisor to plan their capstone experience.

South Slavic Studies Concentration For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Minimum required major courses equate to 30 hours including 6 hours in advanced language and 24 hours in literature and culture.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Study abroad courses may be substituted for major and minor requirements with approval of adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction may be earned by completion of one of the following two options:

- GPA in departmental courses of 3.75; or
- GPA in departmental courses of 3.50, plus successful completion of academic study trip to the region, documented by graded transcript. See a departmental adviser to work out details, preferably two semesters before graduation.

Code	Title	Hours
Language: A minimum of 6 hours beyond the second year of a South Slavic language: SCR 301, 302-Third-Year Serbian/Croatian I, II- or equivalent; or Students may choose to complete the second year (200-level sequence) of a second Slavic language, including Russian, in addition to SCR.		6
Literature and Culture: A minimum of 24 hours is required in the following areas:		24
6 hours of Introductory Culture courses:		
BCS 115	South Slavic Cultures (and)	
Choose one of the following:		
REES 201	Introduction to Eastern Europe	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	
6 hours of Literature and Culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		
12 hours of Upper-level (300- and 400-level) Literature and Culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department. ¹		
Capstone Experience: All majors are required to complete a capstone course, project, or experience chosen from among the following:		0-3
(1) RUSS 493 Honors Senior Thesis (2 hrs); or		

(2) a 300- or 400-level course in the Slavic Department in which a research project is undertaken; or

(3) Study abroad in the region.

Majors should consult with the Undergraduate Advisor to plan their capstone experience.

¹ *Up to 9 hours of the literature requirement (but no more than 6 at the upper level) can be replaced by courses at the same level in other departments, chosen in consultation with and approved by the Undergraduate Advisor, that treat the history, culture, and society of the South Slavic region.*

Ukrainian Studies Concentration

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: slavic@illinois.edu

Minimum required major courses equate to 30 hours including 6 hours in advanced language and 24 hours in literature and culture.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60 - 75 hours). Study abroad courses may be substituted for major and minor requirements with approval of adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction may be earned by completion of one of the following two options:

- GPA in departmental courses of 3.75; or
- GPA in departmental courses of 3.50, plus successful completion of academic study trip to the region, documented by graded transcript. See a departmental adviser to work out details, preferably two semesters before graduation.

Code	Title	Hours
Language: A minimum of 6 hours beyond the second year of the Ukrainian language: UKR 301, 302- or equivalent; or Students may choose to complete the second year (200-level sequence) of a second Slavic language, including Russian, in addition to Ukrainian		6
Literature and Culture: A minimum of 24 hours is required in the following areas:		24
6 hours of Introductory Culture courses:		
UKR 113	Ukrainian Culture (and)	
Choose one of the following:		
REES 200	Intro to Russia and Eurasia	
REES 201	Introduction to Eastern Europe	
RUSS 261	Intro Russian-Jewish Culture	
SLAV 117	Russ & E Euro Science Fiction	
SLAV 120	Russian & E Euro Folktales	

6 hours of Literature Survey courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department.¹

12 hours of Upper-level (300- and 400-level) Literature and Culture courses chosen in consultation with the Undergraduate Advisor from a list maintained in the Slavic Department.¹

Capstone Experience: All majors are required to complete a capstone course, project, or experience chosen from among the following: 0-3

(1) RUSS 493 Honors Senior Thesis (2 hrs); or

(2) a 300- or 400-level course in the Slavic Department in which a research project is undertaken; or

(3) Study abroad in the region.

Majors should consult with the Undergraduate Advisor to plan their capstone experience.

¹ *Up to 9 hours of the literature requirement (but no more than 6 at the upper level) can be replaced by courses at the same level in other departments, chosen in consultation with and approved by the Undergraduate Advisor, that treat the history, culture, and society of the Ukrainian region.*

Sociology

Kevin Leicht, Head of Department

3120 Lincoln Hall, 702 S. Wright Street, Urbana

PH: (217) 333-1950

<http://www.sociology.illinois.edu>

Large-scale societal change begins with individuals like you – hungry for knowledge and ready to make a real difference; in the Department of Sociology you will study the inner workings of society with a focus on either Inequalities or Global Sociology.

Sociologists explore human social life at every level, from personal relationships to global society. Major topics of study include inequality, social movements, criminology, race and class relations, gender, social institutions such as religion and education, and fundamental population processes like immigration and mortality. Sociologists use a range of methods and theories to develop and evaluate ideas about social life.

As a student of Sociology, you will train in research methods and become fluent in social statistics while understanding the complexity of societal diversity and social change. These skills are usable in a wide variety of work settings and are skills that employers value.

Recent graduates have pursued careers with the FBI, as Human Resource Specialists, with non-profit organizations, as policy officers, and have earned advanced degrees in Social Work, Sociology, Law, Medicine, and more. The career paths of Sociology alumni are as diverse as our student population – who represent the best and the brightest from a variety of backgrounds.

In the Department of Sociology you can choose the major in Sociology, the minor in Sociology, or the minor in Criminology, Law and Society (CLS). Whereas the major and minor in Sociology provide an overview into the broader disciplines of Sociology, the minor in CLS is a more specialized approach for those students interested in law and justice related careers and occupations.

Each student should see a Sociology departmental advisor at least once a year to choose sociology courses and to monitor their progress.

Major in Sociology Major in Sciences and Letters Curriculum

E-mail: soc@illinois.edu

Degree title: Bachelor of Arts in Liberal Arts and Sciences

Minimum required major and supporting course work equates to 44 hours including 32 hours of Sociology courses.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours.

Departmental distinction: In order to achieve distinction, high distinction, or highest distinction, a sociology major must meet the following requirements:

- Have completed SOC 490 or SOC 495
- Attain a UIUC GPA of 3.25 or higher
- If both these requirements are met, then the MAJOR GPA distributes as follows:
 - 3.25 – Distinction
 - 3.50 – High Distinction
 - 3.75 – Highest Distinction

Code	Title	Hours
SOC 100	Introduction to Sociology	4
SOC 200	Intro to Sociological Theory	3
SOC 280	Intro to Social Statistics ¹	4
SOC 380	Social Research Methods	4
Select one of the following capstone experiences:		3
SOC 400	Internships	
SOC 450	Senior Capstone Seminar	
SOC 495	Senior Honors Seminar	
Students may select any sociology courses to fulfill the requirement of 32 hours in Sociology		14
Supporting course work taken outside the Department of Sociology ²		12

¹ If a statistics course is taken outside the Department of Sociology to fulfill this requirement, that course does not count toward the 32 hours of Sociology courses.

² Supporting course work is designed to expand the student's education, and should be taken outside of Sociology. A student may take supporting course work from one department, such as psychology, economics, history, or statistics, or from a cohesive selection of courses in various units. With an advisor's approval, departmental or interdisciplinary minors, or a double major, may be used to fulfill the requirements of supporting course work.

- Criminology, Law, and Society (p. 568)
- Sociology (p. 568)

SOC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SOC>)

Courses

SOC 100 Introduction to Sociology credit: 4 Hours.

Examination of how societies grow and change; reciprocal effects of economic, political, community, familial, and scientific institutions on each other and on individual life changes; and social conflict, problems of bureaucratic growth and planned and unplanned social change.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

SOC 101 Sociology of Gender credit: 3 Hours.

An exploration of current questions of gender and their applications to students today. The course will focus primarily on the United States emphasizing individual, interactional, and institutional aspects of the social world. Topics for study include sociological research on femininities, masculinities, gendered bodies, socialization, work, family, politics, sport, and sexualities.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

SOC 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, JS 108, PHIL 108, and REL 108. See REL 108.

This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Western

SOC 109 Religion & Society in West II credit: 3 Hours.

Same as ANTH 109, PHIL 109, and REL 109. See REL 109.

This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Western

SOC 122 Africa in World Perspective credit: 3 Hours.

Examination of Africa in the context of the world-economy, with particular attention placed upon enduring cultural and material relationships with Europe and North America.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 130 Intro Gender & Women's Studies credit: 3 Hours.

Same as GWS 100 and HDFS 140. See GWS 100.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

SOC 152 The New Middle East credit: 3 Hours.

Same as PS 152 and SAME 152. See PS 152.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 160 Global Ineq and Social Change credit: 3 Hours.

Introduces sociological concepts of poverty, inequality, and social change within a global context. Themes explored include basic food security, poverty and hunger; population and resource distribution; foreign aid and development institutions; and social policies and movements for change. Course approach is historical and transnational, and typically includes case studies from Africa, Asia, Latin America, and the United States.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 161 Introduction to Poverty credit: 3 Hours.

Introduction to sociological research about the views, experiences, causes, and consequences of poverty in both advanced and developing countries. One objective is to set the facts straight about who experiences poverty and makes use of the welfare system in the United States. A second purpose is to make sense of the intractable and much more extreme forms of poverty observed across the global South.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

SOC 162 Intro to Intl Health Policy credit: 3 Hours.

Introduces students to international health policy. Students will learn about data sources, basic analytical techniques, and theoretical frameworks for understanding international health policy. From a sociological perspective, students will explore why health issues are essential components to discussion of globalization, immigration, and migration. Students also will learn how health policy and foreign policy decisions in the developed world influence health policy and health care delivery in the developing world.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

SOC 163 Social Problems credit: 3 Hours.

A study of social problems in the United States necessarily entails a discussion of global issues. To that end, this course will examine many contemporary social issues such as crime, war and terrorism, the environment, inequality, poverty, discrimination, the economic recession, and others, through a global framework. Many of the topics we will cover could motivate an entire semester's study in their own right; indeed, some scholars devote their entire careers to but one of these topics. However, this breadth allows us to think broadly about the issues that are identified as social problems and the ways in which individuals and groups attempt to resolve those problems; both processes are revealing about the time and society in which we live. One of the main objectives of this class is to learn about how sociologists examine social problems through analysis and research. Alongside that process, you will improve your critical thinking skills and become a better/more informed consumer of information.

SOC 179 Social Organization credit: 3 Hours.

Beginning with an examination of various examples of organizing, from street gangs to industrial corporations and modern universities, this course will discuss common patterns in organizational phenomena. Basic conceptual frameworks will be provided in the context of contemporary and local problems, illustrating the core issues.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 196 Issues in Sociology credit: 3 Hours.

Origin of problems; consequences of ameliorative strategies. Typical topics include crime, mental illness, drug use, suicide, sexual behavior, violence, and intergroup conflict. May be repeated as topics vary.

SOC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

SOC 200 Intro to Sociological Theory credit: 3 Hours.

Analysis of such classical theorists as Marx, Weber, Durkheim, and Mead and contemporary theorists. Prerequisite: Sophomore standing.

SOC 201 Race, Gender & Power credit: 3 Hours.

Same as GWS 201. See GWS 201.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

SOC 202 Sexualities credit: 3 Hours.

Same as GWS 202. See GWS 202.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

SOC 221 Mexican & Latin Am Migration credit: 3 Hours.

Same as LLS 220. See LLS 220.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 222 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, ANTH 222, and PS 242. See AFST 222.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

SOC 223 Black Women Contemp US Society credit: 3 Hours.

Same as AFRO 226 and GWS 226. See AFRO 226.

SOC 224 Asian Am Historical Sociology credit: 3 Hours.

Same as AAS 224. See AAS 224.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

SOC 225 Race and Ethnicity credit: 3 Hours.

Sociological and social-psychological analysis of minority groups; illustrative material drawn from representative racial, ethnic, and status groups. Prerequisite: SOC 100, SOC 101, OR SOC 163.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

SOC 226 Political Sociology credit: 3 Hours.

Study of power relations within and between the state, bureaucracy, community, social classes, and elites in the United States and other countries.

SOC 227 Latina/Latinos in the Contemporary United States credit: 3 Hours.

Examines the incorporation of the major Latina/Latino subgroups into United States society, surveys the major theoretical approaches that have been used in the social sciences to explain majority-Latino relations, and provides an empirical overview of how major social institutions affect the daily lives of Latina/Latinos. Same as LLS 227. Prerequisite: One of the following: LLS 100, SOC 100, SOC 101, SOC 163, or consent of instructor.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

SOC 249 Sport & Modern Society credit: 3 Hours.

Same as KIN 249. See KIN 249.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 255 Queer Lives, Queer Politics credit: 3 Hours.

Same as GWS 255. See GWS 255.

SOC 261 Gender in a Transnational Perspective credit: 3 Hours.

Examines how gender inequality is structured on a transnational level. Emphasis will be placed on the interactive relationship among various countries, and how globalization promotes racial, ethnic, sexual, and national hierarchies among women, in both newly and advanced industrialized countries. Same as GWS 261. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 267 Pan Africanism credit: 3 Hours.

Same as AFRO 243, AFST 243, and PS 243. See PS 243.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 269 Food, Culture, and Society credit: 3 Hours.

Same as ANTH 209. See ANTH 209.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 270 Population Issues credit: 3 Hours.

Examines the current world population situation; the historical and current patterns of birth, death, migration, marriage, contraception, and abortion; and the world food and energy resources, crowding, and problems of overpopulation. Same as RSOC 270.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 273 Social Perspectives on the Family credit: 3 Hours.

Examines the societal forces shaping aspects of stable and changing family relations in the U. S. and other countries; focuses on social-structural factors affecting marriage, divorce, co-habitation, child-bearing, the division of work and authority, and other features of life. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 274 Introduction to Medical Sociology credit: 3 Hours.

Sociology of health and illness behavior and the social structure of systems which deliver health care services; includes social constraints on illness, the illness role, medical organizations and professions, and the application of the illness model to deviant forms of behavior. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 275 Criminology credit: 3 Hours.

Nature and extent of crime; past and present theories of crime causation; criminal behavior in the United States and abroad, and its relation to personal, structural and cultural conditions; the nature of the criminal justice system and the influences of the exercise of discretion among actors in the criminal justice system. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163 or equivalent.

SOC 278 Mapping Latina/o Inequalities credit: 3 Hours.

Same as LLS 278. See LLS 278.

SOC 280 Intro to Social Statistics credit: 4 Hours.

First course in social statistics for students without mathematics beyond the high school level; topics include the role of statistics in social science inquiry, measures of central tendency and dispersion, simple correlation techniques, contingency analysis, and introduction to statistical inference; includes the statistical analysis of social science data using personal computers. Same as GEOG 280. Credit is not given for SOC 280 if credit for a college level introductory statistics course has been earned.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

SOC 287 Environment and Society credit: 3 Hours.

Same as ESE 287, GEOG 287, PS 273 and NRES 287. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

SOC 300 Attitude Theory and Change credit: 3 Hours.

Same as MACS 352 and PSYC 352. See PSYC 352.

SOC 310 Sociology of Deviance credit: 3 Hours.

Study of traits, conditions, actions, and behaviors that violate social norms and elicit negative societal reactions. Explores social, cultural and individual factors in the etiology of deviance; the establishment and maintenance of deviant categories; the motivations behind deviant behavior; the identification as deviant of individuals and of particular segments of society, by formal and informal means; the effects of institutionalization and social control upon the deviant; and the efforts of deviants to eradicate the label society has placed upon them.

Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 320 Queer Theory credit: 3 Hours.

Same as GWS 370. See GWS 370.

SOC 321 Gender & Latina/o Migration credit: 3 Hours.

Same as LLS 320 and GWS 320. See LLS 320.

SOC 322 Gender, Relationships & Society credit: 3 Hours.

Same as GWS 340 and HDFS 340. See HDFS 340.

SOC 325 Black Men and Masculinities credit: 3 Hours.

Same as AFRO 342. See AFRO 342.

SOC 328 Asian Americans & Inequalities credit: 3 Hours.

An examination of various forms of social inequality between Asian Americans and other groups as well as among Asian Americans, including those based on race, gender, class, citizenship and sexuality. Same as AAS 328. Prerequisite: SOC 100 and/or AAS 100 are recommended.

SOC 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, INFO 345, and MACS 345. See GWS 345.

SOC 350 Technology and Society credit: 3 Hours.

Examines the social and cultural origins of modern technology and technological innovation; the effects of technology and its change on society. Topics include the impact of technology on beliefs and values, accommodation and resistance to change, and technology and the Third World.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 351 Social Aspects of Media credit: 3 Hours.

Same as MACS 351. See MACS 351.

SOC 355 Race and Mixed Race credit: 3 Hours.

Same as AAS 355 and LLS 355. See LLS 355.

SOC 364 Impacts of Globalization credit: 3 Hours.

Introduces sociological theory and research on globalization, in debate with the literature on modernization, world-systems, and development/underdevelopment. Explores recent economic, political, and cultural change at macro-sociological level. Themes include: global governance and world society, global diffusion of American culture, global capitalism, and new forms of social resistance. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

SOC 365 Contemporary Korean Society credit: 3 Hours.

Same as EALC 365. See EALC 365.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 366 Postsocialism Eastern Europe credit: 3 Hours.

Examines the sociological realities of state socialism and postsocialism in Eastern Europe and the former Soviet Union. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, HIST 142, PS 100, or any REES course.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

SOC 367 Globalization Dynamics Debates credit: 3 Hours.

Study of the multidimensional character of globalization. Discussion of key processes of globalization and areas of consensus and controversy in the literature, including major current controversies such as are we headed for a global monoculture; what is the relationship between globalization and neoliberal capitalism; which trend is more significant, globalization or empire? Discussions on scenarios and policy options of global futures.

SOC 373 Social Stratification credit: 3 Hours.

Inequities in power, prestige, income, privilege, and lifestyles in the United States and other countries; class and status as determinants of group interests, ideologies, and interaction; and effects of social change and mobility. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 374 Immigrants in the U.S. credit: 3 Hours.

The change in origin country composition of U.S. immigrants changed dramatically post-1965 from what it was in the early twentieth century and this shift has generated much public and policy concern over the 'new' immigrants and their prospects for economic mobility and integration. Since immigration shows no signs of slowing down, its causes and consequences remain some of the most important topics of the 21st century. Some of the questions considered in this course include: Why do immigrants come to the U.S.; Is the average human capital level of immigrants declining?; Are the new immigrants assimilating into U.S. society and what does that mean? Also examines the economic impact of immigration and considers appropriate policy recommendations such as whether the U.S. should adopt a skill-based point system to regulate immigration. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 375 Criminal Justice System credit: 3 Hours.

Exploration of the actors, institutions, and processes that make up the criminal justice system. We review sociological and other social scientific research on topics including the police, prosecutors, the courtroom work-group, forensic evidence, juries, sentencing, and the impact of mass incarceration. Grades are based on exams, research exercises, and ethnographic observations of criminal courtrooms. Prerequisite: SOC 275 is recommended.

SOC 378 Law and Society credit: 3 Hours.

Examination of law and legal institutions sociologically. We begin with an introduction to theoretical perspectives on the problem of order, illustrated by juxtaposing formal law with other means of achieving order. Next, we consider law and legal systems in action, including relations between law and the economy, stratification, culture, ideology and social change. Finally, we investigate the relationship between law's aims and principles, and law's real-world implementation.

SOC 380 Social Research Methods credit: 4 Hours.

Introduction to the foundations of social research and to the major types of research methods employed in sociology. Provides exposure to the major tools and terminology of social research, including the use of computers in sociology. Topics include: research design, finding and using sociology literature, measurement, sampling, survey research, field methods, use of available data, quantitative data analysis and presentation, and computer resources for research. Prerequisite: SOC 280 and one of the following: SOC 100, SOC 101, or SOC 163. This course satisfies the General Education Criteria for: Quantitative Reasoning II

SOC 382 Social Psych Methods Lab credit: 4 Hours.

Same as PSYC 332. See PSYC 332.

SOC 387 Race, Gender and the Body credit: 3 Hours.

Same as LLS 387. See LLS 387.

SOC 390 Individual Study credit: 1 to 6 Hours.

Individual study or research project. May be repeated. Prerequisite: Six hours of sociology; written consent of instructor on form available in the Sociology Department Office.

SOC 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Same as GWS 392 and LLS 392. See LLS 392.

This course satisfies the General Education Criteria for:
Advanced Composition

SOC 396 Topics in Sociology credit: 3 Hours.

Explores topics not covered in regularly scheduled Sociology courses. See Class Schedule for topics. May be repeated if topics vary. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

SOC 400 Internships credit: 0 to 3 Hours.

Selected internship opportunities in which student and faculty member develop a program of study and research related to internship. Consult departmental undergraduate advisor. 0 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; and SOC 100 or SOC 101 or SOC 163; and six additional hours in Sociology or acceptance of faculty member and Director of Undergraduate Studies.

SOC 410 Labor and the European Union credit: 4 Hours.

Same as EURO 410 and LER 410. See LER 410.

SOC 420 Sociology of Education credit: 2 to 4 Hours.

Same as EPS 420. See EPS 420.

SOC 421 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as AFRO 421, EPS 421, and HDFS 424. See EPS 421.

SOC 422 European Working Class History credit: 2 to 4 Hours.

Same as HIST 450 and LER 450. See HIST 450.

SOC 426 Race, Educational Policy, and Sociology credit: 3 or 4 Hours.

Examination of the origins and development of sociology as a discipline, as related to the sociology of education, and the reproduction of social and racial inequality. The course focuses on four issues: the production of racial inequality in social scientific knowledge, the role that social science plays in reproducing societal patterns of race, class, and gender inequality, the development of sociology and education in the United States and Africa, and the development of American social science and the reproduction of global inequality. Same as EPS 422. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 100 or SOC 101 or SOC 163 or consent of instructor.

SOC 447 Environmental Sociology credit: 3 or 4 Hours.

Examination of historical and modern consequences of environmental alteration and pollution and resource limitations on human populations in the context of various social change theories. Explores the environmental movement, population explosion, the "limits to growth debate," and the impacts of environmental change on food production, land, and water quality. Same as ENVS 447 and RSOC 447. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: SOC 380 or equivalent; and one of the following: SOC 100, SOC 101, SOC 163, RSOC 110, or equivalent; or consent of instructor.

SOC 450 Senior Capstone Seminar credit: 3 Hours.

Over the course of the semester, students will conceive and execute an original sociological research project, using their knowledge of the sociological literature developed in substantive courses and their skills in data collection and analysis developed in methods courses. In parallel, students will explore professional opportunities in sociology and engage in professional development activities, including exploring opportunities for graduate education and learning skills in job search, and resume, c.v., personal statement and cover letter development. 3 undergraduate hours. No graduate credit. Prerequisite: One of the following: SOC 100, SOC 101 or SOC 163; and SOC 380. For Sociology majors only.

SOC 451 Climate & Social Vulnerability credit: 3 or 4 Hours.

Same as ATMS 446 and GEOG 496. See GEOG 496.

SOC 464 Comm in Env Social Movements credit: 3 Hours.

Same as AGCM 430, ENVS 430, and NRES 430. See AGCM 430.

SOC 470 Social Movements credit: 2 to 4 Hours.

Origins and development of groups in promoting and resisting change, resource mobilization, strategies and tactics, individual and social consequences. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of anthropology, social geography, political science, or sociology.

SOC 471 Collective Action & Revolution credit: 3 or 4 Hours.

Contemporary theory and research on the life course of social gatherings ranging from small scale and local to nationwide collective actions by people in pursuit of social and political change. Discusses the logic of practice in political, religious and street crowds; collective action of disperse people; and broad-based revolutionary mobilizations. Cases include pre-modern and modern movements from the western and non-western societies. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 200, or equivalent, or consent of instructor.

SOC 472 Urban Communities & Public Pol credit: 3 or 4 Hours.

Same as AFRO 481 and UP 481. See AFRO 481.

SOC 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as CHLH 473, LLS 473, and SOCW 473. See LLS 473.

SOC 474 Population Trends and Patterns credit: 3 or 4 Hours.

Introduction to contemporary demographic patterns and their historical development; transition theory and other models of demographic change; components of population growth and distribution; and trends and differentials in mortality and fertility. 3 undergraduate hours. 4 graduate hours.

SOC 476 Organization of Health Care credit: 2 to 4 Hours.

Same as CHLH 456. See CHLH 456.

SOC 477 Sociology of Law credit: 2 to 4 Hours.

Social origins and consequences of law and legal process, emphasizing problems of legal change and structure and function of legal sanctions. Law and law-like phenomena in primitive and modern societies. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of anthropology, social geography, political science, or sociology.

This course satisfies the General Education Criteria for:

Advanced Composition

SOC 478 Geography of Health Care credit: 3 or 4 Hours.

Same as GEOG 438. See GEOG 438.

SOC 480 Methods of Field Research credit: 2 to 4 Hours.

Instruction, training, and supervised practice in methods of field research as a basic tool of sociology; emphasis on the role of the field researcher as participant, observer, and interviewer in various kinds of research settings, and on approaches to and applications of field data. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: SOC 380 or consent of instructor.

SOC 481 Survey Research credit: 3 or 4 Hours.

Principles and applications of social science survey research methods; class project designing and conducting a sample survey; training and experience in analysis of survey data; sampling, questionnaire construction, interviewing and data reduction, and file management; and direct use of the computer in survey data analysis. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 380 or consent of instructor.

SOC 483 Middle Eastern Societies & Cultures credit: 3 Hours.

Overview of the contemporary Middle East from social, political, and cultural perspectives. Explores how the internal dynamics together with the forces of globalization shape the societies of the Middle East today. Topics include social structure, political dynamics, family, gender, urban life Islam, social and religious movements. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of Anthropology, Social Geography, Politics, or Sociology.

SOC 484 African Urbanization credit: 3 or 4 Hours.

Examines the causes and consequences of African urbanization in historical perspective. The course will engage with various academic theories of urbanization and seek situate the numerous topics and readings among ongoing debates. However, its substantive focus will be devoted entirely to Africa. Same as AFST 484. 3 undergraduate hours. 4 graduate hours.

SOC 485 Intermediate Social Statistics credit: 3 or 4 Hours.

Intermediate course in the theory and application of statistical methods to social science data. Coverage includes overviews of measurement issues, the logic of hypothesis testing and estimation, the general linear model, one-way analysis of variance, correlation and regression. The core of the course is multiple regression analysis and its extensions. Topics include dummy variable analysis, statistical interaction, model assumptions and violations, non-linear and logistic regression, and an introduction to path analysis. Emphasis on the application of statistical computing packages (e. g. SPSS) and the substantive interpretation of results. 3 undergraduate hours. 4 graduate hours. Credit is not given for both SOC 485 and another course with a primary focus on applied multiple regression analysis such as ECON 203, STAT 420, or PSYC 406. Graduate students must incorporate research literature involving statistical analysis from their discipline into their assignments and class discussions. Prerequisite: SOC 280 or equivalent.

SOC 488 Demographic Methods credit: 3 or 4 Hours.

Introduction to statistical and mathematical procedures in population analysis; the gathering, processing, and evaluating of registration and census data; the life table model; and procedures of mortality and fertility analysis and population projections. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 380 or consent of instructor.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

SOC 490 Advanced Independent Study credit: 3 Hours.

3 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Open only to seniors in the sociology major who have an overall GPA of 3.25 or higher and therefore may be eligible for departmental distinction; obtain written consent of instructor on form available in the Sociology Department Office.

SOC 493 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, NRES 494, UP 493. See GEOG 493.

SOC 495 Senior Honors Seminar credit: 3 Hours.

Intensive scrutiny of current literature on one selected topic. Critical reading and discussion followed by writing essays and research proposals. Subject will shift yearly. There may be community work as an aspect of this course; consult the Class Schedule for details. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: For sociology majors only. Student must have at least 3.5 grade-point average in sociology courses and consent of instructor.

SOC 496 Advanced Topics in Sociology credit: 3 Hours.

Explores topics not covered in regularly scheduled Sociology courses. See Class Schedule for topics. 3 undergraduate hours. No graduate credit. May be repeated if topics vary. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

Minor in Criminology, Law, and Society

Criminology, Law, and Society provides a foundation for students seeking to supplement their major area of study, to develop knowledge and skills needed for criminological, law, and justice related occupations, or to lay foundation for law school or graduate study in sociology, criminology, or justice fields. Students take a range of sociology courses that provide theoretical and practical knowledge while exposing students to current sociological, legal, and justice issues.

Code	Title	Hours
SOC 100 or SOC 163	Introduction to Sociology Social Problems	3-4
SOC 275	Criminology	3
SOC 378 or SOC 477	Law and Society Sociology of Law	3
Choose three courses from the following (9 hours minimum); at least 3 hours must be at the 300- or 400-level:		9
SOC 101	Sociology of Gender	
SOC 225	Race and Ethnicity	
SOC 310	Sociology of Deviance	
SOC 373	Social Stratification	
SOC 378	Law and Society ¹	
SOC 390	Individual Study ²	
SOC 396	Topics in Sociology ²	
SOC 400	Internships ²	
SOC 477	Sociology of Law ¹	
SOC 490	Advanced Independent Study ²	
SOC 496	Advanced Topics in Sociology ²	
Total Hours		18

¹ If not taken as part of the core.

² Advisor approval required – course topic must be focused in criminology and/or law.

Minor in Sociology

A minor in sociology requires that students learn the basic theoretical and methodological approaches in sociology. Students must also learn about the substance of sociology in some depth and are thus required to take at least two sociology courses at an advanced level and a total of at least 18 hours of sociology courses. The course work must include the requirements listed below.

E-mail: soc@illinois.edu

Code	Title	Hours
SOC 100	Introduction to Sociology	4
SOC 200	Intro to Sociological Theory	3
SOC 280	Intro to Social Statistics ¹	4
At least two Sociology courses at the 300- or 400-level		6
Elective Sociology hours as needed to fill the 18 hour requirement		3-6
Total Hours		18

¹ If a statistics course is taken outside the Department of Sociology to fulfill this requirement, that course does not count toward the 18 hours of Sociology courses.

South Asian and Middle Eastern Studies, Center for

Behrooz Ghamari-Tabrizi, Interim Director
<http://www.csames.illinois.edu/>

The Center for South Asian and Middle Eastern Studies offers two Interdisciplinary Minors: South Asian Studies and Study of the Islamic World.

For additional information, please contact:

Associate Director: Angela Williams
Email: aswilliams@illinois.edu
Phone: 244-5939

- Interdisciplinary Minor in South Asian Studies (p. 569)
- Interdisciplinary Minor in the Study of the Islamic World (p. 570)

SAME Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SAME>)

Courses

SAME 150 Lang&Culture of Arab World credit: 3 Hours.

Same as ARAB 150. See ARAB 150.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

SAME 152 The New Middle East credit: 3 Hours.

Same as PS 152 and SOC 152. See PS 152.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SAME 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics in Middle Eastern or South Asian studies; content is variable. May be repeated in the same or separate terms if topics vary.

SAME 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as ASST 208, CWL 208 and REL 208. See REL 208.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 211 War & Peace in Israeli Lit credit: 3 Hours.

Same as CWL 211 and JS 211. See CWL 211.

SAME 213 Intro to Islam - ACP credit: 4 Hours.

Same as REL 213. See REL 213.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Non-West

SAME 214 Introduction to Islam credit: 3 Hours.

Same as REL 214. See REL 214.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

SAME 223 The Qur'an (Koran) credit: 3 Hours.

Same as CWL 223, REL 223. See REL 223.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 260 Mystics and Saints in Islam credit: 3 Hours.

Same as REL 260. See REL 260.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, INFO 325, LAST 325, and REES 325. See EPS 325.

SAME 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Same as CWL 341, JS 341 and REL 340. See CWL 341.

SAME 350 South Asian Goddesses credit: 3 Hours.

Same as CWL 350 and REL 350. See REL 350.

SAME 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLOB 403, GWS 403, HIST 434, and REL 403. See REL 403.

SAME 408 Islam & Politics in Mid. East credit: 3 or 4 Hours.

Same as PS 408 and REL 408. See REL 408.

SAME 410 Gender and Hinduism credit: 3 or 4 Hours.

Same as REL 401. See REL 401.

SAME 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.

Same as CWL 454 and JS 454. See CWL 454.

SAME 481 Muslim Ethics in Global Age credit: 3 or 4 Hours.

Same as REL 481. See REL 481.

SAME 490 Special Topics credit: 3 or 4 Hours.

Study of selected topics in Middle Eastern studies; content is variable. Check Class Schedule for specific topics each semester. 3 undergraduate hours. 4 graduate hour. May be repeated in separate terms as topics vary to a maximum of 6 undergraduate hours or 12 graduate hours.

Interdisciplinary Minor in South Asian Studies

The Center for South Asian and Middle Eastern Studies (<http://www.csames.illinois.edu>) offers an Interdisciplinary Minor in South Asian Studies. The minor is especially suited for students interested in a program of studies with focus on South Asia, as a complement to their disciplinary study. The structure of the minor provides students a great amount of flexibility; possible areas of emphasis include language and literature, as well as history and social sciences.

A minimum grade-point average of 2.75 in South Asian Studies courses is required for completion of the minor. The 18-20 hours of courses selected by students for the South Asian Studies Minor should form a coherent program of study and must meet the approval of an advisor in the Center for South Asian and Middle Eastern Studies. The program must include at least 6 hours of 300- or 400-level courses. A student's plan of courses for the minor must be approved by the program.

Code	Title	Hours
	Fourth-semester course work in an area-relevant language. A course that meets this requirement and is currently offered on a regular basis is HNDI 404 (5 hours). The requirement may also be met by comparable courses in these and other South Asian and South Asia-related languages, taught at UIUC or at other universities, through online courses (where available), and through a proficiency examination.	3-5
HIST/ANTH 130	History of South Asia	3
	Courses on South Asian history, language, literature, culture, and society from the following list: ¹	12
ANTH 499	Topics in Anthropology (appropriate sections)	
ASST 398	Colloquium in Asian Studies (appropriate sections)	

CWL 189	Lit of Asia & Africa I (appropriate sections)
or CWL 190	Lit of Asia & Africa II
ECON 450	Development Economics (appropriate sections)
HNDI 405 & HNDI 406	Advanced Hindi I and Advanced Hindi II
HNDI 408	Intro to South Asian Lit
HIST 430	India from Colony to Nation
LA/ASST 218	S Asian Cultural Landscapes
PS/ASST 346	Gov & Pol of South Asia
REL 104	Asian Mythology
REL 213	Intro to Islam - ACP
REL 260	Mystics and Saints in Islam
REL 286	Introduction to Hinduism
REL 494	Topics in Religious Thought
REL 403	Women in Muslim Societies
REL 408	Islam & Politics in Mid. East
Total Hours	18-20

¹ *Other area-relevant courses may be substituted as they are offered, with approval of the advisor. These include courses in languages other than Hindi and independent study courses with South Asia teaching faculty and with appropriate topics, such as the following ANTH 390, HIST 490, LING 290, PS 490, REL 390, SOC 390. Students wanting to take such independent study courses need to get permission from the instructor; not more than two independent study courses may be taken to meet the degree requirements.*

For a list of approved courses, visit CSAMES Course Archive (<http://www.csames.illinois.edu/program/courses/archive/all>).

Interdisciplinary Minor in the Study of the Islamic World

An interdisciplinary minor in the Study of the Islamic World is offered by the Center for South Asian and Middle Eastern Studies. It is designed for students interested in developing an expertise in one or more parts of the Islamic world or in Islamic culture generally, as a complement to their disciplinary major. Completion of the minor requires 19 credit hours in applicable courses with a minimum grade-point average of 2.75.

For a list of approved courses, visit CSAMES Course Archive (<http://www.csames.illinois.edu/program/courses/archive/all>).

Code	Title	Hours
Completion of a fourth semester course in an Islamic language (e.g. Arabic, Turkish, Swahili, Wolof). Select courses from the approved course list.		4
Select one of the following:		3
HIST 135	History of Islamic Middle East	
SAME 152	The New Middle East	
REL 214	Introduction to Islam	
or REL 213	Intro to Islam - ACP	

Additional courses chosen from the approved course list. The courses must come from at least two disciplines. At least six hours must be at the 300- or 400-level.	12
--	----

Total Hours	19
-------------	----

Spanish and Portuguese

Mariselle Melendez, Head of Department

4080 Foreign Languages Building, 707 South Mathews, Urbana

PH: (217) 333-3390

<http://www.spanport.illinois.edu/>

The Dept of Spanish and Portuguese offers majors in the following areas: Spanish, Portuguese, and a Curriculum Preparatory to the Teaching of Spanish. The department also offers the following undergraduate minors: Spanish and Portuguese. The 5 year BALAS /MA in Spanish and European Union Studies allows students to receive two degrees, a BALAS in Spanish and an MA in European Union Studies.

Spanish

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

- Spanish (p. 576)

For the Degree of Bachelor of Arts in the Teaching of Spanish

- Teaching of Spanish (p. 575)

Portuguese

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

- Portuguese (p. 576)

5 Year BALAS/MA in Spanish and European Union Studies

The Department of Spanish and Portuguese with the European Union Center offers a 5-year BALAS /MA degree program in Spanish and the Master of Arts in European Union Studies (MAEUS). In order to be admitted to this degree program, students apply through a joint application process to their BALAS-granting program and the European Union Center during their third year of studies. Requirements for this degree program are identical to those for the stand-alone BALAS and for the stand-alone MAEUS. Students will receive both degrees when the requirements are met for the degrees; the BALAS and MA degrees will be conferred separately and independently. More detailed information may be obtained from department and EUC offices.

- Minor in Spanish (p. 576)
- Minor in Portuguese (p. 576)

BASQ Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BASQ>)

Basque Courses

BASQ 401 Beginners' Basque credit: 3 Hours.

Basic communication skills in Basque (listening, speaking, reading and writing). Introduction to basic information on Basque culture and history. 3 undergraduate hours. 3 graduate hours. Prerequisite: Four semesters or equivalent of Spanish, French or another Romance language.

BASQ 402 Readings in Basque Studies credit: 3 Hours.

Directed research providing individualized instruction on specific topics in Basque linguistics and culture. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: BASQ 401 or consent of instructor.

CATL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CATL>)

Catalan Courses

CATL 401 Intensive Catalan Language credit: 3 Hours.

Intensive introduction to the Catalan language, appropriate for students familiar with another Romance language; emphasizes acquisition of the four basic skills, listening, speaking, writing, and reading, in order to achieve competence in the language. 3 undergraduate hours. 3 graduate hours. Prerequisite: Basic reading knowledge of another Romance language is helpful but not absolutely necessary.

CATL 402 Studies in Catalan Literature credit: 3 Hours.

Studies selected aspects of Catalan literature; taught in Catalan. Topics will be selected from among the major chronological periods and genres of Catalan literature; such as 20th century novel, Ramon Llull and Ausias March. The intention is to offer the student an in-depth view instead of an introductory overview. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: CATL 401 or equivalent.

PORT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PORT>)

Portuguese Courses

PORT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PORT 200 Advanced Grammar credit: 3 Hours.

The study of the structure of modern Portuguese in both its phonological and syntactic aspects for the student who already has a functional command of the language, with emphasis on developing ability to analyze and interpret grammatical structures. Prerequisite: PORT 202 or consent of instructor.

PORT 201 Intensive Beginning Portuguese credit: 4 Hours.

Accelerated language learning course designed for beginners, equivalent to two semesters. Early emphasis on production skills; comprehension-based skills will be introduced in rapid succession. Course designed for speakers and non-speakers of Romance languages. Some focus on those linguistics structures specific to Portuguese which differ significantly from equivalents in other Romance languages.

PORT 202 Intensive Intermediate Portuguese credit: 4 Hours.

Continued development of reading, writing and conversational skills. Completion of this course fulfills the third-semester level of Portuguese language instruction. Followed by a 200- or 300-level course in Portuguese, this course fulfills the fourth-semester level of Portuguese language instruction. Prerequisite: PORT 201 or consent of instructor.

PORT 320 Readings in Portuguese credit: 3 Hours.

Readings and discussion in Portuguese of a variety of texts by leading Luso-Brazilian writers covering various genres and themes. Designed to emphasize reading skills and discussion, rather than literary criticism. May be repeated if topics vary. Prerequisite: PORT 202 or equivalent.

PORT 334 Brazilian Women's Lit Trans credit: 3 Hours.

Study of gender, race and class in Brazil through the study of these issues as documented by women's voices. Beginning with an analysis of the early representation of women during the Portuguese colonization of the new world up to the present through translations of contemporary literature written by women. Requires no knowledge of Portuguese language. Same as GWS 334.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

PORT 400 Intensive Beginning Portuguese credit: 4 Hours.

Accelerated language learning course designed for beginners, equivalent to two semesters. Early emphasis on production skills; comprehension-based skills will be introduced in rapid succession. Course designed for speakers and non-speakers of Romance languages. Some focus on those linguistics structures specific to Portuguese which differ significantly from equivalents in other Romance languages. 4 undergraduate hours. 4 graduate hours.

PORT 404 Studies in Luso-Brazilian Culture credit: 3 or 4 Hours.

Affords a broad understanding of Luso-Brazilian civilization and culture. May be offered in English (no prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: If taught in Portuguese: PORT 403 (former 320) or equivalent or consent of instructor.

PORT 406 Brazilian Film credit: 3 or 4 Hours.

Study of the evolution of Brazilian cinema through selected films to explore the nature and development of contemporary Brazilian aesthetics. May be offered in English (non prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. Prerequisite: If taught in Portuguese: PORT 402 (former 200) or 403 (former 320) or equivalent.

PORT 410 Topics in Brazilian Literature credit: 3 or 4 Hours.

May be offered in English (no prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 Undergraduate hours or 8 Graduate hours in separate terms if topics vary. Prerequisite: If taught in Portuguese: PORT 402 (former 200) or 403 (former 320) or equivalent.

PORT 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, ITAL 435, LING 462, RMLG 435, and SPAN 435. See SPAN 435.

PORT 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, ITAL 460, SLS 460, and SPAN 460. See EIL 460.

PORT 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, ITAL 489, LING 489 and SPAN 489. See LING 489.

SPAN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SPAN>)

Spanish Courses

SPAN 101 Elementary Spanish I credit: 4 Hours.

Intensive course for beginner students of Spanish. Students will develop basic listening, speaking, reading and writing skills in Spanish to a novice high level, based on the proficiency scale stipulated by the American Council for the Teaching of Foreign Languages (ACTFL) and to provide them with an introduction to the various cultures of the Spanish-speaking world and Hispanics in the United States.

SPAN 102 Elementary Spanish II credit: 4 Hours.

Continuation of SPAN 101. Students continue developing basic listening, speaking, reading and writing skills in Spanish to an intermediate low level, based on the ACTFL proficiency and provides introduction to the various cultures of the Spanish-speaking world and Hispanics in the United States. Credit is not given for both SPAN 102 and SPAN 122. Prerequisite: SPAN 101 or equivalent.

SPAN 122 Intensive Elementary Spanish credit: 4 Hours.

Intensive beginning Spanish, equivalent to the first two semesters, for students with little or no experience in Spanish or whose skills need refreshing. This is considered a second level course for purposes of fulfilling the University General Education Language requirement. Prerequisite: None or assignment by placement exam. Students who have the equivalent of four or more years credit in Spanish at the secondary level will not receive credit for SPAN 122.

SPAN 130 Intermediate Spanish credit: 4 Hours.

Continued development of reading, writing and conversational skills. This is considered a third level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 130 and SPAN 103. Prerequisite: SPAN 122 or equivalent placement score.

SPAN 141 Introduction to Spanish Grammar credit: 4 Hours.

Introduction to the major structures of Spanish, from a linguistic perspective and will develop students' formal knowledge of Spanish grammar. This is considered a fourth level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 141 and SPAN 142. Prerequisite: SPAN 130 (previously numbered 103), equivalent course, or placement score.

SPAN 142 Spanish in the Professions credit: 4 Hours.

Introduction to Spanish in business, law, medical, education & social service fields, with a focus on the importance of bilingualism in the U.S., strategies for lifelong learning, and culture considerations. The development of functional use of Spanish within the professional context is the major focus of the course. This is considered a fourth level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 141 and SPAN 142. Prerequisite: SPAN 130 (formerly numbered 103), equivalent course, or placement score.

SPAN 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and associates. May be repeated to a maximum of 3 hours. Prerequisite: Consent of departmental honors adviser in Spanish.

SPAN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

SPAN 200 Readings in Hispanic Texts credit: 3 Hours.

Readings and discussion in Spanish of a variety of texts by leading Hispanic and Hispanic-American writers covering genres and themes; designed to emphasize reading, discussion, and enjoyment rather than literary criticism. Open to non-Spanish majors. Credit may be received by Advanced Placement "Language" or "Literature" examination. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 202 Spanish for Business credit: 3 Hours.

Introduction to vocabulary of Hispanic commerce; composition of business letters and similar texts. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 204 Advanced Spanish Grammar in Context credit: 3 Hours.

Overview of Spanish grammar, with emphasis on major challenges and areas of contrast with English. The overall goal of the course is to help students gain a greater understanding of some key aspects of Spanish grammar, which will lead to greater accuracy in their written and oral production. Prerequisite: SPAN 141 or equivalent.

SPAN 208 Oral Spanish credit: 3 Hours.

Practice in speaking Spanish. Prerequisite: SPAN 141, SPAN 142, or equivalent. To be taken concurrently with or subsequent to SPAN 204.

SPAN 228 Spanish Composition credit: 3 Hours.

Basic composition course; problems of written Spanish and principles of Spanish stylistic patterns; weekly written exercises. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 232 Spanish in the Community credit: 3 Hours.

Introduction to Spanish-speaking communities in the Champaign-Urbana area, focusing on issues of particular interest to the local Hispanic community, developing contextualized oral proficiency, and facilitating student civic engagement. Active student reflection is structured throughout the course. Meets two hours a week in class and two hours a week in community-based service work. In their interactions with community members and organizations students both learn from and contribute to the community. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 240 Latina/o Popular Culture credit: 3 Hours.

Same as ENGL 224 and LLS 240. See LLS 240.

SPAN 242 Intro to Latina/o Literature credit: 3 Hours.

Same as ENGL 225 and LLS 242. See LLS 242.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

SPAN 246 Gender & Sexuality in Latina/o Literature credit: 3 Hours.

Examination of questions of gender, sexuality, and identity in contemporary Latina/Latino culture through a discussion of novels, performance pieces, essays and films. Spanish majors must complete writing assignments in Spanish. Same as LLS 246.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

SPAN 250 Introduction to Literary Analysis credit: 3 Hours.

An introduction to literary analysis and interpretation. Emphasis will be placed upon close reading and critical analysis of texts representing different genres and periods in Spain and Spanish America. Prerequisite: SPAN 228.

SPAN 252 Introduction to Hispanic Linguistics credit: 3 Hours.

Introduction to Spanish phonology, morphology, syntax, and at least one of the following areas: issues in Spanish semantics and pragmatics, variation in Spanish, Spanish in the U.S., history of Spanish, or acquisition of Spanish. Prerequisite: SPAN 228 or consent of instructor.

SPAN 254 Introduction to Cultural Analysis credit: 3 Hours.

Introduction to the analysis of culture as concept, practice and representation, including consideration of the debates that the idea of culture has provoked in different contexts. Provides analytical and methodological tools to discuss a full range of cultural forms. Special emphasis on issues of culture and representation, as well as on the notion of cultural difference(s). The theoretical and critical texts studies will represent diverse geographical and cultural locations. Examples and discussion will emphasize cultural issues in the context of Spain, Latin America and U.S. Latinas/os. Prerequisite: SPAN 228.

SPAN 295 Topics in Literature and Cultural Studies credit: 3 Hours.

Selected topics in Spanish, Latin American and/or Latina/o literature and cultural studies. Specific topics may vary depending on the instructor. Course taught in Spanish. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary. Prerequisite: SPAN 228.

SPAN 299 Study Abroad credit: 0 to 18 Hours.

Non-advanced level course in Spanish language, literature, history, culture, and/or civilization completed in a Study Abroad program in Spain or Latin America. May be repeated in the same term to a maximum of 18 hours. May be repeated in separate terms to a maximum of 36 hours. Prerequisite: SPAN 141, SPAN 142 or equivalent.

SPAN 303 The Sounds of Spanish credit: 3 Hours.

Practical, introductory course to Spanish phonetics, stressing practice in pronunciation. May be offered as intensive eight-week course. Prerequisite: SPAN 228 or consent of instructor.

SPAN 305 The Structure of Spanish credit: 3 Hours.

An in-depth investigation of the structure of Spanish, with a secondary focus on syntactic variation, especially structural differences with English. Introduces concepts and techniques essential for syntactic analysis and description. Taught in Spanish. Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 307 Bilingualism credit: 3 Hours.

Introduction to the fundamental issues in the study of bilingualism as an individual and social phenomenon, with special emphasis on Spanish bilingual communities in the United States, Spain and Latin America. Taught in Spanish. Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 308 Spanish in the United States credit: 3 Hours.

Descriptive and critical overview of the linguistic practices of the different Spanish-speaking communities in the U.S. The main objective of the course is to develop critical and linguistic awareness about the relationship among language, individual, and society. Special emphasis on historical migration patterns and settlements, characteristics of Spanish in contact with English, and language use and attitude patterns. Same as LLS 308. Prerequisite: SPAN 228 or consent of instructor.

SPAN 309 Varieties of Spoken Spanish credit: 3 Hours.

Relationship between language, individual and society in the context of the spread of Spanish in the world, concentrating on Spanish varieties spoken in Spain and Latin America, including the United States, but will also give an overview of Spanish in Africa (Equatorial Guinea, Morocco), and other parts of the world (Israel, Turkey, the Philippines). Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 310 Premodern Spanish Literatures & Cultures credit: 3 Hours.

A critical analysis of selected texts and authors representative of the Medieval and Early Modern periods in the context of Iberian cultures. Particular emphasis on the relationship between cultural practices and the construction of national identities prior to 1700, as well as on the plurality of cultures that shaped what is now Spain. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 312 Modern Spanish Literatures & Cultures credit: 3 Hours.

Critical analysis of selected texts and periods representative of Spain's literary production from the 18th century to the present, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 314 Latin American Literatures & Cultures to 1800 credit: 3 Hours.

Critical analysis of selected texts and periods representatives of Latin American literary and cultural production from Pre-Columbian until 1800, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 316 Latin American Literatures & Cultures from 1800 credit: 3 Hours.

Critical analysis of selected texts and periods representative of Latin American literary and cultural production from 1800 to present, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 318 Spanish Cultural Studies I credit: 3 Hours.

A critical analysis of historical events, institutions, artistic production, symbols and values representative of Spanish (Iberian) cultures. Particular emphasis on the relationship between specific cultural practices and/or values and the construction of national identities prior to 1700. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 320 Spanish Cultural Studies II credit: 3 Hours.

Critical analysis of selected historical events, artistic production, debates, symbols and values representative of Spanish (Iberian) cultures in the modern and contemporary periods. Particular emphasis on the relationship between cultural practices and national identities, as well as on contextualized analysis of different types of cultural phenomena. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 324 Latin America Cultural Studies I credit: 3 Hours.

Examination of the complexities, ramifications and ambiguities of the cultural encounters, processes and expressions which took place in Latin America between different racial and ethnic groups from Pre-Columbian times to the 1800. Particular emphasis will be placed on the critical analysis of major cultural events, periods and issues that influenced the formation of identities in these territories. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: SPAN 228.

SPAN 326 Latin America Cultural Studies II credit: 3 Hours.

Panoramic view of Latin American cultures since the end of the colonial period (roughly 1820) to the present. Examination of the major debates, authors and cultural issues that shaped those cultures or that were shaped by them. Specific themes may vary by semester, and may include the following: slavery, colonialism and neocolonialism, revolution, mestizaje, gender, the state, and modernization. Analysis will include diverse cultural phenomena, as well as consideration of cultural perspectives and practices. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 332 Spanish and Entrepreneurship credit: 3 Hours.

Entrepreneurship means more than starting a business. This course emphasizes social entrepreneurship, in which the basic process of entrepreneurship-opportunity recognition, resource gathering and value creation is used to address social issues, not to create profits. Students do community-based learning in non-profits serving the local Spanish-speaking community, thereby building their language skills, acquiring cultural knowledge and gaining hands-on experience with social entrepreneurship (theory and practice). Each week class meets two hours in class and two hours in community-based service work. Prerequisite: SPAN 228.

SPAN 395 Advanced Topics in Literature & Cultural Studies credit: 3 Hours.

Selected topics in Spanish, Latin American and/or Latina/o literatures and cultural studies. Specific topics may vary. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: Two 300-level courses in Spanish/Latin American literature or cultural studies.

SPAN 399 Advanced Study Abroad credit: 0 to 18 Hours.

Advanced level course in Spanish language, literature, history, culture, and/or civilization completed in a Study Abroad program taking place in Spain and Latin America. Approved for Letter and S/U grading. May be repeated to a maximum of 36 hours. Prerequisite: SPAN 228. May be taken concurrently with SPAN 228.

SPAN 410 Spanish/English Translation credit: 3 or 4 Hours.

Review of current translation theory and analysis and practice of the translation from Spanish to English (and vice versa) of a variety of text types, ranging from short literary texts to everyday commercial discourse such as that found on product labels. Emphasis on linguistic and cultural aspects of literary discourses as well as non-literary texts. Conducted in Spanish. Same as TRST 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 250, SPAN 252, and SPAN 254; or consent of instructor.

SPAN 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, PS 418, and SLAV 418. See FR 418.

SPAN 430 Spanish Phonology credit: 3 or 4 Hours.

Systematic introduction to the sound structures of Spanish, concentrating on recent contributions of theoretical linguistics to the understanding of the phonology of Spanish in its standard and selected dialectal varieties. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 252 or SPAN 303 or consent of instructor.

SPAN 431 Spanish Morphology credit: 3 or 4 Hours.

Introductory course to basic concepts of morphological structure and word formation from a functional perspective. The course centers around the specific morphological characteristics of Spanish, considering historical and dialectal variation. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 305 or equivalent; or consent of instructor.

SPAN 432 Spanish Syntax credit: 3 or 4 Hours.

Systematic introduction to the foundations of Spanish syntax based on standard and more recent treatments of Spanish and syntactic theory. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 305 or consent of instructor.

SPAN 433 Spanish Sociolinguistics credit: 3 or 4 Hours.

Introduction to the sociolinguistic variation (social, historical, and dialectal) of Spanish-speaking communities, and to the basic theoretical and methodological concepts of sociolinguistic research. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 307 or SPAN 309; or consent of instructor.

SPAN 434 History of the Spanish Language credit: 3 or 4 Hours.

Study of the historical evolution of the Spanish language, from its origins in Latin to its spread and development in Spain and Latin America, considering also the influence of other languages on Spanish. Both internal history (changes in phonology, morphology, syntax and lexicon) and external history are examined. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 252 or equivalent introduction to Spanish or General Linguistics or consent of instructor.

SPAN 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Comparative and historical analysis of the Romance languages. Same as FR 462, ITAL 435, LING 462, PORT 435, and RMLG 435. 3 undergraduate hours. 4 graduate hours. Prerequisite: Four semesters of a Romance language or Latin, or equivalent; LING 100, SPAN 252, FR 416, or equivalent; or consent of instructor.

SPAN 436 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, ENGL 486, GER 405, SLAV 430, and TRST 431. See SLAV 430.

SPAN 437 The Acquisition of Spanish credit: 3 or 4 Hours.

Examination of the acquisition of Spanish by monolinguals, bilinguals, and second language learners. After a general introduction to theories of language acquisition, the focus of the course is on empirical investigations of the acquisition of the phonology, lexicon, morphology and syntax of Spanish by each to the learner groups listed above. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 303 and SPAN 305 or equivalent, or consent of instructor.

SPAN 442 Latina Literature credit: 3 or 4 Hours.

Same as LLS 442 and GWS 445. See LLS 442.

SPAN 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, ITAL 460, PORT 460, and SLS 460. See EIL 460.

SPAN 461 Medieval Spanish Studies credit: 3 or 4 Hours.

An introduction to major works and writers before 1500 with special attention to their political and cultural contexts. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary, to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: SPAN 310 and SPAN 318.

SPAN 462 Early Modern Spanish Studies credit: 3 or 4 Hours.

Study of the major authors and texts of the early modern period (Renaissance and Baroque) with particular attention to the cultural and political contexts of sixteenth and seventeenth century Span. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 310 and SPAN 318.

SPAN 463 18-19thC Spanish Studies credit: 3 or 4 Hours.

Selected literary and non-literary texts published in Spain during the 18th and 19th centuries. Focus on analysis of literary and other manifestations of major cultural movements and artistic currents and preoccupations. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 464 Spanish Studies 1898-1960 credit: 3 or 4 Hours.

Selected literary and non-literary texts published in Spain between 1898-1960. Focus on analysis of literary and other manifestations of major cultural movements and artistic currents and preoccupations. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 465 20th-21stC Spanish Studies credit: 3 or 4 Hours.

Examines the cultural production of 20th and 21st century Spain, with emphasis on major works, critical movements and debates. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 466 Colonial Span Amer Studies credit: 3 or 4 Hours.

In-depth study of colonial Spanish American discursive and cultural production from Pre-Hispanic times to the eighteenth century. Emphasis is placed upon the intellectual and cultural climate from which these texts emerged. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 314 and SPAN 324.

SPAN 467 19thC Sp American Studies credit: 3 or 4 Hours.

Provides a panoramic view of literary and cultural production in Spanish America between 1810 and 1900. Special attention paid to the emergence of "national literatures" within specific historical and political contexts. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 316 and SPAN 326.

SPAN 468 20th-21stC Span Am Studies credit: 3 or 4 Hours.

Examines major works, critical movements and/or theoretical issues in the 20th and 21st century Spanish American literary and cultural studies. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 316 and SPAN 326.

SPAN 477 Span Grammar Comm Lang Tchg credit: 3 Hours.

Survey of major Spanish syntactic and morphological patterns with particular emphasis on the acquisition of Spanish grammar by non-native speakers. Students will develop a sensitivity for appropriate teaching of Spanish grammar. 3 undergraduate hours. No graduate credit. Required for teacher education. Prerequisite: SPAN 475 or consent of instructor.

SPAN 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, ITAL 489, LING 489, and PORT 489. See LING 489.

SPAN 490 Advanced Readings in Spanish credit: 0 to 3 Hours.

Directed reading course intended to develop an advanced student's interest in a special area of Hispanic linguistics or literature (author, genre, period, group of works, etc.). Topics to be chosen in consultation with an advisor. Only topics not covered in regular offerings will be considered. 0 to 3 undergraduate hours. No graduate credit. May be repeated if topics vary. Prerequisite: SPAN 252 for linguistics topics; and any two of SPAN 310, SPAN 312, SPAN 314, or SPAN 316 for literature topics.

SPAN 491 Topics for Honors Students credit: 1 to 3 Hours.

For candidates for honors in Spanish; intensive study of topics in Hispanic literature or linguistics. 1 to 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor and of departmental honors advisor.

Curriculum Preparatory to the Teaching of Spanish

For the Degree of Bachelor of Arts in the Teaching of Spanish

E-mail: span-port@illinois.edu

In order to remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages.

Minimum required course work normally equates to 33-36 hours in Teaching Area of Concentration and 29 hours of professional education courses.

Minimum hours required for graduation: A minimum of 123 hours of credit is required for graduation.

General education: Consult the Curricula Preparatory to Teaching Foreign Languages (p. 410).

Departmental distinction: To be eligible for departmental distinction, a student must have a minimum grade point average of 3.0, display exceptional teaching ability, and complete an approved project or series of projects. Consult the Spanish departmental advisor for details.

Study Abroad: It is strongly recommended that future teachers of Spanish engage in one or more semesters of study in a Spanish-speaking country. A number of the curricular requirements may be met through the Year Abroad Program or other approved programs; see Study Abroad Programs (<http://www.spanport.illinois.edu/studyabroad/spanish>).

Code	Title	Hours
	Professional education courses. (See Foreign Languages-Curricula Preparatory to Teaching Foreign Languages.) (p. 410)	29

Teaching Area of Concentration: Spanish

Code	Title	Hours
	Core Courses	18
Basic Skills Courses		
SPAN 200	Readings in Hispanic Texts	

SPAN 204	Advanced Spanish Grammar in Context	
SPAN 228	Spanish Composition	
Introduction to the Disciplines Courses		
SPAN 250	Introduction to Literary Analysis	
SPAN 252	Introduction to Hispanic Linguistics	
SPAN 254	Introduction to Cultural Analysis	
SPAN 303	The Sounds of Spanish	3
SPAN 477	Span Grammar Comm Lang Tchg	3
SPAN 318	Spanish Cultural Studies I	3
or SPAN 320	Spanish Cultural Studies II	
SPAN 324	Latin America Cultural Studies I	3
or SPAN 326	Latin America Cultural Studies II	
Spanish electives: one or two 300- or 400-level courses chosen from a list maintained at the Spanish advisor's office.		3-6
Total Hours		33-36

Minor in Portuguese

E-mail: span-port@illinois.edu

Web address for department: <http://www.spanport.illinois.edu/>

Code	Title	Hours
PORT 202	Intensive Intermediate Portuguese	4
PORT 200	Advanced Grammar	3
Select at least 9 hours from the following list:		9
PORT 320	Readings in Portuguese (may be repeated)	
PORT 404	Studies in Luso-Brazilian Culture (may be repeated)	
PORT 406	Brazilian Film	
PORT 410	Topics in Brazilian Literature	
Total Hours		16

Minor in Spanish

E-mail: span-port@illinois.edu

Code	Title	Hours
Minimum 18 hours of Spanish Courses		
SPAN 228	Spanish Composition	3
2 to 3 additional SPAN courses at the 200-level		6-9
2 to 3 SPAN courses at the 300- or 400-level		6-9
Total Hours		18

Portuguese

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: span-port@illinois.edu

Minimum required major and supporting courses normally equate to 42-45 hours including at least 27 hours in Portuguese courses beyond the 100 level.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To be considered for departmental distinction, a student must maintain a 3.5 grade point average and fulfill special additional requirements. See the department's honors adviser.

Code	Title	Hours
PORT 200	Advanced Grammar	3
PORT 320	Readings in Portuguese	3
PORT 404	Studies in Luso-Brazilian Culture	3
PORT 406	Brazilian Film	3
PORT 410	Topics in Brazilian Literature	3
Additional courses in Portuguese literature/culture beyond the 100 level		12

Supporting course work or a minor in a related area of study chosen by the student and approved by the adviser.

There is a wide choice of supporting courses because the student's interests may vary from Iberian literature to animal husbandry in Angola and urbanology in Brazil. Supporting areas may include humanities (comparative literature, comparative religion, linguistics, philosophy), social sciences (anthropology, geography, history, Latin American studies, political science, sociology), education, fine and applied arts, and/or journalism. Other fields, or groups of fields, may be approved by the Portuguese undergraduate adviser.¹

¹ A minor consists of a minimum of 18 hours.

Spanish

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: span-port@illinois.edu

Minimum required major and supporting course work normally equates to 48 hours, including 33 hours in Spanish courses at the 200-level or higher.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300 and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the Student Affairs Office before the end of the fourth semester (48-60 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To be considered for departmental distinction, a student must maintain a 3.5 grade point average and fulfill special additional requirements. See the department's honors adviser.

Code	Title	Hours
33 hours of SPAN courses ¹		33
SPAN 228	Spanish Composition	
4 to 6 200-level SPAN courses		
4 to 6 300- and/or 400-level SPAN courses		
Supporting course work, a minor, or a second major in an area of study chosen by the student and approved by the advisor. ²		15-21
Total Hours		48-54

¹ With permission of the adviser, students will be able to take up to two SPAN courses that are taught in a language other than Spanish.

² A minor generally consists of 16-21 hours.

Statistics

Douglas G. Simpson
101 Illini Hall, 725 South Wright St., Champaign, IL 61820
PH: (217) 333-2167
FX: (217) 244-7190
<http://www.stat.illinois.edu>

Statistics is the science of modeling, summarizing, and analyzing data, and of using mathematics and computing tools to make predictions and decisions in the face of uncertainty. Statistical ideas are applicable in any area involving quantitative measurement and in almost every area of scholarly pursuit. The major, administered by the Department of Statistics, is designed to provide students with an understanding of the concepts of statistical inference and a familiarity with the methods of applied statistical analysis. A major in statistics will prepare students for a career in business, industry, or government, and for further graduate study in statistics or in a related area.

The Department of Statistics offers the following majors:

- **Statistics (p. 579)**- The major, administered by the Department of Statistics, is designed to provide students with an understanding of the concepts of statistical inference and a familiarity with the methods of applied statistical analysis. A major in statistics will prepare students for a career in business, industry, or government, and for further graduate study in statistics or in a related area.
- **Statistics and Computer Science (p. 580)**- This major is sponsored jointly by the Departments of Statistics and Computer Science. The Statistics and Computer Science major is designed for students who would like a strong foundation in computer science, coupled with significant advanced coursework in statistics. The major prepares students for professional or graduate work in statistics and computer science, and for applications of computing in which knowledge of statistics is particularly important, such as data mining and machine learning.

Minor in Statistics

- Applied Statistics Track Minor (p. 579)
- Mathematical Statistics Track Minor (p. 580)

The minor, administered by the Department of Statistics, is designed to provide students with an understanding of the concepts of statistical inference and a familiarity with the methods of applied statistical analysis. A minor in statistics will assist students with their major field of study to better prepare them for a career in their chosen field. It will also prepare students to for graduate studies in statistics or in one of many areas where data analysis plays an important role. Interested students should contact the Statistics undergraduate advisor for admission into the minor. Students should have completed the calculus sequence through MATH 241 before entering the minor. Students must choose from either the Applied or Mathematical Statistics Track.

STAT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/STAT>)

Courses

STAT 100 Statistics credit: 3 Hours.

First course in probability and statistics at a precalculus level; emphasizes basic concepts, including descriptive statistics, elementary probability, estimation, and hypothesis testing in both nonparametric and normal models. Credit is not given for both STAT 100 and any one of the following: ECON 202, PSYC 235, or SOC 485. Prerequisite: MATH 112. This course satisfies the General Education Criteria for: Quantitative Reasoning I

STAT 200 Statistical Analysis credit: 3 Hours.

Survey of statistical concepts, data analysis, designed and observational studies and statistical models. Statistical computing using a statistical package such as R or a spreadsheet. Topics to be covered include data summary and visualization, study design, elementary probability, categorical data, comparative experiments, multiple linear regression, analysis of variance, statistical inferences and model diagnostics. May be taken as a first statistics course for quantitatively oriented students, or as a second course to follow a basic concepts course. Credit is not given for both STAT 200 and STAT 212.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

STAT 212 Biostatistics credit: 3 Hours.

Application of statistical reasoning and statistical methodology to biology. Topics include descriptive statistics, graphical methods, experimental design, probability, statistical inference and regression. In addition, techniques of statistical computing are covered. Credit is not given for both STAT 212 and STAT 200.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

STAT 361 Probability & Statistics for Computer Science credit: 3 Hours.

Same as CS 361. See CS 361.

STAT 385 Statistics Programming Methods credit: 3 Hours.

Statisticians must be savvy in programming methods useful to the wide variety of analysis that they will be expected to perform. This course provides the foundation for writing and packaging statistical algorithms through the creation of functions and object oriented programming. Fundamental programming techniques and considerations will be emphasized. Students will also create dynamic reports that encapsulate their implemented algorithms. Students must have access to a computer on which they can install software. Prerequisite: STAT 200 or STAT 212.

STAT 390 Individual Study credit: 1 or 2 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

STAT 391 Honors Individual Study credit: 1 or 2 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

STAT 400 Statistics and Probability I credit: 4 Hours.

Introduction to mathematical statistics that develops probability as needed; includes the calculus of probability, random variables, expectation, distribution functions, central limit theorem, point estimation, confidence intervals, and hypothesis testing. Offers a basic one-term introduction to statistics and also prepares students for STAT 410. Same as MATH 463. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or equivalent.

STAT 408 Actuarial Statistics I credit: 4 Hours.

Examines elementary theory of probability, including independence, conditional probability, and Bayes' theorem; combinations and permutations; random variables, expectations, and probability distributions; joint and conditional distributions; functions of random variables; sampling; central limit theorem. Same as MATH 408. 4 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 408 and either MATH 461 or STAT 400. Prerequisite: MATH 241 or equivalent.

STAT 409 Actuarial Statistics II credit: 4 Hours.

Continuation of STAT 408. Examines parametric point and interval estimation, including maximum likelihood estimation, sufficiency, completeness, and Bayesian estimation; hypothesis testing; linear models; regression and correlation. Same as MATH 409. 4 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 409 and STAT 410. Prerequisite: STAT 408.

STAT 410 Statistics and Probability II credit: 3 or 4 Hours.

Continuation of STAT 400. Includes moment-generating functions, transformations of random variables, normal sampling theory, sufficiency, best estimators, maximum likelihood estimators, confidence intervals, most powerful tests, unbiased tests, and chi-square tests. Same as MATH 464. 3 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 410 and STAT 409. Prerequisite: STAT 400; or STAT 100 and MATH 461.

STAT 420 Methods of Applied Statistics credit: 3 or 4 Hours.

Systematic, calculus-based coverage of the more widely used methods of applied statistics, including simple and multiple regression, correlation, analysis of variance and covariance, multiple comparisons, goodness of fit tests, contingency tables, nonparametric procedures, and power of tests; emphasizes when and why various tests are appropriate and how they are used. Same as MATH 469. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 408 or STAT 400; MATH 231 or equivalent; knowledge of basic matrix manipulations; or consent of instructor.

STAT 424 Analysis of Variance credit: 3 or 4 Hours.

Estimation and hypotheses testing in linear models; one-, two-, and higher-way layouts; incomplete layouts; analysis of covariance; and random effects models and mixed models. 3 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in MATH 415 and STAT 410.

STAT 425 Applied Regression and Design credit: 3 or 4 Hours.

Explores linear regression, least squares estimates, F-tests, analysis of residuals, regression diagnostics, transformations, model building, factorial designs, randomized complete block designs, Latin squares, split plot designs. Computer work is an integral part of the course. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 426 Sampling and Categorical Data credit: 3 or 4 Hours.

Sampling: simple random, stratified, systematic, cluster, and multi-stage sampling. Categorical data: multiway contingency tables, maximum likelihood estimation, goodness-of-fit tests, model selection, logistic regression. Computer work is an integral part of the course. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 427 Statistical Consulting credit: 3 or 4 Hours.

Students, working in groups under the supervision of the instructor, consult with faculty and graduate students through the Statistical Consulting Service; readings from literature on consulting. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 425 or consent of instructor.

STAT 428 Statistical Computing credit: 3 or 4 Hours.

Examines statistical packages, numerical analysis for linear and nonlinear models, graphics, and random number generation and Monte Carlo methods. Same as CSE 428. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410 or equivalent; knowledge of a programming language.

STAT 429 Time Series Analysis credit: 3 or 4 Hours.

Studies theory and data analysis for time series; examines autoregressive moving average model building and statistical techniques; and discusses spectral model building and statistical analysis using windowed periodograms and Fast Fourier Transformations. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 430 Topics in Applied Statistics credit: 3 or 4 Hours.

Formulation and analysis of mathematical models for random phenomena; extensive involvement with the analysis of real data; and instruction in statistical and computing techniques as needed. 3 undergraduate hours. 4 graduate hours. May be repeated with approval. Prerequisite: STAT 410 or STAT 420; or consent of instructor.

STAT 431 Applied Bayesian Analysis credit: 3 or 4 Hours.

Introduction to the concepts and methodology of Bayesian statistics, for students with fundamental knowledge of mathematical statistics. Topics include Bayes' rule, prior and posterior distributions, conjugacy, Bayesian point estimates and intervals, Bayesian hypothesis testing, noninformative priors, practical Markov chain Monte Carlo, hierarchical models and model graphs, and more advanced topics as time permits. Implementations in R and specialized simulation software. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410 and knowledge of R.

STAT 432 Basics of Statistical Learning credit: 3 or 4 Hours.

Topics in supervised and unsupervised learning are covered, including logistic regression, support vector machines, classification trees and nonparametric regression. Model building and feature selection are discussed for these techniques, with a focus on regularization methods, such as lasso and ridge regression, as well as methods for model selection and assessment using cross validation. Cluster analysis and principal components analysis are introduced as examples of unsupervised learning. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400, and either STAT 420 or STAT 425.

STAT 434 Survival Analysis credit: 3 or 4 Hours.

Introduction to the analysis of time-to-event outcomes. Topics center around three main procedures: the Kaplan-Meier estimator, the log-rank test, and Cox regression. Emphasis on big-picture concepts, basic methodological understanding, and practical implementation in R. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410, STAT 420, and knowledge of R at the level of STAT 420.

STAT 440 Statistical Data Management credit: 3 or 4 Hours.

The critical elements of data storage, data cleaning, and data extractions that ultimately lead to data analysis are presented. Includes basic theory and methods of databases, auditing and querying databases, as well as data management and data preparation using standard large-scale statistical software. Students will gain competency in the skills required in storing, cleaning, and managing data, all of which are required prior to data analysis. Same as CSE 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400 or STAT 409.

STAT 443 Professional Statistics credit: 3 or 4 Hours.

This project-based course emphasizes written, visual, and oral communication of statistical results and conclusions. An introduction to statistical consulting is also provided. Additional topics include introductions to statistical methodologies in industry and aspects of careers in statistics. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 420 or consent of instructor.

STAT 448 Advanced Data Analysis credit: 4 Hours.

Several of the most widely used techniques of data analysis are discussed with an emphasis on statistical computing. Topics include linear regression, analysis of variance, generalized linear models, and analysis of categorical data. In addition, an introduction to data mining is provided considering classification, model building, decision trees, and cluster analysis. Same as CSE 448. 4 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400 or STAT 409, and credit for or concurrent registration in STAT 410.

STAT 458 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Same as ANSC 448 and IB 487. See ANSC 448.

STAT 466 Image and Neuroimage Analysis credit: 3 or 4 Hours.

Same as PSYC 466. See PSYC 466.

STAT 480 Data Science Foundations credit: 3 or 4 Hours.

Examines the methods of data management and analysis for "big data", characterized by high volume, variety, velocity, and veracity. Attention will be focused on advanced statistical analysis and visualization in data science applications employing parallel processing, storage and distribution techniques necessary for analysis of massive data sets. Data mining techniques, machine learning methods, and streaming technologies will be utilized for real-time analysis. Students must have access to a computer on which they can install software. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 425 and familiarity with high-level language (e.g. Python, Java, C, F#), and command line programming.

STAT 484 Ethical Practice of Statistics credit: 3 or 4 Hours.

Same as PSYC 484. See PSYC 484.

Statistics

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: stat-office@illinois.edu

Minimum required major and supporting course work normally equates to 70-72 hours

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser in 101 Illini Hall or phone (217) 333-2167.

Minimum hours required for graduation: 120 hours

Departmental distinction: To graduate with distinction requires a specified minimum grade point average in all Computer Science, Statistics, and Mathematics courses listed below. A GPA of 3.25 is required for Distinction, 3.5 for High Distinction, and 3.75 for Highest Distinction.

Code	Title	Hours
Calculus through MATH 241 - Calculus III		
11-12		
Select one from:		
MATH 415	Applied Linear Algebra	
MATH 416	Abstract Linear Algebra	
STAT 200	Statistical Analysis	3
or STAT 212	Biostatistics	
STAT 400	Statistics and Probability I	4
STAT 410	Statistics and Probability II	3
STAT 420	Methods of Applied Statistics	3
STAT 425	Applied Regression and Design	3
Select four of the following:		
12		
STAT 424	Analysis of Variance	
STAT 426	Sampling and Categorical Data	
STAT 427	Statistical Consulting	
STAT 428	Statistical Computing	
STAT 429	Time Series Analysis	
STAT 430	Topics in Applied Statistics	
STAT 440	Statistical Data Management	
STAT 443	Professional Statistics	
MATH 444	Elementary Real Analysis	
or MATH 447	Real Variables	
STAT 448	Advanced Data Analysis	
STAT 480	Data Science Foundations	

Applied Statistics Track Minor

Code	Title	Hours
Select one of the following:		
2-3		
MATH 125	Elementary Linear Algebra	
MATH 225	Introductory Matrix Theory	
MATH 415	Applied Linear Algebra	
Select one of the following:		
3-4		
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
EPSY 280	Elements of Statistics	
PSYC 235	Intro to Statistics	
STAT 100	Statistics	
SOC 280	Intro to Social Statistics	
STAT 200	Statistical Analysis	3

or STAT 212	Biostatistics	
STAT 400	Statistics and Probability I ¹	4
STAT 420	Methods of Applied Statistics	3
Choose one 300- or 400-level course from the list maintained by the department. Please see the Statistics advisor for a current list.		3-4
Total Hours		18-21

Mathematical Statistics Track Minor

Code	Title	Hours
MATH 415	Applied Linear Algebra	3-4
STAT 200	Statistical Analysis	3
or STAT 212	Biostatistics	
STAT 400	Statistics and Probability I ¹	4
STAT 410	Statistics and Probability II	3
or ECE 313	Probability with Engrg Applic	
Choose two 300- or 400-level courses from the list maintained by the department. Please see the Statistics advisor for a current list.		6
Total Hours		19-20

¹ *Students who have completed STAT 408 and STAT 409 will not need to take STAT 400.*

Statistics and Computer Science

This major is sponsored jointly by the Departments of Statistics and Computer Science. The Statistics and Computer Science major is designed for students who would like a strong foundation in computer science, coupled with significant advanced coursework in statistics. The major prepares students for professional or graduate work in statistics and computer science, and for applications of computing in which knowledge of statistics is particularly important, such as data mining and machine learning. See also Computer Science (p. 586), Mathematics (p. 496), Mathematics and Computer Science (p. 505), and Statistics (p. 577).

Major in Sciences and Letters Curriculum

E-mail: stat-office@illinois.edu or academic@cs.illinois.edu (academic@cs.uiuc.edu)

Degree title: Bachelor of Science in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 68-69 hours

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300 and 400-level courses must be taken on this campus.

Minimum hours required for graduation: 120 hours

Departmental distinction: To graduate with distinction requires a specified minimum grade point average in all Computer Science, Statistics, and Mathematics courses listed below. A GPA of 3.25 is

required for Distinction, 3.5 for High Distinction, and 3.75 for Highest Distinction.

Code	Title	Hours
CS 100	Freshman Orientation (recommended)	0-1
Calculus through MATH 241 - Calculus III		11-12
MATH 415	Applied Linear Algebra	3
Required Computer Science Foundation:		32
CS 125	Intro to Computer Science	
CS 173	Discrete Structures	
CS 126	Software Design Studio	
CS 225	Data Structures	
CS 233	Computer Architecture	
CS 241	System Programming	
CS 357	Numerical Methods I	
CS 374	Introduction to Algorithms & Models of Computation	
CS 421	Progrmg Languages & Compilers	
Required Probability and Statistics Foundation:		10
STAT 400	Statistics and Probability I ¹	
STAT 410	Statistics and Probability II	
STAT 428	Statistical Computing	
At least four other statistics, computer science, or mathematics courses, with at least one chosen from each of the following groups:		12
Group I: Statistical Methods		
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science	
Group II: Mathematical Analysis and Modeling		
MATH 347	Fundamental Mathematics	
MATH 441	Differential Equations	
MATH 444	Elementary Real Analysis	
MATH 447	Real Variables	
Group III: Computational Application Areas		
STAT 385	Statistics Programming Methods	
CS 410	Text Information Systems	
CS 411	Database Systems	
CS 412	Introduction to Data Mining	
CS 446	Machine Learning	
CS 481	Stochastic Processes & Applic	
CS 482	Simulation	
Group IV: Statistical Analysis and Modeling		
STAT 420	Methods of Applied Statistics	
STAT 425	Applied Regression and Design	
STAT 426	Sampling and Categorical Data	
STAT 448	Advanced Data Analysis	

¹ Students should take a course from Group I before taking STAT 400.

Art History

Areli Marina

143 Art and Design Building, 408 East Peabody, Champaign
PH: (217) 333-0855

<http://www.art.illinois.edu/index.php/prospective/academics/undergraduate-programs/art-history>

Like the other humanities, the history of art as an undergraduate major offers an enrichment of and a preparation for life, rather than training for a specific occupation. The student who goes on to graduate work in the field can pursue a career in teaching, museum work, or employment in a commercial art gallery, or auction house.

Working in consultation with the LAS undergraduate adviser for art history in the School of Art and Design, each student will design a program of study that satisfies the requirements listed below. Students who wish to take a considerable number of studio courses as part of their major should enroll in the history of art option offered by the School of Art and Design within the College of Fine and Applied Arts.

For the Degree of Bachelor of Arts in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

For advising information please visit the LAS Advising site (<http://www.las.illinois.edu/students/advising/declared>).

Minimum required major and supporting course work equates to 48 hours including 30 hours of Art History courses, 15 hours of supporting coursework and 3 hours of studio.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

For students considering graduate work in Art History French or German is strongly recommended for the language requirement. Other languages including Chinese or Japanese may be used with the approval of the adviser as the needs of the student's program dictate.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To be eligible for distinction, a student must earn a high grade point average and complete at least 4 semester hours of independent research to write a senior research paper. See the undergraduate adviser for details.

Code	Title	Hours
Supporting Requirements in Art		
	Studio course in Art and Design	3
Supporting Requirements in Art History		
	Select three of the following: ¹	12
ARTH 111	Ancient to Medieval Art	
ARTH 112	Renaissance to Modern Art	

ARTH 113	Introduction to African Art	
ARTH 114	Introduction to East Asian Art	
ARTH 115	Art in a Global Context	
Art or Architectural History 200- to 400-level		
ARTH 395	Junior Seminar in Art History	3
ARTH 495	Senior Seminar in Art History	3
One upper-level course from each of the following categories:		12
2		
African or East Asian Art or Architecture		
Art or Architectural History before 1700		
Art or Architectural History after 1700		
200- to 400-level courses in supporting areas chosen with the approval of the adviser. Although the program in art history allows considerable latitude in the selection of such courses, they should be chosen with the goal of enhancing the student's understanding of the cultural context within which works of art and architecture have been created. Recent practice suggests that supporting courses will most commonly be drawn from such fields as anthropology, classics, history, literature, music and dance history, philosophy, psychology, and religious studies.		15

- ¹ Credit will not be given for ARTH 112 and ARTH 115.
- ² Courses in the history of architecture, excluding ARCH 210, may be used with the approval of the adviser for as many as 9 hours of credit in meeting the requirement for 18 hours of art history at the 200-400 level.

ARTH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTH>)

Courses

ARTH 110 Introduction to the History of Art and Visual Culture credit: 3 Hours.

This course introduces participants to foundational questions that shape the disciplines of art history and visual studies. It is not a comprehensive survey. Rather, it provides students critical frames for examining the visual world from various temporal, geographic, and methodological perspectives. Students will investigate the history, interpretation, and criticism of selected cultural objects, images, places, and spaces across time and around the globe.

ARTH 111 Ancient to Medieval Art credit: 4 Hours.

Development of the visual arts in Western Europe and the Near East in their cultural contexts from prehistoric times until the early fifteenth century; includes Egyptian, Greek, Roman, and medieval art and architecture. Same as MDVL 111.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

ARTH 112 Renaissance to Modern Art credit: 4 Hours.

Development of the visual arts in Western Europe and the United States in their cultural contexts from the early fifteenth century to the present.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

ARTH 113 Introduction to African Art credit: 4 Hours.

An introduction to the arts of Africa. Sculpture, textiles, architecture, body adornment, and performance will be examined on the basis of aesthetic, religious, political, and social contexts. The main emphasis will be on traditional art, although the course will address many changes and continuities within African art as evidenced in the late 20th century. The course will proceed geographically from western through central to eastern and southern Africa. Videos, music, and museum visits will complement the lectures.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 114 Introduction to East Asian Art credit: 4 Hours.

Thematic introduction to the visual arts of China and Japan, including calligraphy and painting, woodblock prints, sculpture, gardens and architecture. Same as EALC 114.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 115 Art in a Global Context credit: 4 Hours.

Introduces students to basic concepts necessary for understanding the visual arts. It orients students to the visual arts in a variety of international contexts, and in particular in our current globalizing world.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ARTH 211 Design History Survey credit: 3 Hours.

The historical, social and cultural context of design concentrating on manufactured products, communication, media and design from the Industrial Revolution to the present. Lectures, seminars and individual research projects.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 215 Greek Art credit: 3 Hours.

Survey of architecture, sculpture, and painting of the Greek world from the geometric period to the beginning of the Christian era. Same as CLCV 217.

ARTH 217 Development of Ancient Cities credit: 3 Hours.

Same as CLCV 231. See CLCV 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ARTH 218 Ancient Greek Sanctuaries credit: 3 Hours.

Same as CLCV 232 and REL 232. See CLCV 232.

ARTH 222 Medieval Art credit: 3 Hours.

The arts of Byzantium and Western Europe from the early Christian era to the Renaissance. Same as MDVL 222.

ARTH 230 Italian Renaissance Art credit: 3 Hours.

Architecture, painting, and sculpture of Italy during the Renaissance.

ARTH 231 Northern Renaissance Art credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of Europe outside Italy in the fifteenth and sixteenth centuries. Same as MDVL 231.

ARTH 235 Art, Power and Culture in 17th-Century Europe credit: 3 Hours.

Explores the diverse functions of the visual arts in Europe in a period of religious strife; expanding global trade; the rise of early capitalism, and the consolidation of absolutist regimes.

ARTH 240 Art of the Nineteenth Century credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of France, Germany, Spain, and England in the nineteenth century.

ARTH 241 Modern Art, 1880-1940 credit: 3 Hours.

This course examines the ways in which artists reconceived how art should look and function in response to the many changes – social, political, and technological – that accompanied the modernization of Europe from 1880 to 1940. Topics to be covered include the avant-garde, modernism's relationship to "primitivism," pure abstraction, art's responses to the political upheavals of World War I and the Russian Revolution, the advent of design, and the politics of realism and representation. Although primarily focused in Europe, the course also touches on related modern movements globally.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 242 Art Since 1940 credit: 3 Hours.

The scope of this course begins amidst the devastation and geopolitical shifts that followed World War II and ends with the effects of globalization in the 1990s and 2000s. We will ask the same questions that faced artists and critics in between: Should art focus on its own material processes or open its borders to historical flux? Is it art's job to create the cultural myths that bind society together, or to deconstruct them? Who participates in modern and contemporary art, and who doesn't? What kinds of production should be considered art? How are specific formal strategies informed by the perspectives of different subject positions? What politics underwrite them? We will consider, and reconsider, the existing narratives about art during this period with a dual aim: first, to better understand the historical positions of the artists in question, and, second, to piece together a prehistory of the moment in which we currently find ourselves.

ARTH 249 American Visual Humor credit: 3 Hours.

Investigates the mechanics of visual humor in nineteenth-century American visual and material culture, including graphic satire, painting, sculpture, comics, and early film. Considers this material in the context of social and political attitudes, styles of communication, consumer culture, literary comedic strategies, aesthetic theory, and humor theory more generally. Incorporates in-class screenings of contemporary comedians, visits to the Rare Book Room at the University library, and visits to the Krannert Art Museum.

ARTH 250 American Art credit: 3 Hours.

Surveys American art and architecture from the colonial period to the present.

ARTH 257 History of Photography credit: 3 Hours.

Examines a history of photography from its origin to the present, including both documentary and artistic approaches; considers relationships with other arts.

ARTH 260 Graffiti and Murals credit: 3 Hours.

From Bronx walls to the Berlin Wall, from ancient palatial decorations to spray-can art, murals and graffiti have been revolutionary political tools, objects of aesthetic contemplation, and vehicles for identity formation. Primarily a lecture course that examines ancient and early modern cases from different cultures, as well as focusing on modern examples from Latin America and the USA. Same as LLS 260.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ARTH 299 Spec Topics in Art History credit: 3 Hours.

Special topics in Art History Courses. Topics and subject matter to be published in course listings. May be repeated up to 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTH 310 African Art and Society I credit: 3 Hours.

Introduces the arts of Black Africa, i.e., dance, drama, songs, and poetry, as expressed in a multi-media framework and a social-religious context; surveys the art styles of the Dogon, Senufo, Mende, and Ashanti peoples.

ARTH 312 Central African Art credit: 3 Hours.

A one-semester introduction to the arts of central Africa. Sculpture, pottery, architecture, body adornment, contemporary art, and performance will be examined and discussed on the basis of aesthetic, religious, political, and social contexts. Discusses many changes and continuities within African artistic traditions as evidenced in late twentieth-century urban, popular, and political arts of central Africa. We shall also investigate some central African artistic influences found in African American arts. Same as AFST 312.

ARTH 313 Modern and Contemp African Art credit: 3 Hours.

Examines how multiple "modernisms" emerged from African independence movements, and thereby influenced the development of African and African-American art from the 1960s to the present. Same as AFST 313.

ARTH 342 Arts of Colonial Latin America credit: 3 Hours.

Introduction to the major art historical, stylistic and iconographic developments of several Latin American countries of the late sixteenth through eighteenth centuries. Themes to be investigate include: the pictorial representation of race; indigenous workshops, traditions, and the birth of European art academies; the constructions of gender; as well as the translation of styles. The course includes field trips to local museums and libraries. Previous introductory level art history or Latin American history course recommended. Same as LAST 342.

ARTH 343 Arts of Modern Latin America credit: 3 Hours.

This course is an introduction to the major visual materials, monuments, and critical debates of the arts of Latin America, from the 19th to the early 20th century. It studies a wide range of artistic media, including drawings, paintings, popular prints, performance, photography, film, murals, architecture, and urban planning, especially as they pertain to definitions of "Latin America". The course pays particular attention to constructions of race and gender in representing the modern nation. Same as LAST 343.

ARTH 344 Spanish Modern Art credit: 3 Hours.

Introduction to the rich visual cultures of Spain beginning with the Bourbon dynasty in the eighteenth century through the early decades of the twentieth century. The course examines a variety of themes: from the mythologized loves of Goya, to the grandeur of canvases recreating Spain's history; from Spanish Romanticism to the rise of vanguard movements and the advent of Pablo Picasso. 3 undergraduate hours. Prerequisite: Previous introductory level art history course recommended, but not required.

ARTH 345 Realism to Postimpressionism credit: 3 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting.

ARTH 350 American Art 1750-1900 credit: 3 Hours.

Studies the two major directions of art in the United States from independence to the centennial, with focus on major figures and the scientific and philosophical movements which influenced them. Prerequisite: One year of art history or consent of instructor.

ARTH 351 Early American Modernism credit: 3 Hours.

Examines American art, particularly painting and sculpture, 1876-1940, against its cultural background and the relation of the American artist to Europe in an attempt to isolate the roots of Modernism in the United States. Prerequisite: One year of art history or consent of instructor.

ARTH 360 Women and the Visual Arts credit: 3 Hours.

Explores the complex interconnections of women with the visual arts in Europe and North America from the classical era to the present, including the modes of artistic production and the representation of women in western society. Same as GWS 360.

ARTH 391 Individual Art History Topics credit: 1 to 4 Hours.

Directed independent research. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in art and design; and consent of instructor, advisor, and associate director of the School.

ARTH 395 Junior Seminar in Art History credit: 3 Hours.

Offers Art History majors grounding in the discipline's historiography and exposure to diverse historical methods. Provides students with experience in a range of research techniques as preparation for their Senior Seminar. Prerequisite: Junior standing in Art History curriculum or in Art History minor.

ARTH 402 Ways of Seeing in Edo Japan credit: 3 or 4 Hours.

Focuses on modes of seeing and technologies of vision manifest in the visual arts of Edo Japan, 1615-1868. At the time, imported European instruments of seeing, such as the microscope, made possible unusual visual experiences; revivals of classical Japanese painting manipulated different ways of recreating and visualizing the past. A variety of themes, organized chronologically, will demonstrate the importance of seeing in painting and calligraphy, ceramics, woodblock prints, and architecture. Same as EALC 402. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ARTH 114, or equivalent background in Japanese history or literature. Junior standing or consent of instructor.

ARTH 403 Word and Image in Chinese Art credit: 3 or 4 Hours.

Study of the diverse correlations between verbal texts and visual images in Chinese art and art theory from the twelfth through seventeenth centuries. Same as EALC 403. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 410 West African Art and Ideas credit: 3 or 4 Hours.

Study of West African art styles in chronological and cultural perspectives with a special interest in the use of interdisciplinary source materials. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 413 Sacred African Diaspora Arts credit: 3 or 4 Hours.

Explores African diaspora arts grounded in the diverse aesthetic, philosophical, historical, political, and religious consciousnesses of peoples of African descent living in the Caribbean and the Americas. Focuses on the preservation and ongoing transformations of African visual and religious cultures surviving in African diaspora communities from the period of the trans-Atlantic slave trade to the present. Same as AFST 421. 3 undergraduate hours. 4 graduate hours.

ARTH 415 The Archaeology of Greece credit: 3 Hours.

Same as CLCV 443. See CLCV 443.

ARTH 416 The Archaeology of Italy credit: 3 Hours.

Same as CLCV 444. See CLCV 444.

ARTH 423 Romanesque Art credit: 3 or 4 Hours.

Art and architecture of the Romanesque period. Same as MDVL 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 424 Gothic Art credit: 3 or 4 Hours.

Arts of western Europe from the end of the Romanesque period until the Renaissance. Same as MDVL 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 430 Topics: Italian Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and architecture of Italy during the Renaissance selected for intensive study. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 431 Topics: Northern Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and minor arts of France, Germany, Spain, and England during the Renaissance selected for intensive study. Same as MDVL 431. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 432 Sixteenth-Century Italian Art credit: 3 or 4 Hours.

Painting, sculpture, and architecture in Italy from 1500 to 1580. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 433 Fifteenth-Century Italian Art credit: 3 or 4 Hours.

Study of Italian painting, sculpture and architecture from circa 1300 to 1500. Same as MDVL 433. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 435 Italian Baroque Art credit: 3 or 4 Hours.

Italian painting and sculpture during the period 1580-1700, with particular emphasis on art in Rome. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 436 17th-Century Dutch & Flemish Art credit: 3 or 4 Hours.

Explores the functions of visual arts in the Netherlands in relation to shifting political and religious contexts; evolving notions of privacy, domesticity and subjectivity; the study of nature; and the expanding capital-based wealth of Northern Europe founded upon global trade. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 439 18th Century European Art credit: 3 or 4 Hours.

Critical survey of the major developments in European painting of the eighteenth century. Emphasis is placed on French artists, but major figures in England, Spain, and Italy are also considered. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 440 Romantic Art credit: 3 or 4 Hours.

Studies English, French, and German art from the end of the eighteenth century through 1840; focuses on revivalist movements, historicism, landscape art, and changing conceptions of art and artist during the period. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 441 Realism to Post-Impressionism credit: 3 or 4 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 445 European Art Between the Wars credit: 3 or 4 Hours.

Study of the leading personalities and movements in European painting, sculpture, and architecture, with emphasis on painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 447 France and Its Others credit: 3 or 4 Hours.

Examines the relationship between art and colonialism in nineteenth-century France. Topics include orientalism, primitivism, and exoticism; the central figures include Delacroix, Flaubert, Gerome, and Gauguin. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 460 Museum Management credit: 3 or 4 Hours.

This course is concerned with advanced theoretical issues of art museum work, taught by the professional staff of a museum. Topics covered include collections, curatorial issues, educational program planning, trustee relations, public outreach, fundraising, budgeting, and staff organization. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 462 Museum Theory and Practice credit: 3 or 4 Hours.

Same as ANTH 462 and LA 472. See ANTH 462.

ARTH 489 Senior Art-History Honors-BA credit: 2 to 5 Hours.

Independent guided research and study in a selected area of art history for candidates for the Bachelor of Arts in Art History with departmental distinction. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. (Counts for advanced hours in LAS). Prerequisite: Senior standing in the art history curriculum; a cumulative grade point average of 3.25; an art history grade point average of 3.5; and consent of instructor, department advisor, and associate director of the School.

ARTH 490 Senior Art-History Honors-BFA credit: 2 to 5 Hours.

Directed independent research and study for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Fine and Applied Arts art history, a cumulative grade point average of 3.0, and consent of instructor, advisor, and associate director of the School.

ARTH 491 Topics in Art History credit: 1 to 4 Hours.

Variable content; consult the Class Schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Junior standing or consent of instructor.

ARTH 495 Senior Seminar in Art History credit: 3 Hours.

Required seminar for undergraduate majors that offers students practical experience in research techniques. Focuses on a specialized theme of the professor's choice, and will incorporate extensive reading in a specific field of Art History and the completion of a substantial research paper. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 undergraduate hours. Prerequisite: ARTH 395.

Biology

Students interested in applying to either school of biology should simply choose Biology as their major. After taking two introductory courses, students will choose a major in either Integrative Biology or Molecular and Cellular Biology.

Integrative Biology, School of (<http://www.life.uiuc.edu/sib>).

Director of School: Carla Cáceres

School Office: 286 Morrill Hall, 505 South Goodwin Avenue, Urbana, (217) 333-3044

Molecular and Cellular Biology, School of (<http://mcb.illinois.edu>).

Director of School: Milan Bagchi

School Office: 393 Morrill Hall, 505 South Goodwin Avenue, Urbana, (217) 333-3166

An interschool option in Teaching of Biology (p. 585) is sponsored by the School of Integrative Biology and the School of Molecular and Cellular Biology.

Also, see majors in Integrative Biology (p. 466) and Molecular and Cellular Biology (p. 510).

BIOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOL>)

Biology Teaching

For the Degree of Bachelor of Science in Liberal Arts and Sciences

E-mail: advising@life.uiuc.edu

Minimum required courses normally equate to 79-82 hours in the major and 39 hours for the Teacher Education Minor in Secondary School Teaching.

General education: Students must complete the Campus General Education requirements (<https://courses.illinois.edu>) including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours

This major fulfills state certification requirements to teach high school (grades 9-12) biology through the AP/honors level and chemistry, earth and space science, environmental science and physics up to but not including the AP/honors level.

Students in this major must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (p. 139).

Time to degree completion varies. Minimum time to completion is 8 semesters, but some students may require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education grade-point averages of 2.5 (A= 4.0). Candidates should consult their advisor or the Council on Teacher Education (p. 623) for the list of courses used to compute these grade-point averages.

Departmental distinction: To graduate with distinction, the student must have at least a 3.5 grade point average for all work completed, and present evidence of exemplary student teaching.

Code	Title	Hours
Foundation Courses		

The following courses must be completed or in progress when students apply to the Secondary Education minor.

MATH 220	Calculus (Biocalculus section recommended)	4-5
or MATH 221	Calculus I	
CHEM 102	General Chemistry I	3
CHEM 103	General Chemistry Lab I	1
CHEM 104	General Chemistry II	3
CHEM 105	General Chemistry Lab II	1
CHEM 232	Elementary Organic Chemistry I ¹	3-4
CHEM 233	Elementary Organic Chem Lab I ¹	2
One required 200-level IB course selected from required courses below.		
One required 200-level MCB course (and its lab course) selected from required courses below.		
Additional Required Coursework		
Teacher Education Minor in Secondary School Teaching (p. 139)		39
IB 150	Organismal & Evolutionary Biol	4
MCB 150	Molec & Cellular Basis of Life	4
IB 202	Physiology ²	4
IB 203	Ecology	4
IB 204	Genetics	4
IB 302	Evolution	4
MCB 250	Molecular Genetics	3
MCB 251	Exp Techniqs in Molecular Biol	2
MCB 252	Cells, Tissues & Development	3
MCB 253	Exp Techniqs in Cellular Biol	2
PHYS 101	College Physics: Mech & Heat	5
PHYS 102	College Physics: E&M & Modern	5
GEOL 107	Physical Geology	4
ASTR 100	Introduction to Astronomy	3
or ASTR 210	Introduction to Astrophysics	
Select one of the following:		3-4
EPSY 480	Educational Statistics	
STAT 212	Biostatistics	
Additional 300- and 400-level courses selected from IB and/or MCB in consultation with the advisor.		8

¹ Students should speak with an advisor to help choose the appropriate section of CHEM 232 and CHEM 233.

² IB 202 requires animal dissection and no equivalent alternative is available.

Computer Science and Liberal Arts and Sciences Discipline

The LAS major in Computer Science and an LAS Discipline is a flexible program for students who plan to pursue technical or professional careers in arts and sciences areas requiring a sound grounding in computer science. This major allows students to combine study of computer science with training in a field in Liberal Arts and Sciences to offer students novel perspectives in interdisciplinary work. Students can use the supporting coursework to prepare for employment immediately upon graduation or for pursuing graduate study in a wide variety of fields or to complete a significant body of courses in a single area, such as a double major or minor.

Students are strongly encouraged to get involved in undergraduate research through independent studies and funded research experiences, with the goal of learning from the University of Illinois CS and LAS internationally recognized scholars outside the classroom and participating in the exciting quest for new contributions to the field.

Students interested in Mathematics or Statistics should enroll in the Math/CS (p. 505) or Stat/CS (p. 580) degree

Current approved curricula include:

Computer Science and Anthropology

Today, anthropologists use computational tools and algorithms to analyze large amounts of data either gathered from a field site or by studying on-line social communities and social networks. Students majoring in CS + Anthropology will have knowledge of how people live and communicate as social beings, which can inform best designs and user interfaces for software.

Computer Science and Astronomy

Astronomy is a computation-intensive discipline. Computational challenges in astronomy, including radio astronomical data processing, analysis of large optical image data sets, and dynamical and statistical simulation of astronomical systems, test the limits of currently available hardware and software and have led to significant advances in computational science. This major will offer computationally focused students with a grounding in astronomy for them to understand astronomically motivated computational challenges such as mysteries of the origins of life and our universe.

Computer Science and Chemistry

Students majoring in Computer Science and Chemistry are prepared for a variety of careers, including helping manufacturers design more productive and efficient processes, helping pharmaceutical firms characterize new compounds for drug discovery, and conducting research that requires studying the fundamental properties of atoms, molecules, and chemical reactions. Computer Science and Chemistry majors might develop computer models or simulate chemical and biochemical processes, perform statistical analysis of large data sets, or create visualizations of reaction pathways, molecular interactions, or other phenomena.

Computer Science and Linguistics

The Computer Science and Linguistics program brings together students and faculty interested in different aspects of the computer – natural language relationship – i.e., studying the cognitive aspects of natural languages; endowing computers with human-like behavior and understanding of spoken and written natural language; and designing user-friendly computer programs and interfaces using natural language communication.

Students will be exposed to the tools of both disciplines – formal methods, philosophical analysis, computer programming, and empirical research – with the aim of acquiring the appropriate skills required by the field. Graduates will be successful in landing jobs in various areas, including natural language software design and applications, teaching and research, law, medicine, and public service. The innovative aspect of the program is its focus on relating computers to language, technology, and society where the combination has potential for great impact.

- Computer Science and Anthropology (p. 586)
- Computer Science and Astronomy (p. 587)

- Computer Science and Chemistry (p. 588)
- Computer Science and Linguistics (p. 588)

Computer Science and Anthropology

For the degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Please see the computer science advisor as well as the anthropology advisor.

Computer Science email: academic@cs.illinois.edu

Anthropology email: anthro@illinois.edu

Minimum required major coursework normally equates to 66 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours). Please see the computer science advisor as well as the anthropology advisor.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Computer Science Coursework		
CS 100	Freshman Orientation ¹	0-1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following:		
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science	
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)		
MATH 221 or MATH 220	Calculus I Calculus	4-5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
Required Anthropology Coursework - Minimum of 24 hours		
Required Foundation Courses. Select at least 4 courses from the following. Students may make one course substitution for one of the required foundation courses, choosing from the option listed.		12-18

ANTH 101	Introduction to Anthropology	
ANTH 220 or ANTH 105	Introduction to Archaeology World Archaeology	
ANTH 230 or ANTH 103	Sociocultural Anthropology Anthro in a Changing World	
ANTH 240 or ANTH 102	Biological Anthropology Human Origins and Culture	
ANTH 270/271 or ANTH 104	Language in Culture Talking Culture	
ANTH 374 or ANTH 372	Anth of Science and Technology Topics in Lang & Culture	
Electives (Substitutions with permission of advisor)		6-9
ANTH 241	Human Biological Variation	
ANTH 268	Images of the Other	
ANTH 362	Body, Personhood, and Culture	
ANTH 368	'America' in the World	
ANTH 375	The Culture of Nature	
ANTH 399	Special Topics (check with advisor for appropriate topics)	
ANTH 411	Research Methods in Socio-Cultural Anthropology	
ANTH 423	Economic Anthropology	
ANTH 453	Landscape Archaeology	
ANTH 499	Topics in Anthropology (check with advisor for appropriate topics)	
Optional Senior Capstone Project (See advisor for details)		

¹ CS 100 is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.

Computer Science and Astronomy

For the degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Please see the computer science advisor as well as the astronomy advisor.

Computer Science email: academic@cs.illinois.edu

Astronomy email: astronomy@illinois.edu

Minimum required major coursework normally equates to 66 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours). Please see the computer science advisor as well as the astronomy advisor.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Computer Science Coursework		
CS 100	Freshman Orientation ¹	0-1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following:		3
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science	
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)		
MATH 221 or MATH 220	Calculus I Calculus	4-5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
Required Astronomy Coursework - Minimum of 24 Hours		
Physics and Mathematics Courses ²		
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
MATH 241	Calculus III	4
Intermediate and Advanced Astronomy Courses		12
Select 12 hours from the following. Taking one of the computation-intensive ASTR 496 Seminar in Astronomy sections is strongly recommended		
ASTR 330	Extraterrestrial Life	
ASTR 350	The Big Bang, Black Holes, and the End of the Universe	
ASTR 390	Individual Study	
ASTR 404	Stellar Astrophysics	
ASTR 405	Planetary Systems	
ASTR 406	Galaxies and the Universe	
ASTR 414	Astronomical Techniques	
ASTR 496	Seminar in Astronomy (check with advisor for appropriate topics)	

¹ CS 100 is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.

² ASTR 210 is highly recommended.

Computer Science and Chemistry

For the degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Please visit the computer science advisor as well as the Chemical Sciences advising office.

Computer Science email: academic@cs.illinois.edu
Chemistry advising (School of Chemical Sciences advising): scs-advising@illinois.edu

Minimum required major coursework normally equates to 66 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours). Please visit the computer science advisor as well as the Chemical Sciences advising office.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Computer Science Coursework		
CS 100	Freshman Orientation ¹	0-1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3
CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following:		3
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science	
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3
Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)		
MATH 221 or MATH 220	Calculus I Calculus	4-5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3
Required Chemistry Coursework - Minimum of 24 hours		
Foundation Courses- 12 hours required		
Select one of the following (General or Accelerated Chemistry):		8

CHEM 102 & CHEM 103 & CHEM 104 & CHEM 105	General Chemistry I and General Chemistry Lab I and General Chemistry II and General Chemistry Lab II	
or		
CHEM 202 & CHEM 203 & CHEM 204	Accelerated Chemistry I and Accelerated Chemistry Lab I and Accelerated Chemistry II	
CHEM 232 or CHEM 236	Elementary Organic Chemistry I Fundamental Organic Chem I	4
Advanced Chemistry Courses- 12 hours		
CHEM 440 or CHEM 442	Physical Chemistry Principles Physical Chemistry I	4
In consultation with an advisor, choose 8 hours of 300- or 400- level chemistry courses ²		8

¹ CS 100 is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.

² The following courses may not be used to complete the advanced chemistry hours: CHEM 315, CHEM 397, CHEM 420, CHEM 445, CHEM 447, CHEM 492, CHEM 494, CHEM 496, CHEM 497 and CHEM 499; and any course in another unit, such as any BIOC or MCB course.

Computer Science and Linguistics

For the degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

Please see the computer science advisor as well as the linguistics advisor.

Computer Science email: academic@cs.illinois.edu
Linguistics advising: <http://www.linguistics.illinois.edu/students/undergrad/advising.html>

Minimum required major coursework normally equates to 66 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office by the beginning of the fifth semester (60-75 hours). Please see the computer science advisor as well as the linguistics advisor.

Minimum hours required for graduation: 120 hours

Code	Title	Hours
Required Computer Science Coursework		
CS 100	Freshman Orientation ¹	0-1
CS 125	Intro to Computer Science	4
CS 126	Software Design Studio	3
CS 173	Discrete Structures	3

CS 225	Data Structures	4
CS 233	Computer Architecture	4
CS 241	System Programming	4
Choose one of the following:		3
STAT 200	Statistical Analysis	
STAT 212	Biostatistics	
CS 361	Probability & Statistics for Computer Science	
CS 374	Introduction to Algorithms & Models of Computation	4
CS 421	Progrmg Languages & Compilers	3

Mathematics (may also fulfill the General Education Quantitative Reasoning I and II requirements)

MATH 221 or MATH 220	Calculus I Calculus	4-5
MATH 225	Introductory Matrix Theory	2
MATH 231	Calculus II	3

Required Linguistics Coursework - Minimum of 24 hours

LING 100	Intro to Language Science	3
LING 301	Elements of Syntax	3
LING 307	Elmnts Semantics & Pragmatics	3
LING 406	Intro to Computational Ling	3

Advanced Coursework- select at least three of the following

TRST 415	Machine Translation: History and Applications	
LING 490	Special Topics in Linguistics (Check with advisor for appropriate topics. May be repeated to meet this requirement if topics vary)	
CS 446	Machine Learning	

Linguistics Breadth Course

Any 200-level or higher Linguistics Course (with the exception of ESL and language courses)

¹ CS 100 is an orientation course aimed at first-year students, so students who declare the major after the freshman year are not required to complete it.

Individual Plans of Study (IPS)

Tenaya Reifsteck, LAS Academic Advisor
2002 Lincoln Hall, 702 S. Wright St., Urbana, IL 61801
<http://www.las.illinois.edu/students/programs/majors/ips/>

For the Degree of Bachelor of Arts in Liberal Arts and Sciences, or Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

E-mail: las-ips@illinois.edu

Minimum required major and supporting course work normally equates to 51-70 hours.

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Academic Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: To graduate with distinction, a student must

1. have a cumulative grade point average of at least 3.25 and
2. successfully complete a project that has been approved by the IPS advisory committee.

Further information on requirements for graduation with distinction may be obtained from the secretary of the IPS advisory committee.

Students in the College of Liberal Arts and Sciences may choose any of the undergraduate degree programs offered within the college. These majors and specialized curricula, each with its own pattern of requirements and electives, are continuously reviewed by the sponsoring departments and the college and revised as needed. At the same time, it is not possible to anticipate or specify all possible undergraduate fields of study. So, in order to encourage the growth of new academic disciplines, the college sponsors the experimental major-the Individual Plans of Study program. IPS allows the student to create an original major more appropriate for the individual's educational needs and characterized by a unique pattern of upper-level courses with a new academic direction. Recent IPS students have successfully pursued such innovative majors as Cinematography, Entomology, Neuroscience, Meteorology, and Middle Eastern Studies.

The development of an IPS program begins with the student's perception that a more appropriate field of study could exist beyond the present majors. Consultation with the secretary of the IPS advisory committee and with faculty members in related fields will soon establish whether an original major is appropriate. Then, with the cooperation of one or more faculty members who consent to serve as advisers for this IPS program, an IPS major is planned and justified as carefully as if this were a departmental major.

Once an IPS program is formulated, the student and adviser make formal application to the IPS advisory committee, which evaluates and decides whether a proposed IPS program is appropriate for the aims of both the student and the college. The IPS Advisory Committee and the college will determine whether BA or BS is appropriate for the proposed program of study. Students interested in IPS are encouraged to inquire as early as possible in the sophomore year. In all cases, IPS programs must be initiated and approved before the end of the student's junior year. If program innovation sounds challenging and attractive, additional information is available at the LAS Student Academic Affairs Office, 2002 Lincoln Hall.

Physics

Dale Van Harlingen

209 Loomis Laboratory of Physics, 1110 West Green, Urbana
PH: (217) 333-3761

<http://physics.illinois.edu>

The major in Physics in the Sciences and Letters Curriculum allows students maximum flexibility to develop scientifically oriented careers in fields requiring a physics background through the Physics Concentration or the Physics Teaching Concentration.

The Physics Concentration is a flexible program for students who plan to pursue technical or professional careers in areas requiring a sound grounding in physical science and mathematics. Students can use the concentration to prepare for employment immediately upon graduation or for continuing on to graduate study in a wide variety of fields.

The Physics Teaching Concentration fulfills state certification requirements to teach both physics and general science.

The LAS Specialized Curriculum in Physics is designed for students who plan to pursue graduate study in physics or a closely allied field. In some cases, however, the greater flexibility of the Science and Letters Curriculum may make it a better choice for graduate school preparation for those who want to pursue a combined major and minor, a double major, or double degrees.

See also Engineering Physics (p. 229) in the College of Engineering. See the Physics Department for additional information.

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Sciences and Letters Curriculum

- Physics Concentration (p. 593)
- Physics Teaching Concentration (p. 594)

For the Degree of Bachelor of Science in Physics

- LAS Specialized Curriculum in Physics (p. 593)

PHYS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PHYS>)

Courses

PHYS 100 Thinking About Physics credit: 2 Hours.

Conceptual and problem solving skills in preparation for PHYS 211: –analysis and mathematical descriptions of physical situations – understanding the meaning of the solutions Prerequisite: Credit or concurrent registration in MATH 220 or MATH 221.

PHYS 101 College Physics: Mech & Heat credit: 5 Hours.

Newton's Laws, work and energy, rotational motion, fluids, thermodynamics, and waves. A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 101 and either PHYS 211 or PHYS 213. Prerequisite: Trigonometry.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 102 College Physics: E&M & Modern credit: 5 Hours.

Electric forces and fields, electric potential, electric circuits, magnetic forces and fields, geometrical optics, relativity, and modern physics.

A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 102 and either PHYS 212 or PHYS 214. Prerequisite: PHYS 101.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 110 Physics Careers credit: 0 Hours.

Exploration of careers founded on physics undergraduate training. Introduction to the Physics Department, faculty, research and curricula. Outside speaker presentations. Approved for S/U grading only.

PHYS 123 Physics Made Easy credit: 3 Hours.

Inquiry-based, nonmathematical, hands-on study of physics for elementary school teachers. Coverage of most of the National Science Education K-4 Content Standards. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

PHYS 140 How Things Work credit: 3 Hours.

Nonmathematical approach underscoring the generality and ubiquity of basic physical laws in understanding commonplace phenomena: musical instruments, photography, electric and electronic circuits, television, motors, engines, etc. Credit is not given to engineering majors.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 150 Physics of Societal Issues credit: 3 Hours.

Physics topics and applications relevant in the modern world: energy, quantum mechanics, electricity and magnetism, nuclear physics, waves, light, and outer space. Application to satellites, alternative energy, medical imaging, radiation, nuclear weapons, climate change, and electronics. Emphasis on analytical thinking and the applicability to modern societal issues.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 192 Science and Pseudoscience credit: 1 Hour.

Extra-sensory perception, alien abduction, and psychic crime-solving from the standpoint of scientific inquiry and exploration; the scientific method, how science progresses, and the types of argumentative fallacies that pervade the pseudoscientific community; examples of good science and how the scientific method is self-correcting.

PHYS 193 Physics of Music credit: 2 Hours.

Physics of music and musical instruments; acoustical physics, propagation of sound waves, the biological physics of human hearing, and the acoustical physics associated with all types of musical instruments.

PHYS 194 Behavior of Complex Systems credit: 1 Hour.

Exploration of systems with simple rules that nevertheless exhibit complex behavior. Lecture demonstrations on fractal growth, chaos, catastrophes, self-assembly, lightning, turbulence, explosions, and human rhythms. Simple computer models which exhibit regular, irregular, symmetric, and self-similar patterns and dynamics. Dynamics of isolated and coupled complex systems and mathematical tools for quantifying complex behavior.

PHYS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PHYS 211 University Physics: Mechanics credit: 4 Hours.

Newton's Laws, work and energy, static properties and fluids, oscillations, transverse waves, systems of particles, and rotations. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 211 and PHYS 101. Prerequisite: Credit or concurrent registration in MATH 231.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 212 University Physics: Elec & Mag credit: 4 Hours.

Coulomb's Law, electric fields, Gauss' Law, electric potential, capacitance, circuits, magnetic forces and fields, Ampere's law, induction, electromagnetic waves, polarization, and geometrical optics. A calculus-based approach for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 212 and PHYS 102.

Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 213 Univ Physics: Thermal Physics credit: 2 Hours.

First and second laws of thermodynamics including kinetic theory of gases, heat capacity, heat engines, introduction to entropy and statistical mechanics, and introduction to application of free energy and Boltzmann factor. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 213 and PHYS 101. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 214 Univ Physics: Quantum Physics credit: 2 Hours.

Interference and diffraction, photons and matter waves, the Bohr atom, uncertainty principle, and wave mechanics. A calculus-based course for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 214 and PHYS 102. Prerequisite: PHYS 212.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

PHYS 221 Enrichment Mechanics credit: 1 Hour.

Supplement to PHYS 211 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based mechanics. Prerequisite: PHYS 100; concurrent registration in PHYS 211.

PHYS 222 Enrichment E & M credit: 1 Hour.

Supplement to PHYS 212 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based electricity & magnetism. Prerequisite: PHYS 100; concurrent registration in PHYS 212.

PHYS 225 Relativity & Math Applications credit: 2 Hours.

Theory of Special Relativity, with applications to kinematics and dynamics. Key mathematical methods as they apply to aspects of electromagnetic theory and classical mechanics, including vector analysis, series expansions, matrices, Fourier analysis, partial differentiation, three-dimensional calculus, and simple differential equations. Prerequisite: Credit or concurrent registration in PHYS 212.

PHYS 280 Nuclear Weapons & Arms Control credit: 3 Hours.

Nontechnical analysis of the physics of nuclear weapons, nuclear weapon effects, delivery systems, and defenses against nuclear attack; presentation of current issues; basis for making informed judgments about nuclear armaments and arms control. Same as GBLB 280.

This course satisfies the General Education Criteria for:

Advanced Composition

PHYS 298 Freshmen/Sophomore Special Topics in Physics credit: 0 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the introductory level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 credit hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with freshman or sophomore standing.

PHYS 325 Classical Mechanics I credit: 3 Hours.

Kinematics and dynamics of classical systems, including a review of Newtonian kinematics and dynamics. Three dimensional motion, variable mass, and conservation laws; damped and periodically driven oscillations; gravitational potential of extended objects and motion in rotating frames of reference; Lagrangian and Hamiltonian mechanics. Prerequisite: PHYS 225; credit or concurrent registration in MATH 285.

PHYS 326 Classical Mechanics II credit: 3 Hours.

Continuation of PHYS 325. Central force motion, collisions and scattering, rotational motion, coupled oscillations, continuous media, and fluid dynamics. Prerequisite: PHYS 325.

PHYS 329 Atmospheric Dynamics I credit: 3 Hours.

Same as ATMS 302. See ATMS 302.

PHYS 330 Atmospheric Dynamics II credit: 3 Hours.

Same as ATMS 312. See ATMS 312.

PHYS 398 Sophomore/Junior Special Topics in Physics credit: 1 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the intermediate level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with sophomore or junior standing.

PHYS 401 Classical Physics Lab credit: 3 Hours.

Experiments and techniques in classical mechanics and electromagnetism. Dynamics of electrical and mechanical oscillators in the linear domain. Fourier analysis of system response. Measurements of electrostatic fields, transmission lines, waves, and radiation. Electromagnetic phenomena in dielectrics, conductors, and magnetic materials. Instruction in data analysis and report writing. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent enrollment in PHYS 325.

PHYS 402 Light credit: 4 Hours.

Wave kinematics; geometrical optics: basic concepts, ray-tracing and matrix formalism, Gaussian imaging by thick lenses, stops, apertures, and intensity relations; interference; interference spectroscopy and coherence; diffraction: Fresnel-Kirchhoff formulation, Fraunhofer case, Fresnel case, and holography; polarized light. 4 undergraduate hours. 3 or 4 graduate hours. (3 hours without lab). Prerequisite: MATH 285; PHYS 102 or PHYS 214.

PHYS 403 Modern Experimental Physics credit: 4 or 5 Hours.

Techniques and experiments in the physics of atoms, atomic nuclei, molecules, the solid state, and other areas of modern physical research. 5 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in PHYS 486.

PHYS 404 Electronic Circuits credit: 5 Hours.

Physics of semiconductor devices; theory and application of discrete and integrated devices in linear circuits; use of operational amplifiers and feedback; regulation, oscillators, and modulation; emphasizes practical experience. 5 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 325.

PHYS 406 Acoustical Physics of Music credit: 4 Hours.

Acoustical physics associated with music and musical instruments, propagation of sound waves in and from musical instruments, and the biological physics of human hearing. Investigation of topics via advanced laboratory and data acquisition techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 419 Space, Time, and Matter-ACP credit: 3 or 4 Hours.

Identical to PHYS 420 except for the additional writing component including a final term paper. Same as PHIL 419. 3 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 419 and PHYS 420. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

This course satisfies the General Education Criteria for: Advanced Composition

PHYS 420 Space, Time, and Matter credit: 2 Hours.

Philosophical examination of some fundamental concepts and theories of the physical world, such as time, matter, space, and geometry; interpretation of quantum theory. Same as PHIL 420. 2 undergraduate hours. 2 graduate hours. Credit is not given for both PHYS 420 and PHYS 419. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

PHYS 427 Thermal & Statistical Physics credit: 4 Hours.

Equilibrium thermodynamics, statistical mechanics, and kinetic theory of gases. A unified treatment is used in that the principles of heat and thermodynamics are discussed along with statistical postulates and the microscopic approach of introductory quantum mechanics. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 427 and any of ME 404, CHEM 444, MSE 500. Prerequisite: PHYS 213, PHYS 214, and PHYS 325.

PHYS 435 Electromagnetic Fields I credit: 3 Hours.

Static electric and magnetic fields, their interactions with electric charge and current, and their transformation properties; the effect of special relativity is incorporated. Macroscopic fields in material media are described. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 285; credit or concurrent enrollment in PHYS 325.

PHYS 436 Electromagnetic Fields II credit: 3 Hours.

Time-dependent fields. Electromagnetic induction, Maxwell's equations, electromagnetic wave propagation in various media and structures, and electromagnetic radiation from charge and current distributions. Relativistic covariance of Maxwell's equations. Course Information: 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 435.

PHYS 460 Condensed Matter Physics credit: 4 Hours.

Bonding and structure of crystals; energy bands in insulators, semiconductors, and metals; electrical conductivity; optical properties; lattice vibrations; elasticity; point defects; dislocations. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 460 and MSE 304. Prerequisite: PHYS 435; PHYS 485 or PHYS 486.

PHYS 466 Atomic Scale Simulations credit: 3 or 4 Hours.

Same as CSE 485 and MSE 485. See MSE 485.

PHYS 470 Subatomic Physics credit: 4 Hours.

The nature and properties of nuclei and elementary particles, symmetries, interactions, nuclear models, tools and techniques of experimental subatomic physics, and applications to power generation, astrophysics, chemistry, medicine, and biology. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 485 or PHYS 486.

PHYS 475 Introduction to Biophysics credit: 3 or 4 Hours.

Major concepts of physics inherent to biological systems. Basics of biology, including protein and DNA structure and their organization into cells with a focus on single molecule biophysics. Major experimental techniques including x-ray diffraction, optical and magnetic traps, and fluorescence microscopy, including new super-resolution techniques. Applications to cytoplasmic and nuclear molecular motors, bacterial motion, nerves, and vision. Same as BIOP 401. 3 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 485 Atomic Phys & Quantum Theory credit: 3 Hours.

Basic concepts of quantum theory which underlie modern theories of the properties of materials; elements of atomic and nuclear theory; kinetic theory and statistical mechanics; quantum theory and simple applications; atomic spectra and atomic structure; molecular structure and chemical binding. 3 undergraduate hours. 3 graduate hours. Credit is not given for both PHYS 485 and CHEM 442. Prerequisite: MATH 285 and PHYS 214.

PHYS 486 Quantum Physics I credit: 4 Hours.

Atomic phenomena integrated with an introduction to quantum theory; evidence for the atomic nature of matter and the properties of the Schrodinger equation, single particle solutions in one dimension, the hydrogen atom, perturbation theory, external fields, and atomic spectroscopy of outer electrons. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285; PHYS 214; credit or concurrent registration in MATH 415.

PHYS 487 Quantum Physics II credit: 4 Hours.

Continuation of PHYS 486. Identical particles, spectral hyperfine structure, magnetic properties of matter, atomic spectroscopy of inner electrons, high-energy photon effects, molecular binding and spectra, emission and absorption of light, and symmetry principles. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 486.

PHYS 496 Intro to Physics Research credit: 3 Hours.

Examination of current research topics through extensive reading, writing, and oral-presentation activities. 3 undergraduate hours. No graduate credit.

This course satisfies the General Education Criteria for: Advanced Composition

PHYS 497 Individual Study credit: 1 to 4 Hours.

Individual study at an advanced level in a subject not covered by course offerings. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

PHYS 498 Special Topics in Physics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in physics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

PHYS 499 Senior Thesis credit: 3 Hours.

Faculty-guided writing of a senior thesis involving independent research. Oral presentations of research and outside journal articles, proposal writing and reviewing, poster presentation, preparation of graduate school applications, and discussion of physics frontiers with outside experts. 3 undergraduate hours. No graduate credit. Prerequisite: PHYS 496.

LAS Specialized Curriculum in Physics

E-mail: undergrad-info@physics.illinois.edu

Degree Title: Bachelor of Science in Physics

General Education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Minimum hours required for graduation: 126

Departmental distinction: Graduation with distinctions awarded to students who complete 8 additional hours of 300- or 400-level physics courses or advanced courses in closely related technical subjects and who have attained cumulative grade point averages as follows: distinction, 3.5; high distinction, 3.8; highest distinction, 3.8 plus acknowledgement of truly outstanding work/research.

The LAS Specialized Curriculum in Physics is designed for students who plan to pursue graduate study in physics or a closely allied field. However, students who want to pursue a combined major and minor, a double major, or a double degree should consider the LAS Science and Letters Curriculum in Physics because of the greater flexibility it offers. Students in the Specialized Curriculum beyond the freshman year must maintain an overall grade point average of at least 2.5 and also a grade point average of 2.5 in all required mathematics and physics courses.

Entering freshmen typically take calculus, chemistry, rhetoric, and PHYS 110 during the first semester and begin the general physics sequence in the second semester. Students with advance placement in mathematics should begin the general physics sequence in the first semester. All students are strongly encouraged to take a Freshman Discovery Seminar during the first year fall semester and plan ahead to allow space in their programs for undergraduate research.

Code	Title	Hours
Fixed Physics Core		38
PHYS 110	Physics Careers	
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	
PHYS 225	Relativity & Math Applications	
PHYS 325	Classical Mechanics I	
PHYS 326	Classical Mechanics II	
PHYS 435	Electromagnetic Fields I	
PHYS 436	Electromagnetic Fields II	
PHYS 427	Thermal & Statistical Physics	
PHYS 486	Quantum Physics I	
PHYS 487	Quantum Physics II	

Flexible Physics Core (Select two courses from the list below)		8-10
PHYS 401	Classical Physics Lab	
PHYS 402	Light (with lab)	
PHYS 403	Modern Experimental Physics	
PHYS 404	Electronic Circuits	
PHYS 406	Acoustical Physics of Music	
Supporting Technical Courses		24-26
MATH 221	Calculus I ¹	
MATH 231	Calculus II	
MATH 241	Calculus III	
MATH 285	Intro Differential Equations	
or MATH 286	Intro to Differential Eq Plus	
MATH 415	Applied Linear Algebra	
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CS 101	Intro Computing: Engrg & Sci	
General Education - Students must complete the Campus General Education requirements.		Variable
Free Electives (No restrictions on these courses.)		15-35
Minimum Hours		85

¹ *MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.*

Physics Concentration within the Sciences and Letters Curriculum

E-mail: undergrad-info@physics.illinois.edu

Degree title: Bachelor of Science in Liberal Arts and Sciences

Minimum required major and supporting course work normally equates to 65-73 hours

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

Departmental distinction: Graduation with distinction is awarded to students who complete 8 additional hours of 300- or 400- or 500-level physics courses or advanced courses in closely related technical subjects, and who have attained cumulative grade point averages as follows: distinction, 3.5; high distinction, 3.8; highest distinction, 3.8 plus acknowledgement of truly outstanding work/research.

The Physics Concentration is a flexible program for students who plan to pursue technical or professional careers in areas requiring a sound grounding in physical science and mathematics. Students can use the concentration to prepare for employment immediately upon graduation or for continuing on to graduate study in a wide variety of fields. Students

who are certain that they want to go on to graduate study in physics or in a closely allied field should also consider the LAS Specialized Curriculum in Physics. In some cases, however, the greater flexibility of the Science and Letters Curriculum may make it a better choice for graduate school preparation for those who want to pursue a combined major and minor, a double major, or double degrees. Students in the concentration must maintain an overall grade point average of at least 2.0 and also a grade point average of at least 2.0 in all required physics and mathematics courses. To be permitted to enroll in advanced physics courses in this concentration a student must maintain at least a 2.0 average in all attempts at science and mathematics courses taken at the University of Illinois.

Students in this concentration must choose an approved elective technical or professional option no later than the end of the second semester of the sophomore year. A set of pre-approved options is available via the departmental web site (<http://physics.illinois.edu/undergrad/las-options.asp>) and from the departmental undergraduate studies office. Students may also design and follow a "custom option" subject to departmental approval. Students completing the Astrophysics option will earn a minor in Astronomy, if appropriate Minor form is filed.

Entering freshmen typically take calculus, chemistry, rhetoric, and PHYS 110 during the first semester and begin the general physics sequence in the second semester. Students with advance placement in mathematics should begin the general physics sequence in the first semester. All students are strongly encouraged to take a Freshman Discovery Seminar during the first year fall semester and plan ahead to allow space in their programs for undergraduate research.

Code	Title	Hours
Fixed Physics Core		23-24
PHYS 110	Physics Careers	
PHYS 211	University Physics: Mechanics	
PHYS 212	University Physics: Elec & Mag	
PHYS 213	Univ Physics: Thermal Physics	
PHYS 214	Univ Physics: Quantum Physics	
PHYS 225	Relativity & Math Applications	
PHYS 325	Classical Mechanics I	
PHYS 435	Electromagnetic Fields I	
PHYS 486	Quantum Physics I	
or PHYS 485	Atomic Phys & Quantum Theory	
Flexible physics core electives. Choose three courses from a departmentally approved list, with at least one being PHYS 401, PHYS 403, PHYS 404, or PHYS 406. The number of hours varies depending upon the courses chosen. (http://physics.illinois.edu/undergrad/las-sl-flexcore.asp)		9-15
Supporting Technical Courses		21-22
MATH 221	Calculus I ¹	
MATH 231	Calculus II	
MATH 241	Calculus III	
MATH 285	Intro Differential Equations	
or MATH 286	Intro to Differential Eq Plus	
CHEM 102	General Chemistry I	
CHEM 103	General Chemistry Lab I	
CS 101	Intro Computing: Engrg & Sci	
Elective Technical or Professional Option		12

A set of technical or professional courses that addresses an intellectually coherent body of knowledge. At least 9 hours should be at the 200-level or higher. Required courses may not be included in the set. Students may select from a list of pre-approved options or design a custom option, subject to departmental approval.

¹ *MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.*

Physics Teaching Concentration within the Sciences and Letters Curriculum

E-mail: undergrad-info@physics.illinois.edu

Web address for department: <http://physics.illinois.edu>

Degree title: Bachelor of Science in Liberal Arts and Sciences

General education: Students must complete the Campus General Education (<https://courses.illinois.edu>) requirements including the campus general education language requirement.

Twelve hours of 300- and 400-level courses in the major must be taken on this campus.

A Major Plan of Study Form must be completed and submitted to the LAS Student Affairs Office before the end of the fifth semester (60-75 hours). Please see your adviser.

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school physics (grades 9-12) through the AP/honors level and general science (high school biology, chemistry, earth and space science, and environmental science up to but not including the AP/honors level).

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching. See the College of Education section for requirements of the minor (p. 139) (39 hours).

Time to degree completion varies. Minimum time to completion is 8 semesters, some students may require 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook for more information.

To remain in good standing in this program and be recommended for certification, candidates are required to maintain UIUC, cumulative, content area, and professional education, grade-point averages of 2.5 (A=4.0). Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade-point averages. <http://www.cote.illinois.edu/>

Departmental distinction: Distinction is determined by a combination of grade point average and achievement in student teaching. The student's practice teaching experience will be evaluated by the departmental honors adviser and the teaching supervisor. Distinction requires a 3.2 grade point average; high distinction, 3.4; highest distinction, 3.6. Students desiring distinction should consult with the departmental honors adviser during the junior year.

Code	Title	Hours
Foundation Courses		
The following courses must be completed or in progress when students apply to the Secondary Education minor.		
MATH 221 or MATH 220	Calculus I ¹ Calculus	4
MATH 231	Calculus II	3
MATH 241	Calculus III	4
MATH 285 or MATH 286	Intro Differential Equations Intro to Differential Eq Plus	3
PHYS 211	University Physics: Mechanics	4
PHYS 212	University Physics: Elec & Mag	4
PHYS 213	Univ Physics: Thermal Physics	2
PHYS 214	Univ Physics: Quantum Physics	2
Select one group of Chemistry courses:		4-5
CHEM 102 & CHEM 103 or CHEM 202 & CHEM 203	General Chemistry I and General Chemistry Lab I Accelerated Chemistry I and Accelerated Chemistry Lab I	
Additional required coursework		
Teacher Education Minor in Secondary School Teaching (p. 139)		39
Physics Core		
PHYS 110	Physics Careers	0
PHYS 325	Classical Mechanics I	3
PHYS 435	Electromagnetic Fields I	3
PHYS 485 or PHYS 486	Atomic Phys & Quantum Theory Quantum Physics I	3
Choose at least three courses from List A and List B below. At least one course must come from List B.		9-14
A		
PHYS 326	Classical Mechanics II	
PHYS 436	Electromagnetic Fields II	
PHYS 427	Thermal & Statistical Physics	
PHYS 470	Subatomic Physics	
PHYS 487	Quantum Physics II	
PHYS 460	Condensed Matter Physics	
PHYS 475	Introduction to Biophysics	
B		
PHYS 401	Classical Physics Lab	
PHYS 403	Modern Experimental Physics	
PHYS 404	Electronic Circuits	
PHYS 406	Acoustical Physics of Music	
Additional Technical Courses		
IB 100	Biology in Today's World	3
GEOL 107	Physical Geology	4
ASTR 210	Introduction to Astrophysics	3

¹ MATH 220 may be substituted with four of the five credit hours applying toward the degree. MATH 220 is appropriate for students with no background in calculus.

Media, College of

Student Services Center
18 Gregory Hall
810 S. Wright St., MC-477
Urbana, IL 61801
PH: (217) 244-4329
<http://media.illinois.edu>

media-ssc@illinois.edu

The College of Media strives to give students solid backgrounds in social sciences and humanities and to provide them broad career competence in advertising, journalism or media studies. The College's premise is that students need to understand the world and its people if they are to communicate effectively and enjoy fulfilling and meaningful lives.

The College offers Bachelor of Science degrees in Advertising, Journalism, and Media and Cinema Studies. Students who seek to become leaders in cutting-edge media study with leading professionals and scholars and learn using the latest equipment and facilities. Included are laboratories for reporting, editing, design, and multimedia-journalism; editing suites for radio and television production; and a television studio. The Communications Library is recognized as one of the best in the nation. Dedicated Career services are available for students in the College.

The College also includes Illinois Public Media, which operates the local PBS and NPR stations WILL-AM, FM, TV and online.

The College also houses the Institute of Communications Research.

The College has a rich past and a bright future. It traces its history to 1902, when instruction in journalism began. A school of journalism was established in 1927. In 1950 it became the School of Journalism and Communications. In 1957 the school was elevated to college status. The name College of Communications was adopted in 1968. To better reflect the College's emphasis on mediated communication, the name College of Media was adopted in 2008 becoming one of the first Colleges of Media in the country.

Departments and Curricula

The College, fully accredited by the Accrediting Council on Education in Journalism and Mass Communication, offers these majors:

- **ADVERTISING (ADV)**, which offers students the opportunity to learn and think about advertising as a way of modeling the mind, as a material reflection of social structure, as a fundamentally modern phenomenon, as an art form and even as a basis for community, by drawing on insights from psychology, sociology, history, literature, and anthropology. This program will thoroughly infuse the understanding of consumer behavior and message knowledge base and, therefore, provide a better and longer-lasting education for students.
- **JOURNALISM (JOUR)**, prepares students for exciting and fulfilling careers in traditional broadcast journalism, news-editorial journalism, and emerging media. The primary professional aim is to train students as public affairs and enterprise journalists. The Journalism Department seeks to prepare broadly educated professionals who will assume decision-making and leadership roles in a variety of media organizations.

- MEDIA AND CINEMA STUDIES (MACS), prepares students with dynamic skills for careers in media, information, creative, and visual industries, as well as informed interaction with everyday media technologies. Majors have the opportunity to participate in original research, mixed media production, internships, study abroad, and public engagement through a transformative learning environment. MACS offers an undergraduate and graduate minor in CINEMA STUDIES.

The College also offers an minors in PUBLIC RELATIONS, JOURNALISM, and CINEMA STUDIES.

The Departments of Advertising and Journalism offer graduate programs leading to Master of Science degrees in Advertising and Journalism. The Department of Media and Cinema Studies offers an undergraduate and a graduate minor in Cinema Studies. The College also offers an interdisciplinary program leading to a Doctor of Philosophy degree in communications and media.

Requirements

Admission

High school seniors and transfer students from another institution should contact the Office of Undergraduate Admissions for admission requirements and applications for a specific term.

Current University of Illinois students who will have completed at least one year on the Urbana-Champaign campus should apply during the first weeks of the semester during which they will complete their 30th hour of course credit. Successful applicants will be admitted for the following semester. Applications also will be accepted from more advanced students provided that by the end of the semester in which they apply, they will have completed no more than 90 hours. Forms are available on the College web site. Specific deadlines are cited on the forms.

Students seeking to transfer from another university may apply early in the spring semester provided they will have completed at least 30 transferable hours by the end of the spring semester. Hours planned during upcoming summer semesters are not considered. Applications are available from the Office of Undergraduate Admissions.

Inter-college transfer students (students already on campus) should include a personal essay of up to 500 words. The essay should demonstrate the applicant's media-related abilities and detail the applicant's interest in and demonstrated commitment to a career for which a College of Media degree would be appropriate.

Admission is competitive. While there is no specific requirement regarding grades, a strong GPA is advantageous especially in core classes that are part of the major you wish to transfer in to. Students with the best essays and the best academic or professional qualifications, including any pertinent extracurricular activities or internships, will receive highest priority. For a University of Illinois student, one way to demonstrate interest is to have earned a grade of B or better in introductory courses such as ADV 150, JOUR 200, MACS 100, MACS 101, MACS 261, MACS 262, or other courses taught by the College.

Students currently enrolled in other colleges on campus are accepted on the condition that by the time they join the College at the start of the semester after they apply, they must:

- Have completed at least two semesters in the University of Illinois at Urbana-Champaign academic unit to which they were admitted, if admitted as freshmen.

- Be classified by the university as sophomores (at least 30 credit hours) or as juniors (fewer than 90 credit hours).
- Be in good academic standing.
- Have completed approximately one-fourth (if sophomores) or one-half (if juniors) or more of the total credit hours required to satisfy the university's General Education requirements.
- Have made substantial progress toward completing any departmental requirements for courses outside the College of Media. For example, applicants for Advertising ideally will have completed ADV 150, ECON 102 and ECON 103, STAT 100 and two of these three courses: SOC 100, ANTH 103 and PSYC 100.

Students may apply to any major in the College: Advertising, Journalism, or Media and Cinema Studies. College of Media students may not complete double majors within the College. Students majoring in Journalism may not pursue a Journalism Minor.

Students who would require more than nine total semesters of overall college or university enrollment to complete their degree will be denied admission. Students must complete their College of Media degrees within seven semesters of joining the College as sophomores or within five semesters of joining the College as juniors. A minimum of three semesters within the College is required for students admitted as juniors. A minimum of five semesters within the College is required for students admitted as sophomores.

Minors in areas outside the College are strongly encouraged. However, because considerable coursework in other colleges is implicit within the requirements for all College of Media degrees, students are not admitted to the College of Media for the purpose of pursuing second majors or second undergraduate degrees.

Most required courses in Advertising, Journalism, and Media and Cinema Studies must be completed at the University of Illinois at Urbana-Champaign. Students completing freshman and sophomore studies at institutions other than the University of Illinois at Urbana-Champaign may test their interest in the Media field. However, a maximum of nine hours of transferable Media courses are allowed toward the 124 hour graduation requirement.

Graduation

To graduate, students must satisfy all University requirements as to residency, scholarship, and fees and must complete the University's general education requirements. All students also must fulfill these general requirements of the College of Media:

- Complete a total of 124 semester hours of course credit of which no more than 12 hours total may be in basic physical education activity courses (KIN 100-KIN 111, KIN 122), vocational and technical education courses, basic courses in military science (AFAS, MILS and NS courses numbered below 300), Institute of Aviation courses, Undergraduate Open Seminar (199) courses, and independent study courses and other experimental or special topics courses (such as LAS 110) outside the College of Media. Independent study courses additionally must be approved by the College to ensure that credit is given only for academic work directly supervised by a faculty member. The College encourages its students to have appropriate professional internships and to participate in professional activities. While it does not allow academic credit for such experience, one credit hour is possible through an academic course or independent study supervised by a College of Media faculty member and taken in conjunction with an internship.

- Complete not less than 72 hours of credit outside the College of Media.
- No course of any number that is offered by or cross-listed with Advertising, Journalism or Media and Cinema Studies or is substantially similar to courses offered by Advertising, Journalism or Media and Cinema Studies may count in this total, regardless of the rubric under which it is taken. For each hour of credit beyond 44 in such courses, the number of hours required for graduation increases by one additional hour to ensure that the requirement of 80 hours outside the College is met.
- Complete not less than 20 hours in courses numbered 200 or above outside the College of Media and not cross-listed in the College of Media, regardless of the rubric under which they are taken. At least 9 of the 20 hours must be in courses numbered 300 and above.
- Complete the specific requirements of one of the three curricula offered by the College.
- Earn a cumulative grade point average of 2.00 (A = 4.00) in all courses presented for the degree and a cumulative 2.00 grade point average for all courses taken in the College.

Special Programs

Dean's List

To be eligible for Dean's List recognition for any semester, students must rank in the top 20 percent of the College in grade point average and must complete at least 12 hours taken for a letter grade (A through F) on the Urbana-Champaign campus. Transfer, study abroad and guided individual study coursework is excluded.

Students who are registered with the Center for Wounded Veterans (CWV) or with Disability Resources and Educational Services (DRES) who are enrolled in less than 12 but at least nine graded semester hours who are in the top 20 percent of the College are also eligible. Such students must sign a release with CWV or DRES indicating their consent for consideration for Dean's List eligibility and have submitted that consent to their home unit's academic affairs office no later than Reading Day in the semester in which they wish to be considered for Dean's List. These consent forms are valid only for the semester in which they are issued, and students must submit by the deadline updated consent forms for each semester in which they wish to be considered for the Dean's List.

The specific grade point average necessary to achieve Dean's List recognition may vary. College of Media standards are high.

Dean's List recognition is determined before the start of the ensuing semester. Students who are not initially selected but who believe they might qualify because of the late resolution of incomplete, deferred or missing grades may petition before the end of the next semester for retroactive addition to the list.

Honors at Graduation

For graduation with honors, a student must rank in the upper 20 percent of his or her graduation class in overall grade point average. For graduation with high honors, a student must additionally rank in the upper 10 percent. For graduation with highest honors, a student must additionally rank in the upper 5 percent.

For purposes of this award, "graduating class" means all students listed as receiving or as being candidates for receiving bachelor's degrees in all College majors at the College's annual commencement convocation each

May. This includes students who graduated in the previous December and those who are candidates for graduation in May and August. Grade point averages are computed through the fall semester immediately preceding the annual convocation and include all transfer courses and other grades posted as of that date.

Transfer students, in addition to meeting the general requirement, must have cumulative University of Illinois at Urbana-Champaign grade-point averages as high as the lowest ones listed for students who qualify on the basis of having completed all of their work at the University of Illinois at Urbana-Champaign and must have earned 40 or more semester hours at the University of Illinois at Urbana-Champaign through the fall semester immediately preceding the annual convocation.

Kappa Tau Alpha

Each year, scholastically high-ranking graduating juniors and seniors in the College of Media are considered for membership in Kappa Tau Alpha, the seventh oldest national honorary society, founded to recognize and promote academic excellence and scholarship in journalism and mass communication.

Students must rank in the upper 10 percent of their class, must have completed at least five semesters of degree work and must have completed at least nine semester hours in professional skills courses, as defined by the national society.

Edmund J. James Scholars

The James Scholar Program, named for the University of Illinois' fourth president, Edmund J. James, focuses on giving high-ability students the opportunity to gain additional knowledge by working closely with instructors.

To remain in good standing as a James Scholar in the College of Media, students must maintain semester and cumulative GPAs of 3.5 and higher, complete at least 14 credit hours for traditional letter grades each semester and complete at least one honors course or project each academic year. Students may choose from taking a Campus Honors Program course, completing an Honors Credit Learning Agreement with a professor in any course, working on an honors project with a College of Media professor as an independent study, or from the pre-approved honors activity list as provided by the honors Dean to complete the honors requirement. Students who study abroad will be exempt of the GPA and credit hour requirements during the semester(s) they are abroad. The honors requirement should be completed the semester the student is on campus.

James Scholars' academic records are reviewed each summer. If a student has met the stated requirements for each of the two past semesters at the time of the review, he or she will be certified as a James Scholar for the next academic year and the James Scholar designation will be added to his or her transcripts for that academic year. Any student who does not fulfill the requirements will be removed from the James Scholars program. Because James Scholar review takes place once a year, a student who does not meet the requirements in the fall semester will remain in the program for the spring. However, s/he will be dropped during the summer review period and the James Scholar notation will not appear on the transcript for the previous academic year. In order to graduate with the James Scholar designation, all students must have completed a minimum of four honors activities, with at least one being completed each year the student is in the program.

Students entering the College of Media as freshmen are invited to join the James Scholars program at the time of admission if they rank in the top

20 percent of the College's incoming class, as determined by an Office of Admissions and Records standard that combines factors such as standardized test scores and high school GPA.

Students already in the College of Media are invited to become James Scholars for the upcoming fall semester if they have completed fewer than 75 hours, have at least a 3.5 overall GPA and were included on the Dean's List for the spring semester. If a student loses the James Scholar status, he or she must sit out of the program for at least one academic year before becoming eligible for reinstatement. A student may only be reinstated by making the College's spring Dean's List.

Students who transfer into the College of Media from another college on the Urbana-Champaign campus are invited to participate in the James Scholar program immediately if they were a James Scholar in their previous college. Students who transfer to the College from another institution may request to participate if they have a transfer GPA of at least 3.7.

A qualifying student may enter the program for his or her sophomore or junior year, but not for his or her senior year alone. Students who join the James Scholar program during the sophomore or junior year will need to pick up additional honors activities in order to graduate with the minimum four required to graduate with the honor.

For complete policies and procedures, please see: <https://media.illinois.edu/student-honors-and-awards>

Credit/No Credit Grading Option

The College follows credit-no credit provisions described in the Grading System and Other Regulations section of the Programs of Study.

All courses listed or cross-listed with departments in the College, or specifically required by one of those departments for its majors or used to fulfill University General Education requirements, must be taken for a traditional letter grade. For Advertising majors, this means these courses outside the College must be taken for a grade: STAT 100 (or any of the allowed substitutes for it), ECON 102-ECON 103, BADM 320, and two out of the three courses PSYC 100, SOC 100 and ANTH 103. Journalism majors must take CS 105, ECON 102, ECON 103, PSYC 100, SOC 100, and STAT 100 (or any of the allowed substitutes for it) for a letter grade. For all majors, courses taken to fulfill the College's advanced hour requirement (20 hours outside the College in courses numbered 200 and above) also must be taken for traditional letter grades.

- Advertising (p. 598)
- Agricultural Communications (p. 79)
- Journalism (p. 602)
- Media and Cinema Studies (p. 605)
- Cinema Studies (p. 610)
- Journalism (p. 605)
- Public Relations (p. 599)

Departments

- Advertising (p. 598)
- Journalism (p. 602)
- Media and Cinema Studies (p. 605)

Advertising

Dr. Jacqueline Hitchon, Department Head

119 Gregory Hall
810 S. Wright Street
PH: (217) 333-1602

<https://media.illinois.edu/degrees/advertising-bs-ms>

For the Degree of Bachelor of Science in Advertising

To graduate from the advertising curriculum, a student must meet all general University and College requirements for the degree and must complete the following courses, all of which must be taken for a traditional letter grade:

Code	Title	Hours
Required Major Courses		24
ADV 150	Introduction to Advertising	3
ADV 281	Advertising Research Methods	3
ADV 283	Advertising and Brand Strategy	3
ADV 284	Consumer Insight	3
ADV 390	Content Creation	3
ADV 460	Innovation in Advertising	3
ADV 483	Audience Analysis	3
ADV 498	The Sandage Project	3
College of Media Electives ¹		20-28
Hours outside the College of Media (72 hours minimum)		72
Other Required Supporting Coursework:		
BADM 320	Principles of Marketing ³	3
ECON 102 & ECON 103	Microeconomic Principles and Macroeconomic Principles	6
STAT 100	Statistics ²	3
Select two of the following:		7-8
ANTH 103	Anthro in a Changing World	3
PSYC 100	Intro Psych	4
SOC 100	Introduction to Sociology	4

Advanced Hours Requirement

At least 20 hours in courses numbered 200 or above. These courses must be outside and not cross-listed with the College of Media. At least 9 of the 20 hours must be in courses numbered 300 or above.

Please note: Courses used to fulfill University General Education requirements or to fulfill requirements for a minor may count toward these requirements. Courses used to fulfill the College of Media's advanced outside hours requirement may also count toward these requirements.

124 total hours are required for graduation

- ¹ College Electives must include at least six credits of Advertising elective courses numbered 300 or above for students admitted to the major starting in Fall 2016. Students admitted to the major prior to Fall 2016 are also strongly encouraged to fulfill six credits of Advertising elective courses numbered 300 or above. College of Media elective courses offered by or cross-listed with Agricultural Communications (AGCM), Journalism (JOUR), Media and Cinema Studies (MACS) or the College of Media (MDIA) count toward the remainder.
- ² Or another approved basic course or course sequence in statistical methods, which currently include ECON 202, EPSY 280, PSYC 235, SOC 280, SOCW 225). Such courses may, if they qualify, also be credited toward the requirement of advanced hours and General Education courses outside the College.
- ³ Which may be credited toward the College requirement of advanced hours outside the College.

The Public Relations (PR) minor is designed to provide undergraduate students with a foundational understanding of how public relations practitioners manage relationships between organizations and their stakeholders and manage the reputations of those organizations. Courses within the PR minor will help students develop skills in writing, research, strategic planning, relationship management, and crisis communication that can be applied in business, nonprofit, or government contexts.

Students who plan to pursue careers in public relations, advertising, communications, marketing, or other related fields will find that the PR minor serves as a valuable complement to the courses in their major. Students from other majors who wish to have a better understanding of the role public relations plays in organizations and who wish to sharpen skills in writing, persuasion, strategic planning, and public communication will also benefit from the minor.

The minor requires a minimum of 18 credit hours. Students majoring in Advertising or Journalism must complete at least six hours of advanced course work for the minor distinct from credits earned for their major.

Code	Title	Hours
Foundations of public relations 9		
Courses all students must complete:		
JOUR 200	Introduction to Journalism	
ADV 310	Intro to Public Relations	
ADV 410	Public Relations Strategies	
Writing for public relations and media 3-4		
Students must select one course from:		
ADV 350	Writing for Public Relations	
JOUR 210	Newsgathering Across Platforms	
CMN 220	Communicating Public Policy	
Advanced topics in public relations 6		
Students must select two courses from:		
ADV 393	Advertising and Society	
ADV 490	Advanced Special Topics in Advertising ¹	
ADV 494	Persuasion Consumer Response	
JOUR 360	The Media and You	
JOUR 453	Crisis Communications	
JOUR 460	Special Topics ¹	
CMN 321	Strategies of Persuasion	

CMN 377	Propaganda and Modern Society	
CMN 464	Health Communication Campaigns	
Total Hours		18-19

¹ Will be announced in course description as "Eligible for PR minor."

ADV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ADV>)

Courses

ADV 150 Introduction to Advertising credit: 3 Hours.

Introduction to the practice and profession of advertising. Course material covers various functional areas of advertising and integrated brand promotion, including account planning, creative, media, research, consumer behavior, sales promotion and interactive advertising. Topics also include how advertising relates to society in cultural, social, ethical and regulatory contexts. Open to all undergraduate majors.

ADV 199 Undergraduate Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours in separate semesters, if topics vary.

ADV 281 Advertising Research Methods credit: 3 Hours.

Introduces students to the wide spectrum of qualitative and quantitative research techniques that are commonly used in the advertising industry. In addition to examining the principles, methods and techniques of advertising research, the course will address issues such as when research should and should not be conducted, analyzing data sets, forming meaningful research questions, figuring out how to answer the questions, and presenting the answers to these questions in a clear and compelling manner. Credit is not given for ADV 281 if credit for ADV 481 has been earned. Prerequisite: ADV 150, STAT 100 or equivalent.

ADV 283 Advertising and Brand Strategy credit: 3 Hours.

Designed to help students acquire brand decision-making skills. Advertising and marketing theories, practical problems and traditional cases will be studied as they learn to build a strong brand strategy that will lead to a strong brand advertising strategy. This encompasses every facet of making advertising decisions for a brand. This involves understanding the content a consumer requires, how the consumer will come in contact with the brand, and what is the goal of the connection between consumer and content/contact. Prerequisite: ADV 150, ADV 281.

ADV 284 Consumer Insight credit: 3 Hours.

Course focuses on methods of eliciting consumer insight. In particular, this class introduces the process and applied outcomes of consumer insight in terms of building brand strategy. Techniques for persuasive presentation of insight will also be introduced. Prerequisite: ADV 281.

ADV 290 Special Topics in Advertising credit: 1 to 3 Hours.

Designed to offer freshmen and sophomores opportunity to take courses in advertising's most recent developments. May be repeated to a maximum of 12 hours in separate terms, if topics vary.

ADV 305 Digital Advertising Content, Technologies and Concepts credit: 3 Hours.

This introductory course systematically examines a wide range of topics related to the proliferation and use of digital media in a networked world, including psychology, social relationships, culture, economics, politics, and philosophy. It is designed to prepare students for living and working in an increasingly mediated society in which digital technologies are omnipresent, yet ubiquitous. While the scope of this course is highly interdisciplinary, its emphasis will be placed on specialist knowledge for media professions such as advertising and journalism. Prerequisite: ADV 150. Restricted to students with sophomore and junior standing.

ADV 310 Intro to Public Relations credit: 3 Hours.

Introduces the student to the practice and profession of public relations. Course material covers topics such as the history of public relations, the role of law and ethics in public relations, and theories that guide public relations research and practice. The course will also introduce roles played by public relations practitioners within organizations, such as media relations, consumer relations, employee relations, community relations, and investor relations.

ADV 311 Classic Campaigns credit: 3 Hours.

Analyzes the most recognized and successful direct mail, print, radio, television and digital advertising campaigns of the 20th and early 21st centuries. Includes particular attention to their strategy and development as well as their social, cultural, and economic impact.

ADV 312 Advertising History credit: 3 Hours.

In this course, you will develop a rich knowledge base of advertising and the advertising industry as it has evolved in the United States over the last two centuries. Included will be an analysis of the key events, forces, people and technology.

ADV 315 Emerging Media credit: 3 Hours.

Same as AGCM 315. See AGCM 315.

ADV 350 Writing for Public Relations credit: 3 Hours.

Focuses on the strategy of crafting and delivering PR messages to various audiences with special emphasis on pre-writing, preparation, revision and presentation. Prerequisite: ADV 310.

ADV 390 Content Creation credit: 3 Hours.

Explores theories of creativity; situates creativity and creative practices within the social structure of organizations that develop creative content; examines the relationship between creative strategy, creative concepts and creative executions; exposes students to the practice of creating content for traditional and non-traditional media vehicles. Prerequisite: ADV 284.

ADV 393 Advertising and Society credit: 3 Hours.

Provides a critical understanding of advertising's role in modern society. Advertising will be studied as a cultural force and social institution. Its role will be examined in relation to communications, economics, and political and legal systems. Credit is not given for ADV 393 if credit for ADV 493 has been earned.

ADV 396 Research Experience in Advertising credit: 1 to 3 Hours.

Supervised participation in research and scholarly activities, usually as an assistant to an investigator. Approved for Letter and S/U grading. May be repeated to a maximum of 9 hours. Prerequisite: ADV 150, ADV 281, or written consent of instructor.

ADV 399 Advertising Study Abroad credit: 1 to 5 Hours.

Provides credit toward undergraduate degree for undertaking study and/or a research project through faculty led programs or from an accredited foreign institution or approved overseas program. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 18 hours. Final determination of appropriate credit will be made upon completion of the work done abroad and/or on campus. Prerequisite: One academic year (or one semester in the case of transfer students) in residence at UIUC, good academic standing, completion of at least thirty semester hours toward the bachelor's degree, and prior approval of the Department of Advertising. Some programs have additional requirements.

ADV 400 Special Problems credit: 0 to 3 Hours.

Special projects, research, and independent reading in advertising for students capable of individual work under the guidance of a faculty adviser. 0 to 3 undergraduate hours. No graduate credit. May be repeated in the same or in multiple semesters, if topics vary. Prerequisite: Written research proposal and consent of department.

ADV 409 Media Entrepreneurship credit: 3 Hours.

Introduces students to the foundations of entrepreneurship and evolving business models for media. Students are introduced to the foundation and context of entrepreneurship. The course will cover the skills and practices necessary for new entrepreneurial ventures, as well as the processes of evaluating an idea, assessing the market, and implementing a new venture. Finally, students will examine business case studies for both successful and unsuccessful media start-ups. 3 undergraduate hours. No graduate credit. Prerequisite: Junior or senior standing in the College of Media.

ADV 410 Public Relations Strategies credit: 3 Hours.

Examines the intersection of public relations strategies and communication tactics used by organizations to meet reputation and relationship management objectives with relevant publics and stakeholder groups, such as journalists, consumers, employees, investors, government officials and agencies and community members. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 310.

ADV 452 Creative Concepts I credit: 3 or 4 Hours.

Planning and execution of advertising across media, with emphasis on the creation of campaigns 3 undergraduate hours. 4 graduate hours. Prerequisite: ADV 390 and consent of instructor (required).

ADV 454 Creative Concepts II credit: 3 Hours.

This portfolio-oriented course builds upon the core competencies acquired in ADV 452 and applies them to solving real-world advertising problems with integrated creative consumer communications efforts than span traditional and new media. 3 undergraduate hours. 3 graduate hours. Prerequisite: ADV 452.

ADV 460 Innovation in Advertising credit: 3 Hours.

This course is intended to improve creative and critical thinking skill in advertising planning by understanding the core technology and perspective of digital and other innovative media in the context of integrated communication. This will allow students to understand how consumers perceive and process digital advertising messages; to research critical questions in digital consumer behavior; to learn how to utilize digital and non-digital media in the context of integrated communication; to apply knowledge of digital communication technology to the real-world advertising cases. 3 undergraduate hours. 3 graduate hours. Credit is not given for ADV 460 if credit for the Digital Advertising section of ADV 490 has been earned. Prerequisite: ADV 283, ADV 284.

ADV 461 Computational Advertising credit: 3 Hours.

This class will survey the emerging landscape of computational advertising. It will provide students with a thorough understanding of the technologies including web-search, auctions, behavioral targeting, and mechanisms for viral marketing that underpin the display of advertisements on a variety of locations. These locations include web pages (banner ads), on prominent search engines (text ads), on social media platforms, as well as cell phones. The students shall also learn about new research areas in computational advertising including electronic billboards, moving objects (banners atop taxi cabs) and algorithmic synthesis of personalized advertisements. This class will also discuss issues related to consumer privacy. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 460, ADV 483. Junior or senior standing required.

ADV 475 Multicultural Advertising credit: 3 Hours.

Examines the role of multicultural issues upon advertising both as a practice and as an industry. Incorporates historical perspectives to understand the foundational role race, age, and sexual orientation has played in advertising and marketing and will address current issues of racial imagery in advertising, racial diversity in the industry, and a variety of topics related involving multicultural advertising and marketing. 3 undergraduate hours. 3 graduate hours.

ADV 476 Global Advertising credit: 3 Hours.

Explores theories of culture and communication and applies them to advertising issues in the context of globalization. Through case studies and an applied research paper, students will develop strategies for advertising and communicating messages to local and global audiences. 3 undergraduate hours. 3 graduate hours. Prerequisite: ADV 150 or equivalent.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

ADV 478 Psychology of Advertising credit: 3 Hours.

Course is designed to familiarize students with theory and research at the intersection of advertising and psychology. Explores issues pertaining to advertising psychology, including: basic research methodology, the emergence of trends, attitudes and persuasion, human and brand personality, cross-cultural advertising, implicit consumer cognition, judgment and decision making, and others. 3 undergraduate hours. No graduate credit. Credit is not given for ADV 478 if credit for the Psychology of Advertising section of ADV 490 has been earned. Prerequisite: ADV 281 or equivalent.

ADV 481 Advertising Research Methods credit: 3 Hours.

Overview of basic concepts of research methodology with particular emphasis on advertising research. Computer analysis and interpretation of actual data sets; measurement with both structured and unstructured techniques; principles of survey and experimental design. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 150 and a specified course in statistical methods.

ADV 482 Qualitative Analysis in Advert credit: 3 Hours.

Provides students with an understanding of the multiple qualitative methods used in advertising and consumer research; a deeper examination of design and analysis issues are covered with focus on analysis of texts to uncover consumer insights and test advertising strategy. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 150 and ADV 281 or equivalent.

ADV 483 Audience Analysis credit: 3 Hours.

Analyzes audiences and matches consumer insights with strategic ideas for brand communication, contact, and connection. 3 undergraduate hours. No graduate credit. Prerequisites: ADV 283 and ADV 284.

ADV 484 Quantitative Research Methods credit: 3 Hours.

Advanced undergraduate course on quantitative research methods in advertising and consumer behavior. In-depth coverage of descriptive research, experimental research, descriptive and inferential statistics, and computer analysis and interpretation of actual data. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 281.

ADV 490 Advanced Special Topics in Advertising credit: 1 to 3 Hours.

Covers current issues in various advertising areas not studied extensively in other courses. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: Announced separately for each topic.

ADV 491 Advertising Management Plan credit: 3 Hours.

Application of analytical planning concepts to advertising planning and decision making; covers all of the decision making areas of advertising. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 290, ADV 483.

ADV 492 Tech and Advertising Campaigns credit: 3 Hours.

With the maturation of the internet as an advertising and media channel, advertising, journalism, and communications students need to know more about technology and how that impacts their messages and designs. Likewise, computer scientists could benefit from knowledge of what the end user is looking for when designing web content, applications and other web-based media. Students in this course will gain design knowledge as well as a hands-on experience in completing a technology-driven advertising campaign. Students will participate in engineering, advertising and project management activities with individual as well as team responsibilities. Same as CS 468. 3 undergraduate hours. No graduate credit. Credit is not given for ADV 492 and ADV 498. Prerequisite: CS 225 or consent of instructors. Junior or senior standing in Advertising or Computer Science.

ADV 494 Persuasion Consumer Response credit: 3 Hours.

Addresses what makes a mass-mediated message persuasive by reviewing theories of mass communication and persuasion, consumer information-processing, and advertising effectiveness measures. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 281.

ADV 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved professional, industry related internship. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours or 2 graduate hours. May be repeated in subsequent terms to a maximum of 3 undergraduate hours or 3 graduate hours. Prerequisite: Consent of instructor.

ADV 496 UG Research Project credit: 1 to 3 Hours.

Supervised investigation of student-driven research on special topics related to advertising in individual or collaborative format. Topic and nature of research may vary. Capstone paper required. Type of course: Lecture-discussion 1 to 3 undergraduate hours. No graduate credit. May be repeated up to 3 hours in the same term or 6 hours in separate terms, if topics vary. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Restricted to majors only. Not available to freshman.

ADV 497 Colloquium in Advertising credit: 1 Hour.

Current topics, cases, and research in advertising are presented in a forum that fosters critical thinking and engagement. Weekly presentation and discussion of current research and cases by faculty, undergraduate/graduate students, visiting scholars and visiting professionals. 1 undergraduate hour. No graduate credit. Approved for S/U grading only. May be repeated up to 2 hours in separate terms, if topics vary. Prerequisite: ADV 281 and consent of instructor.

ADV 498 The Sandage Project credit: 3 Hours.

This course is named after the founder of the Advertising Department, Charles H. Sandage (known as the "father of advertising education"). His vision of educating the future of the industry was grounded in theoretical and foundational courses emphasizing the "why of advertising" - not just the "how." In this course, students will integrate the concepts, experiences, and skills that have been learned in the curriculum with a service-learning project. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 283, ADV 390 and ADV 460 or consent of instructor.

Journalism

Nancy Benson, Department Head

119 Gregory Hall
810 S. Wright Street
PH: 217-333-0709

<https://media.illinois.edu/node/75/bs-journalism>

For the Degree of Bachelor of Science in Journalism

To graduate from the Department of Journalism, a student must meet all general University and College requirements for the degree and must complete the following courses, all of which must be taken for a traditional letter grade and for which all pre-requisites will be enforced:

Code	Title	Hours
Core Curriculum		26
JOUR 200	Introduction to Journalism ¹	3
JOUR 210	Newsgathering Across Platforms ¹	4
JOUR 215	Multimedia Reporting	4
JOUR 311	Media Law	3
One of the following courses:		3
JOUR 205	History of American Journalism	
JOUR 452	Great Books of Journalism	
Four of the following courses:		16
JOUR 315	Adv Public Affairs Reporting	
JOUR 320	News Editing	
JOUR 335	Audio Journalism	
JOUR 340	Video Reporting & Storytelling	
JOUR 425	Multimedia Editing and Design	
JOUR 445	Video Storytelling 2-Producing	
One of the following courses:		3
JOUR 450	Media and Public Opinion	
JOUR 451	Research Methods in Journalism	
Electives within the College of Media, including any course not chosen above:		12-13
Hours in the College of Media		51-52
Courses outside the College of Media		72-73
CS 105	Intro Computing: Non-Tech	3
ECON 102	Microeconomic Principles	3
ECON 103	Macroeconomic Principles	3
PSYC 100	Intro Psych	4
RHET 105	Writing and Research	4
SOC 100	Introduction to Sociology	4
STAT 100	Statistics	3

Campus General Education requirements not met by classes listed

Minor or Specialization

Recognized minor or one 18-hour specialization or two 9-hour specializations, approved by advisor, from outside College of Media and Department of Communication. May include hours listed above. Students may choose to complete a Public Relations minor in addition to the non-Media minor or specialization.

Advanced Hours Requirement

At least 20 hours in courses numbered 200 or above. These courses must be outside and not cross-listed with the College of Media. 9 of the 20 hours must be in courses numbered 300 or above.

Please note: Courses used to fulfill University General Education requirements or to fulfill requirements for a minor may count toward these requirements. Courses used to fulfill the College of Media's advanced outside hours requirement may also count toward these requirements.

Minimum total hours required for graduation

124

The Minor in Journalism allows a student to explore the role of journalism in a democracy and to assess how journalism is meeting its social responsibility to engage, enlighten and empower citizens. The minor equips students to participate in the ever-changing world of media delivery and consumption.

Code	Title	Hours
JOUR 200	Introduction to Journalism	3
JOUR 205	History of American Journalism	3
JOUR 250	Journalism Ethics & Diversity	3
JOUR 311	Media Law	3

Select two courses from the following:

6-7

JOUR 210	Newsgathering Across Platforms ¹	
JOUR 360	The Media and You	
JOUR 361	Readings in Sports Journalism	
JOUR 421	Editing for Publication	
JOUR 450	Media and Public Opinion	
JOUR 451	Research Methods in Journalism ²	
JOUR 452	Great Books of Journalism	
JOUR 453	Crisis Communications	
JOUR 454	Propaganda & the News Media	
JOUR 470	International Reporting	
JOUR 471	Science Journalism	
JOUR 482	Immersion Journalism	
JOUR 483	Investigative Journalism	

Total Hours

18-19

¹ JOURN 200 is a prerequisite for JOURN 210.

² JOURN 200 and Quantitative Reasoning I are prerequisites for JOURN 451.

JOUR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JOUR>)

Courses

JOUR 199 Undergraduate Open Seminar credit: 1 to 3 Hours.

A changing array of courses focusing on special topics in journalism. Approved for Letter and S/U grading. May be repeated to a maximum of 12 hours in separate semesters, if topics vary.

JOUR 200 Introduction to Journalism credit: 3 Hours.

Discussion of the history, freedom, technologies, ethics, and functions of the news media. Training in clear, descriptive writing techniques, using journalistic models. Prerequisite: Completion of Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

JOUR 205 History of American Journalism credit: 3 Hours.

Surveys the history of the field of journalism since pre-colonial times. Includes the evolution of the media in the United States and the evolution of cultural concepts concerning the media, including rights granted under the First Amendment. Credit is not given for JOUR 205 if credit for JOUR 405 has been earned.

JOUR 210 Newsgathering Across Platforms credit: 4 Hours.

Fundamentals of journalistic reporting and writing across print, broadcast and digital platforms. Credit is not given for JOUR 210 if credit for JOUR 400 has been earned. Prerequisite: JOUR 200.

JOUR 215 Multimedia Reporting credit: 4 Hours.

Designed to acquaint students with the fundamentals of digital photography, video, audio and multimedia as it applies to journalism. Instruction will include conceptual frameworks and techniques to create multimedia journalism content; the conception, planning and creation of multimedia projects; coverage of events with audio, video and photographs; the technical and creative aspects of digital photography, video, and multimedia; delivery platforms for multimedia content including the Web and evolving communication technologies. Credit is not given for JOUR 215 if credit for JOUR 410 has been earned. Prerequisite: JOUR 210 or consent of Journalism Department.

JOUR 220 News Editing credit: 4 Hours.

Editing and headline writing, news judgment, ethics and leadership. Credit is not given for JOUR 220 if credit for JOUR 320 has been given.

JOUR 250 Journalism Ethics & Diversity credit: 3 Hours.

Focuses on media decision-making and news judgment, specifically ethics and diversity in newsgathering with regard to scope, privacy, bias, economic concerns, and accountability. Examines real-life news decisions and the thoughts of journalists who lived through famous and infamous ethics situations. Key provisions in the Society of Professional Journalists Code of Ethics regarding use of diverse voices will be discussed and applied in practical ways, and both students and the instructor will find current examples of ethics issues to present to the class. Diversity education is part of the required standard for achieving journalism accreditation from the discipline's national accrediting body.

JOUR 293 Digital Photography for Everyone credit: 3 Hours.

Foundations of digital photography, techniques to produce photographs; the conception and planning of pictures; the pictorial coverage of locations, events and human interest situations; and the planning and execution of photos in print, on the web and other electronic media are the focus of this hands-on course. You will develop a practical understanding of the potentials and realities of photographic communication to better use them for full expression of your vision. Approved for Letter and S/U grading.

JOUR 311 Media Law credit: 3 Hours.

Detailed analysis of the theories of freedom of expression, the legal doctrines of greatest concern to mass communicators, and contemporary issues related to free speech and press, including libel, copyright, and news-gathering in a digital age. Credit is not given for JOUR 311 if credit for JOUR 411 has been earned.

JOUR 315 Adv Public Affairs Reporting credit: 4 Hours.

Study and extensive practice of in-depth public affairs reporting - its concepts, techniques, traditions, ethics, and social obligations. Credit is not given for JOUR 315 if credit for JOUR 415 has been earned. Prerequisite: JOUR 210.

JOUR 320 News Editing credit: 4 Hours.

Editing and headline writing, news judgment, ethics and leadership. Credit is not given for JOUR 320 if credit for JOUR 420 has been earned.

JOUR 335 Audio Journalism credit: 4 Hours.

Reporting and writing news for audio programs and websites. Credit is not given for JOUR 335 if credit for JOUR 435 has been earned. Prerequisite: JOUR 210.

JOUR 340 Video Reporting & Storytelling credit: 4 Hours.

Introduces news studio and field production and principles of field reporting and editing of news video; principles of planning, producing, and directing news and public affairs programs. Credit is not given for JOUR 340 if credit for JOUR 440 has been earned. Prerequisite: JOUR 210.

JOUR 360 The Media and You credit: 3 Hours.

The course will survey contemporary public relations to clarify several elements: publicity, advertising, branding, press agency, public affairs, issues management, lobbying, investor relations and development. Students will learn to work with the press and the ethical dimensions of the relationships that form. The course will employ real and hypothetical case studies. Teams will develop strategies to reach a PR goal. Each team will make presentations to be judged by real clients or the instructor and guest judges.

JOUR 361 Readings in Sports Journalism credit: 3 Hours.

Books about sports and sports personalities are perennial best-sellers. Students in this course will read, analyze and discuss long-form sports journalism. Some of the books and stories are considered classics of the form; others may be fairly recent and news-worthy publications. All will represent varied approaches to sports journalism in books, magazines and digital experiments and forms.

JOUR 421 Editing for Publication credit: 3 Hours.

Principles and practice of editing across disciplines. Content includes style, grammar, punctuation, word usage, clarity and brevity. Both print and digital environments are considered. Students will edit text and display copy such as headlines and photo captions. 3 undergraduate hours. 3 graduate hours. Credit is not given for both JOUR 421 and JOUR 320. Journalism majors should enroll in JOUR 320. Prerequisite: Advanced Composition.

JOUR 425 Multimedia Editing and Design credit: 4 Hours.

Principles of visual reporting and editing; seeks to instill application-level competency in a wide array of non-linear, non-narrative techniques of journalistic storytelling across various media. 4 undergraduate hours. 4 graduate hours. Prerequisite: JOUR 215.

JOUR 445 Video Storytelling 2-Producing credit: 4 Hours.

Advanced techniques for reporting, producing, writing, shooting, and editing video news stories and for producing and airing regularly scheduled news programs on deadline. 4 undergraduate hours. 4 graduate hours. Prerequisite: JOUR 340.

JOUR 450 Media and Public Opinion credit: 3 Hours.

Theory of public opinion and communications; relation of communication systems to public opinion, social systems, and the political order. 3 undergraduate hours. 3 graduate hours. Prerequisite: Completion of Quantitative Reasoning I.

JOUR 451 Research Methods in Journalism credit: 3 Hours.

Introduction to social science principles of measurement, sampling, statistical inferences and logic of research design in collection, analysis and interpretation of information used in journalism and mass media. 3 undergraduate hours. 3 graduate hours. Prerequisite: Completion of Quantitative Reasoning I requirement. JOUR 200 recommended, or graduate standing.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

JOUR 452 Great Books of Journalism credit: 3 Hours.

Books written by journalists have had great impact on U.S. public policy and understanding, covering such topics as corporate power, political corruption, rural poverty, the atomic bombing of Japan, Watergate, and a soldiers-eye view of war. From hard-edged investigations to nonfiction literature, the readings broaden and deepen understanding of the power and purpose of journalism beyond breaking news and celebrities. Readings from eight groundbreaking books, assessment of social and professional impact, ethical issues, reporting and writing approaches, and extensive class discussion. 3 undergraduate hours. 3 graduate hours.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

JOUR 453 Crisis Communications credit: 3 Hours.

Students will take on the role of a public relations/public affairs officer to learn how to deal with the media when managing a crisis for a client, whether a multinational corporation or a professional athlete. Students will use case studies of actual events to examine how the media dealt with the crisis. Students will get a look at the inner workings of a major PR firm devoted to telling the truth while managing the message. 3 undergraduate hours. 3 graduate hours.

JOUR 454 Propaganda & the News Media credit: 3 or 4 Hours.

The course examines techniques and processes of propaganda in a democratic society. It draws from contemporary theories of influence and persuasion to identify propaganda in the context of modern journalism, to delineate differences between propaganda and information, and to assess the impact of propaganda on democratic decision making in the digital age. Particular attention is given to the news media practices and consumption patterns that unwittingly facilitate strategies of modern propagandists. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior or Graduate standing.

JOUR 460 Special Topics credit: 1 to 4 Hours.

A changing array of special projects, research or reading in journalism. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent semesters if topics vary.

JOUR 470 International Reporting credit: 3 Hours.

Role of international news in daily lives. Examines those who report it and those who pioneered it. Students monitor how U.S. and international media cover selected countries and learn how to write international news. In selected semesters, students may research issues and life in a foreign country in preparation for an international reporting trip. 3 undergraduate hours. 3 graduate hours.

JOUR 471 Science Journalism credit: 3 Hours.

Students will explore media coverage of science. They will examine the interconnections of scientific advances and public understanding. The seminar format will allow students to interview scientists and journalists, to discuss work, and to become science communicators. Subject matter of reporting projects will be determined by the background and interests of the students. Field trips and Illinois science will be featured. 3 undergraduate hours. 3 graduate hours.

JOUR 472 Business Reporting credit: 3 Hours.

Learning to follow the money is a key part of covering corporate America, professional sports or Hollywood. No need to fear financial statements: This course shows you easy methods to pick them apart and turn them into smart stories. Students learn to report and write stories using the Wall Street Journal's feature methods. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210 or JOUR 400. Journalism or Agricultural Communications major(s). Restricted to students with Sophomore, Junior, Senior, or Graduate class standing.

JOUR 475 Magazine Writing credit: 3 Hours.

Preparation of feature stories and articles; techniques of marketing, market analysis, and publishing articles written in the course. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210.

JOUR 480 Advanced Reporting Topics credit: 3 Hours.

Advanced reporting projects or techniques, with separate sections for a varying array of topics such as investigative reporting, immersion journalism, literary journalism, business and financial journalism, online publishing, radio news features, sports writing, broadcast documentary production, digital journalism, and photo journalism. 3 undergraduate hours. 3 graduate hours. May be repeated in the same or subsequent semesters if topics vary. Prerequisite: JOUR 210.

JOUR 481 Literary Feature Writing credit: 3 Hours.

Course focuses on concept, reporting practice, and ethics of literary approaches to create evocative, story-like journalism articles. Students report and write a single in-depth story that will be re-reported and re-written three times. Includes extensive readings illustrating the finest literary journalism. The class includes extensive self, class and professor criticism and editing. Articles for this class have been published in the News-Gazette and other publications. An archive of published stories can be found at intimatejournalism.com. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210. Journalism majors only.

JOUR 482 Immersion Journalism credit: 3 or 4 Hours.

The interview methodology students learn is seen as the best way to provide the ethnographer/writer/reporter with insight into social phenomena. The methodology can be used to examine living conditions, family history and attitudes of ethnic groups at any class level – wealthy, affluent, middle class, poor or underclass. Students with insatiable curiosity about behavior will be able to extract from participants surprising revelations about their needs, desires and motivations. Students will learn how personalities, circumstances, and choices made by participants' parents and forebears affect the participant's life today. Same as AFRO 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: Juniors, Seniors and Graduate students of any discipline.

JOUR 483 Investigative Journalism credit: 3 Hours.

The investigative methodology students learn is seen as the best way to provide the producer/editor/reporter with insight into social issues, government and businesses practices and systems. The methodology can be used to examine and topics or issue. Students will use data, documents, interviews and field observation to collect information, do basic data analysis, test hypotheses, and produce stories in text, audio, or video or all. Students will learn how to do deep research, organize complex material, and produce presentations that are easy for the public to understand. 3 undergraduate hours. 3 graduate hours.

JOUR 490 Professional Project credit: 3 Hours.

Individual and team-produced advanced enterprise projects in specialized fields. 3 undergraduate hours. 3 graduate hours. May be repeated in the same or subsequent semesters if topics vary.

JOUR 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved professional, industry related internship. 0 to 1 undergraduate hours. 0 to 1 graduate hours. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours or 2 graduate hours. May be repeated in separate terms to a maximum of 3 undergraduate hours or 3 graduate hours. Prerequisite: Consent of instructor.

Journalism Minor

The Minor in Journalism allows a student to explore the role of journalism in a democracy and to assess how journalism is meeting its social responsibility to engage, enlighten and empower citizens. The minor equips students to participate in the ever-changing world of media delivery and consumption.

Code	Title	Hours
JOUR 200	Introduction to Journalism	3
JOUR 205	History of American Journalism	3
JOUR 250	Journalism Ethics & Diversity	3
JOUR 311	Media Law	3
Select two courses from the following:		6-7
JOUR 210	Newsgathering Across Platforms ¹	
JOUR 360	The Media and You	
JOUR 361	Readings in Sports Journalism	
JOUR 421	Editing for Publication	
JOUR 450	Media and Public Opinion	
JOUR 451	Research Methods in Journalism ²	
JOUR 452	Great Books of Journalism	
JOUR 453	Crisis Communications	
JOUR 454	Propaganda & the News Media	
JOUR 470	International Reporting	
JOUR 471	Science Journalism	
JOUR 482	Immersion Journalism	
JOUR 483	Investigative Journalism	
Total Hours		18-19

¹ JOURN 200 is a prerequisite for JOURN 210.

² JOURN 200 and Quantitative Reasoning I are prerequisites for JOURN 451.

Media and Cinema Studies

Dr. C. L. Cole, Department Head

119 Gregory Hall, 810 South Wright Street, Urbana
PH: (217) 333-1549

<https://media.illinois.edu/degrees/media-and-cinema-studies-bs/undergraduate-programs>

The Department of Media and Cinema Studies in the College of Media offers a B.S. Degree in Media and Cinema Studies with two concentrations, Media Studies and Cinema Studies. Students from outside the College can earn an undergraduate Minor in Cinema Studies and a graduate Minor in Cinema Studies. College of Media students may not pursue the Minor in Cinema Studies.

Students in the Media and Cinema Studies program develop an understanding of modern communications, media, and cinema from an interdisciplinary perspective. They explore the theory behind contemporary media and the origins, structures and implications for our society. Students also address the history of media and cinema both in the United States and internationally. The development of all mediated forms is considered in light of more general concerns about technology, culture, society, and politics.

For the Degree of Bachelor of Science in Media and Cinema Studies

To graduate from the media and cinema studies curriculum, a student must meet all general University and College requirements for the degree and must complete the following courses, all of which must be taken for a traditional letter grade and for which all prerequisites will be enforced.

Code	Title	Hours
Core Curriculum		17
MACS 203	Contemporary Movies	3
MACS 264	Creative and Information Economies	4
MACS 317	Media History	3
MACS 320	Popular Culture	3
MACS 351	Social Aspects of Media	3

Code	Title	Hours
Thematic Areas		15
5 additional courses in at least 2 of the following thematic areas.		
In addition, students can declare a specialization by taking 4 courses in 1 thematic area or by completing the requirements of a related certificate program.		
All students must complete a senior project in a 400-level course.		

Cinema Studies	
MACS 100	Intro to Popular TV & Movies
MACS 205	Introduction to Documentary
MACS 261	Survey of World Cinema I
MACS 262	Survey of World Cinema II
MACS 321	Film Culture
MACS 361	Film Theory and Criticism
MACS 464	Film Festivals

See list of other approved classes or contact the department for approval of other classes.

Media Industries & Cultures	
MACS 100	Intro to Popular TV & Movies
MACS 224	Sportsmedia Technology & Culture
MACS 321	Film Culture
MACS 326	New Media, Culture & Society
MDIA 380	21st Century Documentaries
MACS 408	TV Studies

See list of other approved classes or contact the department for approval of other classes.

Difference & Power	
MACS 100	Intro to Popular TV & Movies
MACS 326	New Media, Culture & Society

LLS 435	Commodifying Difference
MACS/GWS 356	Sex & Gender in Popular Media
MACS/AAS 375	Latina/o Media in the US
MACS/AFRO 381	Black Women and Film
MACS 389	International Communications
See list of other approved classes or contact the department for approval of other classes.	

Science, Technology, and Visualization

MACS 166	Contemporary Media Literacy
MACS 224	Sportsmedia Technology & Culture
MACS 326	New Media, Culture & Society
MACS/GWS 345	Digital & Gender Cultures
AGCM 430	Comm in Env Social Movements
See list of other approved classes or contact the department for approval of other classes.	

Global Media and Cinema

MACS 261	Survey of World Cinema I
MACS 262	Survey of World Cinema II
MACS 389	International Communications
MACS/SLAV 419	Russian & East European Film
MACS/SCAN 492	Scandinavian Cinema
MACS/GER 493	German Cinema I
See list of other approved classes or contact the department for approval of other classes.	

Sports Media

RST 130	Foundations of Sport Mgt
MACS 224	Sportsmedia Technology & Culture
MACS/KIN 346	Case Study: Endless Summer
MACS 408	TV Studies
JOUR 361	Readings in Sports Journalism
See list of other approved classes or contact the department for approval of other classes.	

Media Making, Design and Research

MACS 100	Intro to Popular TV & Movies
MACS 166	Contemporary Media Literacy
MACS 323	Studies Film/Media Production
MACS 326	New Media, Culture & Society
MDIA 380	21st Century Documentaries
MACS 464	Film Festivals
See list of other approved classes or contact the department for approval of other classes.	

Code	Title	Hours
College of Media Electives		36
Students must earn at least 36 hours in the College of Media. Remaining hours are completed with ADV, JOUR, MACS, or MDIA electives.		

Code	Title	Hours
Required Area of Study or Minor Outside the College of Media		9

In addition to the courses in the major plan described above, students must complete 9 hours in an approved area outside the College of Media. Approved areas include: African American Studies; American Indian Studies; Anthropology; Art History; Asian American Studies; Business Administration; Communication; Computer Science; Creative Writing; Economics; Food Science and Human Nutrition; Gender and Women's Studies; History; Kinesiology and Community Health; Latina/o Studies; Linguistics; Literature; Natural Resources and Environmental Sciences; Non-English Languages; Philosophy; Political Science; Psychology; Recreation, Sport and Tourism; Regional Area Studies; or Sociology. A university-approved minor may substitute for this requirement. Courses may, if they qualify, also count toward the requirement for advanced hours outside of the College.

Code	Title	Hours
Advanced Hours Requirement		20

At least 20 hours in courses numbered 200 or above. These courses must be outside and not cross-listed with the College of Media. At least 9 of the 20 hours must be in courses numbered 300 and above.

Code	Title	Hours
Total hours required for graduation		124

Minor in Cinema Studies

The Minor in Cinema Studies provides undergraduate students with certain core courses in the discipline while also allowing them the freedom to explore the various approaches to the subject presented by different departments.

The Minor in Cinema Studies requires a minimum of 21 hours distributed over seven courses as follows. At least six hours of advanced (300 or 400) level courses must be included:

Code	Title	Hours
MACS 261	Survey of World Cinema I	3
MACS 262	Survey of World Cinema II	3
Select one of the following (Non-US Cinema):		3-4
MACS 207	Indian Cinema in Context	
MACS 419	Russian & East European Film	
MACS 466	Japanese Cinema	
MACS 470	Topics in Italian Cinema	
MACS 490	Green Screen: Film and Nature	
MACS 492	Scandinavian Cinema	
MACS 493	German Cinema I	
ITAL 270	Introduction to Italian Cinema	
ANTH 266	African Film and Society	
Select one of the following (Identity, Culture and Politics):		3
MACS 211	Intro to African-American Film	
MACS 250	Latina/os on the Bronze Screen	
MACS 275	Am Indian and Indigenous Film	
MACS 335	Film, TV, and Gender	

MACS 356	Sex & Gender in Popular Media	
MACS 365	Asian American Media and Film	
MACS 375	Latina/o Media in the US	
MACS 381	Black Women and Film	
MACS 432	Commodifying Difference	
MACS 461	Politics of Popular Culture	
AAS 120	Intro to Asian Am Pop Culture	
ENGL 272	Minority Images in Amer Film	
Select one of the following:		3-4
MACS 264	Creative and Information Economies	
MACS 317	Media History	
MACS 320	Popular Culture	
MACS 331	Media and Democracy	
MACS 351	Social Aspects of Media	
MACS 410	Media Ethics	

Two additional courses on film offered by or cross-listed with MACS, other than those used to fulfill the requirements above. A list of approved courses is maintained by the department. 6-7

MACS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MACS>)

Courses

MACS 100 Intro to Popular TV & Movies credit: 3 Hours.

The goal of this course is for students to begin to develop a critical understanding of the role of popular movies and television in their own lives and in U.S. culture. The course looks at issues of the relationship of media to social violence, gender identities, sexual identities, adolescents, minority cultures, and the role of the U.S. media globally. It also considers some of the major media genres that characterize U.S. popular television and movies.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

MACS 101 Intro to the Media credit: 3 Hours.

Introduces students to core issues in communication, ranging from the role of language in human history to political questions posed by electronic and digital technologies. Exploring key contemporary problems through timely readings, students learn and write about how the media affect everyday life. Prerequisite: Freshman or sophomore standing.

This course satisfies the General Education Criteria for:

Advanced Composition

MACS 104 Intro to Film credit: 3 Hours.

Same as ENGL 104. See ENGL 104.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 117 Shakespeare on Film credit: 3 Hours.

Same as ENGL 117. See ENGL 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 166 Contemporary Media Literacy credit: 3 Hours.

Develops critical media production skills to assess the importance of new media in contemporary culture. The course emphasizes both social and technical aspects of media. As part of the course, students prepare their own media and evaluate current media literacy projects.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours in separate semesters if topics vary.

MACS 202 Social Aspects Info Tech credit: 3 Hours.

Same as INFO 202 and IS 202. See INFO 202.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 203 Contemporary Movies credit: 3 Hours.

Provides a critical context for recent international cinema by exploring several kinds of genres, aesthetics, and technologies. We will discuss transnational trends in cinema relating to the influence of other media such as gaming, social networking, and personal electronics, as well as consider impacts of economic structures of global filmmaking production and exhibition. We will view popular and art movies, and query longstanding categories such as the teen pic, "woman's" film, and documentary.

MACS 205 Introduction to Documentary credit: 3 Hours.

This course introduces students to one of the fastest growing areas in media today: the documentary. It's designed for students who want to expand their knowledge and appreciation of documentaries in all their forms. Using weekly in-class screenings, discussion, readings, and writing, students will examine a wide variety of documentaries, looking at their styles, purposes, and storytelling "voices", as well as learning the language and other fundamentals of documentary. We will also cover some of the basic methods involved in planning and creating a documentary. Please note: this is NOT a hands-on production course. Prerequisite: Sophomore standing or above required.

MACS 207 Indian Cinema in Context credit: 3 Hours.

Same as CWL 207. See CWL 207.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

MACS 211 Intro to African-American Film credit: 3 Hours.

Examination of the history, theory, and aesthetics of African-American filmmaking from the silent era to the present. Films are analyzed within their sociocultural contexts, with particular attention to how constructions of race, identity, and community interact with class, gender, and sexuality; and the link between film and other forms of Black expressive culture. The impact of African-American film on popular culture, links to the African Diaspora, and relations with other communities of color will also be discussed. Same as AFRO 211.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

MACS 224 Sportsmedia Technology & Culture credit: 3 Hours.

This course is designed for students who are curious about (a) how new technologies are changing sportsmedia cultures, and (b) the kinds of knowledges and skills needed to effectively engage with this powerful cultural and economic industry. We'll use four primary focal points (ESPN, Sport Fandom, Action-Sports, Data Production / Smart Stadiums) to help us understand today's sportsmedia cultural industry's challenges and possibilities, and the kinds of challenges and possibilities that the sportsmedia cultural industry creates for society. We'll also use our course focal points and related industry websites to concretize the key concepts (drawn from theoretical readings and applied studies in media studies, sociology, sport studies, and technology studies).

MACS 227 Studies in Black Television credit: 3 Hours.

Same as AFRO 227. See AFRO 227.

MACS 250 Latina/os on the Bronze Screen credit: 3 Hours.

Same as LLS 250. See LLS 250.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

MACS 261 Survey of World Cinema I credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from its origins through the coming of sound; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MACS 262 Survey of World Cinema II credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from the coming of sound to the present; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MACS 264 Creative and Information Economies credit: 4 Hours.

An introduction to the political economy of the media in the U.S. The purpose of the class is to acquaint students with a core understanding of how the media system operates, and with what effects, in a capitalist society. The course examines the role of advertising, public relations, corporate concentration, and government regulation upon journalism, entertainment, culture, and participatory democracy. The class also examines issues such as the Internet, globalization, and public broadcasting.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MACS 273 American Cinema Since 1950 credit: 3 Hours.

Same as ENGL 273. See ENGL 273.

MACS 275 Am Indian and Indigenous Film credit: 3 Hours.

Same as AIS 275 and ENGL 275. See AIS 275.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

MACS 295 Intro Media/Cinema Topics credit: 3 Hours.

Introduction to the study of special topics in media and cinema studies, including cultural, social, historical, economic, and/or political issues in media and/or cinema. Topics vary but may include: genres, stars, historical movements, thematic studies, television, convergence culture, new media. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary.

MACS 300 Topics in Film and History credit: 3 Hours.

Same as HIST 300. See HIST 300.

MACS 317 Media History credit: 3 Hours.

Presents the nature and development of communication systems; history of communication media; history of journalism, advertising, and broadcasting; and communications in the modern world.

MACS 320 Popular Culture credit: 3 Hours.

Examines the critical literature on mass media entertainment; reviews significant contemporary issues and develops perspectives for understanding popular culture.

MACS 321 Film Culture credit: 3 Hours.

Introduces students to key issues of, major theoretical approaches to, and current debates about the cultural function of films. Course addresses theories of spectatorship, the politics of pleasure, the culture of entertainment, and the cinematic construction of race, class, and gender.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 322 Politics and the Media credit: 3 Hours.

Same as CMN 325 and PS 312. See PS 312.

MACS 323 Studies Film/Media Production credit: 1 to 3 Hours.

Provides analytical framework for pursuing film/media production. Emphasizes critical analysis of various aspects of production: e.g., scriptwriting, storyboarding, cinematography, editing, set and costume design, location and studio shooting, sound. Covers theories of representation, narrative, meaning-making, experimentation, and audience in relation to film/media production practices. Does not, however, teach students how to do film and media production (e.g., how to work a camera, etc.). Therefore, students must come to the course with experience in film and/or media production (can be self-taught). Both individual and group projects are encouraged. Students should expect to work as crew for other students in class. Culminates in a public screening at which students present an analysis of their own project—both the process and the finished product. To apply for course, students (individually or in groups) must propose an idea or concept for a film/media project they would like to produce during the class. May be repeated in separate terms to a maximum of 6 hours. May be repeated by students who wish to pursue a longer project in two consecutive semesters (may include summer). Students may not repeat the course to pursue separate projects. Prerequisite: Consent of instructor.

MACS 326 New Media, Culture & Society credit: 3 Hours.

Digital media is an immensely pervasive and powerful form of communication that despite its rapid growth has yet to reach most of the world's population. This lecture-based survey course for undergraduates traces the history and formation of personal computing and the Internet, the development of virtual communities and virtual worlds, evolving forms of digital representation and communication, digital visual cultures, features of new media industries, and the rise of participatory media. Evaluation and assessment is based on written exams, quizzes, class discussion in section, and practice-based assignments using new media technologies such as wikis, blogs, games, and digital video. Emphasis is on mastering key concepts of digital media through theory and history, and on critical discussion of distinctive features of digital media objects. Lectures and discussion sections are held in computer-equipped classrooms. Same as INFO 326.

MACS 331 Media and Democracy credit: 3 Hours.

Studies the philosophical bases of the functions and the responsibilities of mass communications.

MACS 335 Film, TV, and Gender credit: 3 Hours.

Same as GWS 335. See GWS 335.

MACS 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, INFO 345, and SOC 345. See GWS 345.

MACS 346 Case Study: Endless Summer credit: 3 Hours.

Same as KIN 346 and RST 346. See KIN 346.

MACS 351 Social Aspects of Media credit: 3 Hours.

Explores media structures in relation to cultural content and social functions; examines problems of life and society as treated in mass-produced communications. Same as SOC 351.

MACS 352 Attitude Theory and Change credit: 3 Hours.

Same as PSYC 352 and SOC 300. See PSYC 352.

MACS 356 Sex & Gender in Popular Media credit: 3 Hours.

Examines the notion that the mass media influence our development as gendered individuals, looking at those who argue for and against this notion. Considers different forms of feminist theory applied to the study of mass media, the history and scholarly criticisms of the media and their portrayal of women, and feminist attempts to create alternatives to mainstream media images. Throughout, the course considers representation of minorities in the dominant media and examines newly created alternative representations. Same as GWS 356.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 361 Film Theory and Criticism credit: 3 Hours.

Study of major aesthetic and critical theories about film; study of theory and practice of film criticism.

MACS 364 Topics in Media Business credit: 3 Hours.

Addresses the business, industry, and economic implications of the interaction of Internet, television, radio, film, and print outlets through digitization-driven platform and interactive technologies. Explores historical and emergent business models, ownership and work patterns, and investment arrangement related to media convergence. Investigates novel forms of individual and collective labor structures and globally distributed modes of production and consumption. Includes attention to economic and scholarly models seeking to analyze media business structures. Specific topics vary by semester, but may include Google, Disney, and Hollywood studio system, or activist media organizations. May be repeated for a maximum of 6 hours if topics vary.

MACS 365 Asian American Media and Film credit: 3 Hours.

Same as AAS 365. See AAS 365.

MACS 373 Special Topics in Film Studies credit: 3 Hours.

Same as ENGL 373. See ENGL 373.

MACS 375 Latina/o Media in the US credit: 3 Hours.

Examines the portrayal and participation of Latinas and Latinos in the U.S. media using a variety of interdisciplinary approaches. Addresses historical and political movements that have been critical to Latina/Latino print, broadcast, and electronic communication within the broader context of cultural diversity. Same as LLS 375.

MACS 377 Global Communications credit: 3 Hours.

Introduces students to the multiple dimensions of cross-national and comparative communications. Specific topics will vary according to instructor's focus, but may include human dimensions of global communication, intercultural communication, media impact, structure and processes of institutional communication (i.e. propaganda, diplomacy).

MACS 381 Black Women and Film credit: 3 Hours.

Same as AFRO 381. See AFRO 381.

MACS 382 French & Comparative Cinema I credit: 3 Hours.

Same as CWL 387, FR 387, and HUM 387. See FR 387.

MACS 383 French & Comparative Cinema II credit: 3 Hours.

Same as CWL 389, FR 389, and HUM 389. See FR 389.

MACS 389 International Communications credit: 3 Hours.

Provides an interdisciplinary approach to international communications; its structure and content; the role of international communications in conflict and conflict resolution; the semantics of international communication; the technical and economic aspects of international mass communications; and government-industry relations in communications. Same as PS 389.

MACS 391 Individual Study credit: 0 to 3 Hours.

Individual research and exploration of media and cinema studies topics under the guidance of a faculty advisor. May be repeated in the same or in multiple semesters, if topics vary. Prerequisite: Consent of instructor.

MACS 395 Special Media/Cinema Topics credit: 3 Hours.

Cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include: genres, historical movements, thematic studies, television, convergence culture, new media. May be repeated to a maximum of 6 hours if topics vary.

MACS 408 TV Studies credit: 3 or 4 Hours.

Examines factors reshaping TV and its relationship to culture, including genres, industry practices (advertising, production, distribution), new media technologies (YouTube, Twitter, and newer developments), and computer gaming. Analyzes places/spaces of television, mobility, surveillance, television as instruction/guide (dating, cooking, fashion), citizenship, consumption, and TV in everyday life. Focuses on contemporary aspects of TV, with some attention to earlier forms and practices of television. Students required to view and analyze some television programs outside of class. 3 undergraduate hours. 4 graduate hours.

MACS 410 Media Ethics credit: 3 or 4 Hours.

Surveys the major ethical problems in news, advertising, publications and entertainment media; includes case studies and moral reasoning on confidentiality, privacy, conflicts of interest, deception, violence, and pornography. 3 undergraduate hours. 4 graduate hours.

MACS 419 Russian & East European Film credit: 3 or 4 Hours.

Same as SLAV 419. See SLAV 419.

MACS 423 Language Acquisition credit: 3 or 4 Hours.

Same as LING 423 and PSYC 423. See PSYC 423.

MACS 425 Intro to Psycholinguistics credit: 3 or 4 Hours.

Same as LING 425. See LING 425.

MACS 432 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, AFRO 435, GWS 435, and LLS 435. See LLS 435.

MACS 461 Politics of Popular Culture credit: 3 or 4 Hours.

Same as AIS 461. See AIS 461.

MACS 464 Film Festivals credit: 3 or 4 Hours.

Examines the history and significance of film festivals: What they mean for the film industry (marketing, distribution, production), audiences (both at the festival and beyond), film history, and the evolution of filmmaking. Covers specific local, national, and international festivals including festivals focused on particular issues (e.g., Chicago International Children's Film Festival, San Francisco International Asian American Film Festival, Miami Gay and Lesbian Film Festival, and our own local IUB 48-Hour Film Contest). Coordinated with Roger Ebert's Film Festival (which is held in Champaign every April) including internship/volunteer opportunities, screenings, and meetings with guests. Class culminates with a UIUC student film festival, organized, judged, and sponsored by the class. 3 undergraduate hours. 4 graduate hours.

MACS 466 Japanese Cinema credit: 3 or 4 Hours.

Examines the influence of Japan's traditional aesthetics on its cinema and surveys its major film movements, genres, and directors. Same as EALC 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in the College of Media or East Asian Languages and Cultures, or consent of instructor.

MACS 470 Topics in Italian Cinema credit: 3 or 4 Hours.

Same as ITAL 470. See ITAL 470.

MACS 490 Green Screen: Film and Nature credit: 3 or 4 Hours.

Same as EURO 489 and SCAN 490. See SCAN 490.

MACS 492 Scandinavian Cinema credit: 3 or 4 Hours.

Same as SCAN 492. See SCAN 492.

MACS 493 German Cinema I credit: 3 Hours.

Same as GER 493. See GER 493.

MACS 494 German Cinema II credit: 3 Hours.

Same as GER 494. See GER 494.

MACS 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved internship. 0 to 1 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours. May be repeated in separate terms to a maximum of 3 undergraduate hours. Prerequisite: Consent of instructor.

MACS 496 Advanced Media/Cinema Topics credit: 3 or 4 Hours.

Advanced study of cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include national and transnational cinemas, directors, genres, historical movements, social and political movements, thematic studies, television, convergence culture, new media. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or separate terms to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: One College of Media course or consent of instructor.

MACS 498 Senior Seminar credit: 3 Hours.

Seminar and tutorial in selected Media and Cinema Studies topics. 3 undergraduate hours. No graduate credit. May be repeated in the same or subsequent semesters to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies major, or consent of instructor.

MACS 499 Senior Thesis credit: 3 Hours.

Individual research for majors in Media and Cinema Studies leading to the completion of a thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies Major, and consent of advisor.

Minor in Cinema Studies

Dr. C. Cole, Department Head

119 Gregory Hall

810 S. Wright Street

PH: 217-333-1549

<http://media.illinois.edu/macs/>

The Minor in Cinema Studies provides undergraduate students with certain core courses in the discipline while also allowing them the freedom to explore the various approaches to the subject presented by different departments.

The Minor in Cinema Studies requires a minimum of 21 hours distributed over seven courses as follows. At least six hours of advanced (300 or 400) level courses must be included:

Code	Title	Hours
Required Courses:		
MACS 261	Survey of World Cinema I	3
MACS 262	Survey of World Cinema II	3
Select ONE of the following Non-US Cinema/Foreign Language courses:		3-4
MACS 207	Indian Cinema in Context	
MACS 382	French & Comparative Cinema I	3
MACS 383	French & Comparative Cinema II	3
MACS 419	Russian & East European Film	
MACS 470	Topics in Italian Cinema	
MACS 490	Green Screen: Film and Nature	
MACS 492	Scandinavian Cinema	
MACS 493	German Cinema I	
MACS 494	German Cinema II	3
ITAL 270	Introduction to Italian Cinema	
ANTH 266	African Film and Society	
Select ONE of the following Culture, Identity and Politics in Media courses:		3
MACS 211	Intro to African-American Film	
MACS 250	Latina/os on the Bronze Screen	
MACS 275	Am Indian and Indigenous Film	
MACS 335	Film, TV, and Gender	
MACS 356	Sex & Gender in Popular Media	
MACS 365	Asian American Media and Film	
MACS 375	Latina/o Media in the US	
MACS 381	Black Women and Film	
MACS 432	Commodifying Difference	
MACS 461	Politics of Popular Culture	
AAS 120	Intro to Asian Am Pop Culture	
ENGL 272	Minority Images in Amer Film	
Select TWO from these additional Cinema Studies courses:		6-7
MACS 117	Shakespeare on Film	3
MACS 300	Topics in Film and History	3
MACS 361	Film Theory and Criticism	3
MACS 391	Individual Study	0 to 3
MACS 395	Special Media/Cinema Topics	3
ENGL 104	Intro to Film	3

ENGL 117	Shakespeare on Film	3
ENGL 273	American Cinema Since 1950	3
ENGL 373	Special Topics in Film Studies	3
HIST 300	Topics in Film and History	3
RUSS 219	Russian Cinema Survey	3
SCAN 490	Green Screen: Film and Nature	3 or 4
SLAV 419	Russian & East European Film	3 or 4
Select ONE of the following Media Studies courses:		3-4
MACS 100	Intro to Popular TV & Movies	3
MACS 199	Undergraduate Open Seminar	1 to 5
MACS 264	Creative and Information Economies	
MACS 317	Media History	
MACS 320	Popular Culture	
MACS 331	Media and Democracy	
MACS 351	Social Aspects of Media	
MACS 410	Media Ethics	

Advanced Hours Requirement: 6

Six hours of advanced (300 or 400) level courses must be included

Please note, we cannot guarantee that all of these courses will be taught on a regular basis, so keep this in mind when selecting courses.

MACS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MACS>)

Courses

MACS 100 Intro to Popular TV & Movies credit: 3 Hours.

The goal of this course is for students to begin to develop a critical understanding of the role of popular movies and television in their own lives and in U.S. culture. The course looks at issues of the relationship of media to social violence, gender identities, sexual identities, adolescents, minority cultures, and the role of the U.S. media globally. It also considers some of the major media genres that characterize U.S. popular television and movies.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

MACS 101 Intro to the Media credit: 3 Hours.

Introduces students to core issues in communication, ranging from the role of language in human history to political questions posed by electronic and digital technologies. Exploring key contemporary problems through timely readings, students learn and write about how the media affect everyday life. Prerequisite: Freshman or sophomore standing.

This course satisfies the General Education Criteria for:

Advanced Composition

MACS 104 Intro to Film credit: 3 Hours.

Same as ENGL 104. See ENGL 104.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 117 Shakespeare on Film credit: 3 Hours.

Same as ENGL 117. See ENGL 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 166 Contemporary Media Literacy credit: 3 Hours.

Develops critical media production skills to assess the importance of new media in contemporary culture. The course emphasizes both social and technical aspects of media. As part of the course, students prepare their own media and evaluate current media literacy projects.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours in separate semesters if topics vary.

MACS 202 Social Aspects Info Tech credit: 3 Hours.

Same as INFO 202 and IS 202. See INFO 202.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 203 Contemporary Movies credit: 3 Hours.

Provides a critical context for recent international cinema by exploring several kinds of genres, aesthetics, and technologies. We will discuss transnational trends in cinema relating to the influence of other media such as gaming, social networking, and personal electronics, as well as consider impacts of economic structures of global filmmaking production and exhibition. We will view popular and art movies, and query longstanding categories such as the teen pic, "woman's" film, and documentary.

MACS 205 Introduction to Documentary credit: 3 Hours.

This course introduces students to one of the fastest growing areas in media today: the documentary. It's designed for students who want to expand their knowledge and appreciation of documentaries in all their forms. Using weekly in-class screenings, discussion, readings, and writing, students will examine a wide variety of documentaries, looking at their styles, purposes, and storytelling "voices", as well as learning the language and other fundamentals of documentary. We will also cover some of the basic methods involved in planning and creating a documentary. Please note: this is NOT a hands-on production course. Prerequisite: Sophomore standing or above required.

MACS 207 Indian Cinema in Context credit: 3 Hours.

Same as CWL 207. See CWL 207.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

MACS 211 Intro to African-American Film credit: 3 Hours.

Examination of the history, theory, and aesthetics of African-American filmmaking from the silent era to the present. Films are analyzed within their sociocultural contexts, with particular attention to how constructions of race, identity, and community interact with class, gender, and sexuality; and the link between film and other forms of Black expressive culture. The impact of African-American film on popular culture, links to the African Diaspora, and relations with other communities of color will also be discussed. Same as AFRO 211.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

MACS 224 Sportsmedia Technology & Culture credit: 3 Hours.

This course is designed for students who are curious about (a) how new technologies are changing sportsmedia cultures, and (b) the kinds of knowledges and skills needed to effectively engage with this powerful cultural and economic industry. We'll use four primary focal points (ESPN, Sport Fandom, Action-Sports, Data Production / Smart Stadiums) to help us understand today's sportsmedia cultural industry's challenges and possibilities, and the kinds of challenges and possibilities that the sportsmedia cultural industry creates for society. We'll also use our course focal points and related industry websites to concretize the key concepts (drawn from theoretical readings and applied studies in media studies, sociology, sport studies, and technology studies).

MACS 227 Studies in Black Television credit: 3 Hours.

Same as AFRO 227. See AFRO 227.

MACS 250 Latina/os on the Bronze Screen credit: 3 Hours.

Same as LLS 250. See LLS 250.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

MACS 261 Survey of World Cinema I credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from its origins through the coming of sound; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MACS 262 Survey of World Cinema II credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from the coming of sound to the present; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

MACS 264 Creative and Information Economies credit: 4 Hours.

An introduction to the political economy of the media in the U.S. The purpose of the class is to acquaint students with a core understanding of how the media system operates, and with what effects, in a capitalist society. The course examines the role of advertising, public relations, corporate concentration, and government regulation upon journalism, entertainment, culture, and participatory democracy. The class also examines issues such as the Internet, globalization, and public broadcasting.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

MACS 273 American Cinema Since 1950 credit: 3 Hours.

Same as ENGL 273. See ENGL 273.

MACS 275 Am Indian and Indigenous Film credit: 3 Hours.

Same as AIS 275 and ENGL 275. See AIS 275.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

MACS 295 Intro Media/Cinema Topics credit: 3 Hours.

Introduction to the study of special topics in media and cinema studies, including cultural, social, historical, economic, and/or political issues in media and/or cinema. Topics vary but may include: genres, stars, historical movements, thematic studies, television, convergence culture, new media. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary.

MACS 300 Topics in Film and History credit: 3 Hours.

Same as HIST 300. See HIST 300.

MACS 317 Media History credit: 3 Hours.

Presents the nature and development of communication systems; history of communication media; history of journalism, advertising, and broadcasting; and communications in the modern world.

MACS 320 Popular Culture credit: 3 Hours.

Examines the critical literature on mass media entertainment; reviews significant contemporary issues and develops perspectives for understanding popular culture.

MACS 321 Film Culture credit: 3 Hours.

Introduces students to key issues of, major theoretical approaches to, and current debates about the cultural function of films. Course addresses theories of spectatorship, the politics of pleasure, the culture of entertainment, and the cinematic construction of race, class, and gender.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 322 Politics and the Media credit: 3 Hours.

Same as CMN 325 and PS 312. See PS 312.

MACS 323 Studies Film/Media Production credit: 1 to 3 Hours.

Provides analytical framework for pursuing film/media production. Emphasizes critical analysis of various aspects of production: e.g., scriptwriting, storyboarding, cinematography, editing, set and costume design, location and studio shooting, sound. Covers theories of representation, narrative, meaning-making, experimentation, and audience in relation to film/media production practices. Does not, however, teach students how to do film and media production (e.g., how to work a camera, etc.). Therefore, students must come to the course with experience in film and/or media production (can be self-taught). Both individual and group projects are encouraged. Students should expect to work as crew for other students in class. Culminates in a public screening at which students present an analysis of their own project—both the process and the finished product. To apply for course, students (individually or in groups) must propose an idea or concept for a film/media project they would like to produce during the class. May be repeated in separate terms to a maximum of 6 hours. May be repeated by students who wish to pursue a longer project in two consecutive semesters (may include summer). Students may not repeat the course to pursue separate projects. Prerequisite: Consent of instructor.

MACS 326 New Media, Culture & Society credit: 3 Hours.

Digital media is an immensely pervasive and powerful form of communication that despite its rapid growth has yet to reach most of the world's population. This lecture-based survey course for undergraduates traces the history and formation of personal computing and the Internet, the development of virtual communities and virtual worlds, evolving forms of digital representation and communication, digital visual cultures, features of new media industries, and the rise of participatory media. Evaluation and assessment is based on written exams, quizzes, class discussion in section, and practice-based assignments using new media technologies such as wikis, blogs, games, and digital video. Emphasis is on mastering key concepts of digital media through theory and history, and on critical discussion of distinctive features of digital media objects. Lectures and discussion sections are held in computer-equipped classrooms. Same as INFO 326.

MACS 331 Media and Democracy credit: 3 Hours.

Studies the philosophical bases of the functions and the responsibilities of mass communications.

MACS 335 Film, TV, and Gender credit: 3 Hours.

Same as GWS 335. See GWS 335.

MACS 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, INFO 345, and SOC 345. See GWS 345.

MACS 346 Case Study: Endless Summer credit: 3 Hours.

Same as KIN 346 and RST 346. See KIN 346.

MACS 351 Social Aspects of Media credit: 3 Hours.

Explores media structures in relation to cultural content and social functions; examines problems of life and society as treated in mass-produced communications. Same as SOC 351.

MACS 352 Attitude Theory and Change credit: 3 Hours.

Same as PSYC 352 and SOC 300. See PSYC 352.

MACS 356 Sex & Gender in Popular Media credit: 3 Hours.

Examines the notion that the mass media influence our development as gendered individuals, looking at those who argue for and against this notion. Considers different forms of feminist theory applied to the study of mass media, the history and scholarly criticisms of the media and their portrayal of women, and feminist attempts to create alternatives to mainstream media images. Throughout, the course considers representation of minorities in the dominant media and examines newly created alternative representations. Same as GWS 356.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 361 Film Theory and Criticism credit: 3 Hours.

Study of major aesthetic and critical theories about film; study of theory and practice of film criticism.

MACS 364 Topics in Media Business credit: 3 Hours.

Addresses the business, industry, and economic implications of the interaction of Internet, television, radio, film, and print outlets through digitization-driven platform and interactive technologies. Explores historical and emergent business models, ownership and work patterns, and investment arrangement related to media convergence. Investigates novel forms of individual and collective labor structures and globally distributed modes of production and consumption. Includes attention to economic and scholarly models seeking to analyze media business structures. Specific topics vary by semester, but may include Google, Disney, and Hollywood studio system, or activist media organizations. May be repeated for a maximum of 6 hours if topics vary.

MACS 365 Asian American Media and Film credit: 3 Hours.

Same as AAS 365. See AAS 365.

MACS 373 Special Topics in Film Studies credit: 3 Hours.

Same as ENGL 373. See ENGL 373.

MACS 375 Latina/o Media in the US credit: 3 Hours.

Examines the portrayal and participation of Latinas and Latinos in the U.S. media using a variety of interdisciplinary approaches. Addresses historical and political movements that have been critical to Latina/Latino print, broadcast, and electronic communication within the broader context of cultural diversity. Same as LLS 375.

MACS 377 Global Communications credit: 3 Hours.

Introduces students to the multiple dimensions of cross-national and comparative communications. Specific topics will vary according to instructor's focus, but may include human dimensions of global communication, intercultural communication, media impact, structure and processes of institutional communication (i.e. propaganda, diplomacy).

MACS 381 Black Women and Film credit: 3 Hours.

Same as AFRO 381. See AFRO 381.

MACS 382 French & Comparative Cinema I credit: 3 Hours.

Same as CWL 387, FR 387, and HUM 387. See FR 387.

MACS 383 French & Comparative Cinema II credit: 3 Hours.

Same as CWL 389, FR 389, and HUM 389. See FR 389.

MACS 389 International Communications credit: 3 Hours.

Provides an interdisciplinary approach to international communications; its structure and content; the role of international communications in conflict and conflict resolution; the semantics of international communication; the technical and economic aspects of international mass communications; and government-industry relations in communications. Same as PS 389.

MACS 391 Individual Study credit: 0 to 3 Hours.

Individual research and exploration of media and cinema studies topics under the guidance of a faculty advisor. May be repeated in the same or in multiple semesters, if topics vary. Prerequisite: Consent of instructor.

MACS 395 Special Media/Cinema Topics credit: 3 Hours.

Cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include: genres, historical movements, thematic studies, television, convergence culture, new media. May be repeated to a maximum of 6 hours if topics vary.

MACS 408 TV Studies credit: 3 or 4 Hours.

Examines factors reshaping TV and its relationship to culture, including genres, industry practices (advertising, production, distribution), new media technologies (YouTube, Twitter, and newer developments), and computer gaming. Analyzes places/spaces of television, mobility, surveillance, television as instruction/guide (dating, cooking, fashion), citizenship, consumption, and TV in everyday life. Focuses on contemporary aspects of TV, with some attention to earlier forms and practices of television. Students required to view and analyze some television programs outside of class. 3 undergraduate hours. 4 graduate hours.

MACS 410 Media Ethics credit: 3 or 4 Hours.

Surveys the major ethical problems in news, advertising, publications and entertainment media; includes case studies and moral reasoning on confidentiality, privacy, conflicts of interest, deception, violence, and pornography. 3 undergraduate hours. 4 graduate hours.

MACS 419 Russian & East European Film credit: 3 or 4 Hours.

Same as SLAV 419. See SLAV 419.

MACS 423 Language Acquisition credit: 3 or 4 Hours.

Same as LING 423 and PSYC 423. See PSYC 423.

MACS 425 Intro to Psycholinguistics credit: 3 or 4 Hours.

Same as LING 425. See LING 425.

MACS 432 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, AFRO 435, GWS 435, and LLS 435. See LLS 435.

MACS 461 Politics of Popular Culture credit: 3 or 4 Hours.

Same as AIS 461. See AIS 461.

MACS 464 Film Festivals credit: 3 or 4 Hours.

Examines the history and significance of film festivals: What they mean for the film industry (marketing, distribution, production), audiences (both at the festival and beyond), film history, and the evolution of filmmaking. Covers specific local, national, and international festivals including festivals focused on particular issues (e.g., Chicago International Children's Film Festival, San Francisco International Asian American Film Festival, Miami Gay and Lesbian Film Festival, and our own local IUB 48-Hour Film Contest). Coordinated with Roger Ebert's Film Festival (which is held in Champaign every April) including internship/volunteer opportunities, screenings, and meetings with guests. Class culminates with a UIUC student film festival, organized, judged, and sponsored by the class. 3 undergraduate hours. 4 graduate hours.

MACS 466 Japanese Cinema credit: 3 or 4 Hours.

Examines the influence of Japan's traditional aesthetics on its cinema and surveys its major film movements, genres, and directors. Same as EALC 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in the College of Media or East Asian Languages and Cultures, or consent of instructor.

MACS 470 Topics in Italian Cinema credit: 3 or 4 Hours.

Same as ITAL 470. See ITAL 470.

MACS 490 Green Screen: Film and Nature credit: 3 or 4 Hours.

Same as EURO 489 and SCAN 490. See SCAN 490.

MACS 492 Scandinavian Cinema credit: 3 or 4 Hours.

Same as SCAN 492. See SCAN 492.

MACS 493 German Cinema I credit: 3 Hours.

Same as GER 493. See GER 493.

MACS 494 German Cinema II credit: 3 Hours.

Same as GER 494. See GER 494.

MACS 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved internship. 0 to 1 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours. May be repeated in separate terms to a maximum of 3 undergraduate hours. Prerequisite: Consent of instructor.

MACS 496 Advanced Media/Cinema Topics credit: 3 or 4 Hours.

Advanced study of cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include national and transnational cinemas, directors, genres, historical movements, social and political movements, thematic studies, television, convergence culture, new media. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or separate terms to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: One College of Media course or consent of instructor.

MACS 498 Senior Seminar credit: 3 Hours.

Seminar and tutorial in selected Media and Cinema Studies topics. 3 undergraduate hours. No graduate credit. May be repeated in the same or subsequent semesters to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies major, or consent of instructor.

MACS 499 Senior Thesis credit: 3 Hours.

Individual research for majors in Media and Cinema Studies leading to the completion of a thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies Major, and consent of advisor.

Agricultural Communications

Dr. Lulu Rodriguez, Director

274 Bevier Hall

905 S. Goodwin Ave.

PH: 217-300-1045

<http://agcomm.illinois.edu/>

For the Degree of Bachelor of Science with a Major in Agricultural Communications

The major in Agricultural Communications is for students wishing to pursue careers as professionals in writing, editing, and publishing; public relations; advertising; radio and television broadcasting; photography; and related activities with an emphasis on the fields of food, agriculture, the environment, energy and consumer behavior. Concentrations in journalism or advertising allow students to pursue these professional interests. Program requirements in each concentration include the completion of an interdisciplinary minor in Food and Environmental Systems. The College of Agricultural, Consumer and Environmental Sciences and the College of Media jointly offer this curriculum.

A minimum of 126 hours are required for graduation, including:

General Education Requirements

Agricultural Communications major requirements

Minor in Food and Environmental Systems requirements

College of Media concentration requirements

Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
Select one of the following:		6-7
RHET 105 & CMN 101	Writing and Research and Public Speaking (See College Composition I requirement)	
OR		
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition		
Select from campus approved list. (JOUR 200; AGCM 220).		3-4
Cultural Studies		
Select one course from Western/Comparative culture and one from non-Western/U.S. minority culture from campus approved list.		6
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
EPSY 280	Elements of Statistics	
PSYC 235	Intro to Statistics	
SOC 280	Intro to Social Statistics	

SOCW 225	Intro Stat for Social Work	
STAT 100	Statistics (or its equivalent)	
Quantitative Reasoning II		
Select one from campus approved list.		3-4
Natural Sciences and Technology		
Physical Science		
Select one from the following:		3-5
ATMS 100	Introduction to Meteorology	
ATMS 120	Severe and Hazardous Weather	
ATMS 140	Climate and Global Change	
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
ENVS 101	Introduction to Energy Sources	
ESE 117	The Oceans	
ESE 118	Natural Disasters	
GEOL 107	Physical Geology	
PHYS 101	College Physics: Mech & Heat	
Life Science		
Select one from the following:		3-4
ANSC 207	Companion Animal Biology & Care	
ANTH 249	Evolution and Human Disease	
CPSC 112	Introduction to Crop Sciences	
CPSC 113	Environment, Agric, & Society	
FSHN 120	Contemporary Nutrition	
IB 103	Introduction to Plant Biology	
IB 105	Environmental Biology	
IB 109	Insects and People	
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	
Humanities and the Arts		
Select from campus approved list.		6
Social and Behavioral Sciences		
PSYC 100	Intro Psych	4
Select one course from:		
ACE 100	Agr Cons and Resource Econ	
PS 101	Intro to US Gov & Pol	
Agricultural Communications Required		
ACES 101 or ACES 200	Contemporary Issues in ACES / ACES Transfer Orientation	0-2
AGCM 110	Intro to Ag and Env Comm	3
AGCM 320	Public Information Campaigns	4
JOUR 200	Introduction to Journalism	3
Select two of the following:		6-7
AGCM 220	Communicating Agriculture	
AGCM 270	Ag Sales and Persuasive Communication	
AGCM 315	Emerging Media	
AGCM 330	Environmental Communications	
AGCM 398	Undergraduate Seminar	
AGCM 430	Comm in Env Social Movements	
Students must also complete the ACES Minor in Food and Environmental Systems (p. 85)		18
COLLEGE OF MEDIA CONCENTRATION		21-23

Students must choose one of two concentrations:		
ADVERTISING		21
Required courses:		
ADV 150	Introduction to Advertising	3
ADV 281	Advertising Research Methods	3
ADV 283	Advertising and Brand Strategy	3
ADV 284	Consumer Insight	3
Choose three of the following:		
ADV 390	Content Creation	
ADV 409	Media Entrepreneurship	
ADV 460	Innovation in Advertising	
ADV 483	Audience Analysis	
JOURNALISM		23
Required courses:		
JOUR 210	Newsgathering Across Platforms	4
JOUR 215	Multimedia Reporting	4
JOUR 311	Media Law	3
Choose three of the following:		
JOUR 315	Adv Public Affairs Reporting	
JOUR 320	News Editing	
JOUR 425	Multimedia Editing and Design	
JOUR 335	Audio Journalism	
JOUR 340	Video Reporting & Storytelling	
JOUR 445	Video Storytelling 2-Producing	

AGCM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AGCM>)

Courses

AGCM 110 Intro to Ag and Env Comm credit: 3 Hours.

Development and role of communication in relation to food, feed, fiber, energy, natural resources, international development and other dimensions of agriculture. Introduction to channels, methods, challenges and opportunities for improving communication within agriculture and communicating agriculture to the public.

AGCM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in agricultural communications. May be repeated in the same or separate terms as topics vary.

AGCM 220 Communicating Agriculture credit: 3 Hours.

Skills necessary to communicate complex information about the broad agriculture domain to different audiences. Application of communication theories. Emphasis on essential communication skills, including writing, conducting interviews, planning, and critical evaluation of information sources. Same as ENVS 220 and NRES 220. Prerequisite: Completion of a Composition I course.

This course satisfies the General Education Criteria for: Advanced Composition

AGCM 230 Agricultural and Environmental Photography credit: 3 Hours.

Application of photojournalism principles and techniques in the communication of topics related to food, agriculture, the environment, energy and community development for print, broadcast and computer-mediated applications. Emphasis on creative and technical aspects of digital photography.

AGCM 250 Visual Principles for Ag Comm credit: 2 Hours.

This course outlines fundamental design principles and techniques for effective visual communication on print. These principles will be applied in project—magazine pages, logos, brochures, newsletters, posters and signs—to achieve communication objectives. This course provides practical, hands on experience in developing visual presentations about topics related to agriculture, food, fiber, renewable fuel, the environment, and natural resources. Students are introduced to the use of industry-standard desktop publishing software (InDesign, Photoshop, Illustrator).

AGCM 270 Ag Sales and Persuasive Communication credit: 3 Hours.

Sales concepts and persuasive business communication techniques. Role, dynamics, and principles of sales communications related to food, agriculture, and the environment. Sales objectives, market segmentation, prospecting, handling obligations, relationship building, and the nuances of sales communications.

AGCM 293 Communications Internship credit: 1 to 3 Hours.

Supervised experience in a field directly pertaining to agricultural communications. Approved for S/U grading only. May be repeated. Prerequisite: Sophomore standing. AGCM Program approval required.

AGCM 294 Research Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 10 hours. Prerequisite: Sophomore standing.

AGCM 295 Independent Study or Research credit: 1 to 3 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated. Prerequisite: AGCM Program and instructor approval required.

AGCM 315 Emerging Media credit: 3 Hours.

Theories, principles and practices of applying emerging tools, technology, and norms to communicate agriculture to broad audiences. Focus on the strategies and tactics of using new media to communicate food, fuel, fiber, natural resources, health, human nutrition and related topics. Same as ADV 315. Prerequisite: AGCM 220 or ADV 150 or consent of instructor.

AGCM 320 Public Information Campaigns credit: 4 Hours.

Coordinated approach to planning, implementing and evaluating information campaigns in the broad domain of food and agriculture. Students work with groups, agencies and organizations in designing communication campaigns strategies and tactics. Prerequisite: Sophomore standing and Composition I course.

This course satisfies the General Education Criteria for: Advanced Composition

AGCM 330 Environmental Communications credit: 3 Hours.

Basics of communicating about environmental issues to various audiences, emphasizing communication to lay publics. Gathering information about a current environmental issue, analyzing interests of groups involved, and examining strategies for communicating clearly to different groups. Same as ENVS 330 and NRES 330. Prerequisite: Sophomore standing.

AGCM 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated for up to 6 hours in separate terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

AGCM 398 Undergraduate Seminar credit: 1 to 3 Hours.

Special topics in a field of study directly pertaining to subject matter in agricultural communications. May be repeated in the same or subsequent terms to a maximum of 12 hours.

AGCM 430 Comm in Env Social Movements credit: 3 Hours.

Examines the interests, values systems and communications strategies of key participants in the environmental movement. Students examine environmental issues and predict possible reactions from key participants in the environmental arena. Same as ENVS 430, NRES 430, and SOC 464. 3 undergraduate hours. 3 graduate hours. Prerequisite: Composition I course.

AGCM 499 Seminar credit: 1 to 4 Hours.

Special topics in agricultural communications. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 12 hours as topics vary.

Social Work, School of

<http://socialwork.illinois.edu>

Dean of the School: Dean Wynne Korr
 Director of BSW Program: Brenda Lindsey
 1010 W. Nevada St.
 Urbana, IL 61801
 (217) 244-5246
 E-mail: undergradsocialwork@illinois.edu
 (undergradsocialwork@illinois.edu)

Overview of Curriculum and Requirements

The purpose of undergraduate social work education at the School of Social Work is to provide a comprehensive educational experience for students that is grounded in a liberal arts tradition and prepares graduates for excellence in the areas of social work practice, policy, social engagement and leadership.

Upon degree completion, graduates will be prepared for entry into generalist social work practice, advanced standing in graduate social work education, and a multitude of career opportunities. These can include careers in communications, corrections, education, government, health care, human resources, law, non-profit organizations, religious studies, and public service. Obtaining an undergraduate degree in Social Work gives students the opportunity to pursue a License of Social Work (LSW). A BSW degree also makes students eligible to pursue Advanced Standing status in many masters of Social Work (MSW) programs. The advanced standing status enables BSW graduates to receive a MSW in only one year.

The focus of undergraduate curriculum delivery is through a student-centered strengths-based educational model that fosters student understanding by providing a challenging, yet supportive environment of high expectations that encourage the development of well-informed and engaged citizens.

Degree title: Bachelor of Social Work

The social work major prepares practitioners for generalist social work practice with individuals, groups, families and communities. The curriculum requires a minimum of 120 hours for graduation. Minimum required course work in the major equates to 53 course hours of social work coursework, which includes 15 credit hours of combined agency-based field practicum (internship) and field seminar.

Departmental Distinction

The top 10% of the BSW graduating class will graduate with distinction.

Admission Requirements for Freshman

The following requirements must be met for consideration for admission as a freshman into the BSW Program:

- University of Illinois application-The application includes a major selection, an essay, a list of activities, work experience, community service, honors and awards, and an accurate email address
- Application fee
- Self-Reported Academic Record (SRAR)
- Official test scores-Standardized test scores are required for admission review: either ACT (code 1154) or SAT I (cod 1836) scores are accepted
- English proficiency
- We do NOT accept letters of recommendation

For more detailed information regarding application requirements and the application process, please visit the University of Illinois Admissions website at: www.admissions.illinois.edu (<http://www.admissions.illinois.edu>)

Admission Requirements for Transfer and Inter-College Transfer Students (ICT)

The following requirements must be met for consideration for admission into the BSW Program:

- Documentation of a minimum of 50 (fifty) hours of volunteer¹ or paid work experience must be provided with the submission of the BSW application or prior to beginning the BSM program. These hours must be completed by working with or for an underrepresented population or population in need.¹
- Cumulative minimum GPA 2.5 or higher
- Evidence of strong communication and interpersonal skills
- Evidence of personal attributes that are suitable for the profession of social work
- Successful completion of the application process for entry <https://socialwork.illinois.edu/academics/bachelor-of-social-work/admissions-information/bsw-application/>.

¹ *Volunteer hours may include classroom service learning and work completed through registered student organizations and Greek organization affiliations. If you need assistance obtaining additional hours, please contact the Community Learning Lab (<http://socialwork.illinois.edu/community-learning-lab>) or the Office of Volunteer Programs (<http://union.illinois.edu/get-involved/office-of-volunteer-programs>).*

Application Deadline:

To be guaranteed consideration for the Spring term, you must apply by October 15th. To be guaranteed consideration for the Fall term, you must apply by March 1st. The School of Social Work *may* consider ICT applications after this date if the application specifically requests consideration for an earlier term.

General Education

Code	Title	Hours
Communication Skills and Composition		
CMN 101 & RHET 105 or CMN 111 & CMN 112	Public Speaking and Writing and Research Oral & Written Comm I and Oral & Written Comm II	6-7
Advanced Composition - SOCW 300 will meet the Advanced Composition Requirement		3-4
Language other than English		
Complete of the third level or equivalent is required for graduation. American Sign Language is also acceptable.		0-9
Humanities and the Arts		
Literature and the Arts		3
Historical and Philosophical Perspective		3
Social and Behavioral Science		
Any course that has been approved as a Social and Behavioral Science course from the General Education course list.		9
Cultural Studies		
Western cultures		3
Non-Western/ U.S. minority		3
Natural Sciences and Technology		
Life Science		3
Physical Science		3
Quantitative Reasoning		
SOCW 225	Intro Stat for Social Work	
STAT 100	Statistics	
ECON 202	Economic Statistics I	
EPSY 280	Elements of Statistics	
SOC 280	Intro to Social Statistics	
PSYC 235	Intro to Statistics	
From the approved campus list		3

BSW Requirements

Code	Title	Hours
SOCW 200	Introduction to Social Work	3
SOCW 300	Diversity: Identities & Issues	3
SOCW 401	Practice I	4
SOCW 402	Practice II	3
SOCW 403	Practice III	3
SOCW 410	Social Welfare Pol and Svcs	3
SOCW 427	Social Work Research Methods	3
SOCW 451	HBSE I: Human Development	3
SOCW 461	Professional Practice Seminar I	4
SOCW 470	Field Practicum & Professional Seminar II	15
Social Work electives:		9
SOCW 310	UG Research Assistance	
SOCW 315	Social Work Services for Older Adults	
SOCW 321	Social Entre & Social Change	

SOCW 325	International Development with Grassroots Organizations	
SOCW 330	International Perspectives	
SOCW 360	Social Work and the Military	
SOCW 380	Current Topics in Social Work (may be repeated)	
SOCW 412	Hispanics in the U.S.	
SOCW 416	Child Welfare Issues & Trends	
SOCW 418	Independent Study	
SOCW 420	Subst Use in Social Context	
SOCW 436	Intl SW & Development	
SOCW 455	Social Work with Women	
SOCW 475	Undergraduate Research Abroad	
SOCW 480	UG Research Project	
Total SOCW hours		53
Minimum hours required for graduation		120

The Social Work Minor is designed for students interested in combining a primary academic area with social welfare and professional social work content. It emphasizes synthesis and application of social work theories, policies and research in the development of comprehensive solutions to major social problems.

E-mail: undergradsocialwork@illinois.edu

Code	Title	Hours
Minor required courses:		
SOCW 200	Introduction to Social Work	12
SOCW 300	Diversity: Identities & Issues	
SOCW 410	Social Welfare Pol and Svcs	
SOCW 451	HBSE I: Human Development	
Choose Two:		
SOCW 240	Death & Dying	6
SOCW 297	Asian Families in America	
SOCW 310	UG Research Assistance	
SOCW 315	Social Work Services for Older Adults	
SOCW 321	Social Entre & Social Change	
SOCW 330	International Perspectives	
SOCW 360	Social Work and the Military	
SOCW 380	Current Topics in Social Work	
SOCW 412	Hispanics in the U.S.	
SOCW 416	Child Welfare Issues & Trends	
SOCW 418	Independent Study	
SOCW 420	Subst Use in Social Context	
SOCW 436	Intl SW & Development	
SOCW 455	Social Work with Women	
SOCW 475	Undergraduate Research Abroad	
SOCW 480	UG Research Project	
Total Hours		18

SOCW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SOCW>)

Courses

SOCW 101 SOCW Orientation Seminar credit: 2 Hours.

Informational orientation seminar for Social Work majors to enhance their understanding of college life and social work as a profession.

SOCW 199 Undergraduate Open Seminar credit: 1 to 4 Hours.

Approved for letter and S/U grading. May be repeated.

SOCW 200 Introduction to Social Work credit: 3 Hours.

Broad survey of the field of social work; introduction to social services, social welfare organizations, major social problems and target population groups, and the methods used in working with individuals, groups, and communities; includes the range of personnel and skills in social work agencies, and the means of education and training for social work professionals.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOCW 225 Intro Stat for Social Work credit: 3 Hours.

Introduction of basic concepts in statistics with emphasis on the application of statistical methods in social work research. Topics include: descriptive statistics, probability theory and distributions, point and interval estimation, hypothesis testing, central tendency, variability, independence, contrasts, correlation and regression, non-parametrics, concepts of levels of measurements, and statistical vs. practical significance. Priority will be given to Social Work majors. Credit is not given for SOCW 225 if credit for a college level introductory statistics course has already been earned.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

SOCW 240 Death & Dying credit: 3 Hours.

This course will focus on various aspects of death and dying. Content will examine different types of death, impact of death throughout the lifespan, cultural beliefs and practices regarding death and dying, grief, healing after loss, legal and ethical issues related to death, and the roll of social workers at the end of life. Students will be encouraged to examine their own thoughts, values, feeling, and beliefs about death and dying.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOCW 297 Asian Families in America credit: 3 Hours.

Offers a comparative analysis of Asian families as they cope and adapt to American society. Examines: 1) how families from four major Asian-American groups (Chinese, Indian, Japanese and Korean) function in American society; 2) how these families compare to families in their country of origin; and 3) how these families are similar to or different from the 'typical American' family. Includes visits to Asian cultural institutions and with Asian families. Same as AAS 297 and HDFS 221.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

SOCW 298 Social Work Experiential Learning Fees credit: 0 Hours.

This is a shell course to assess fees to support the cost of providing student learning experiences in social work practice settings. Additional fees may apply. See Class Schedule. Approved for S/U grading only. Prerequisite: The SOCW Admissions and Records Officer will manually add this course to student schedules.

SOCW 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in an approved study-abroad program in Social Work appropriate to the student's course of study. Approved for letter and S/U grading.

SOCW 300 Diversity: Identities & Issues credit: 3 Hours.

This introductory course explores multiple dimensions of diversity in a pluralistic and increasingly globalized society. Using a social work strengths perspective as well as historical, constructivist, and critical conceptual frameworks; the course examines issues of identity, culture, privilege stigma, prejudice, and discrimination. The social construction and implications of race, class, gender, sexual orientation, and other dimensions of difference is examined at individual, interpersonal, and systems levels. Students are expected to use the course material to explore their personal values, biases, family backgrounds, culture, and formative experiences in order to deepen their self-awareness and develop interpersonal skills in bridging differences. Finally, students apply learning from the course to identify characteristics of effective social work and other health and human service provision among people culturally different themselves; and to identify opportunities for change contributing to prejudice reduction and cross-cultural acceptance at home, work and in society.

This course satisfies the General Education Criteria for:

Advanced Composition

Cultural Studies - US Minority

SOCW 310 UG Research Assistance credit: 0 to 3 Hours.

Assist departmental faculty in on-going research. Topics and nature of assistance vary. Capstone paper required. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Majors only.

SOCW 315 Social Work Services for Older Adults credit: 3 Hours.

Focus on the aging process, special needs of older adults, and the role of social work in addressing these needs. All levels of social work intervention are considered, direct practice with older persons and their families, service delivery systems in local communities, and state and national policies. Special attention is given to the needs of caregivers, person-centered care, diverse vulnerable populations and resources for older adults to age in place.

SOCW 321 Social Entre & Social Change credit: 3 Hours.

Intended for undergraduates who have an interest in creating programs and products that have social values for communities. Features social entrepreneurship as an approach to social development and will consider its application and related change strategies to a wide array of social problems. Social entrepreneurship has emerged as a change approach that features the application of entrepreneurial practices to social ventures. Social entrepreneurship is similar to business entrepreneurship in its emphasis on selected program development and management principles and processes, but social entrepreneurs have the primary goal of creating social value in communities rather than personal or shareholder wealth. The initial part of the class will emphasize instructing students in broad concepts and principles related to entrepreneurship, while the latter portion of the course will feature students working on teams to design social projects.

SOCW 325 International Development with Grassroots Organizations credit: 3 Hours.

This course engages students to think critically about international aid and development by cultivating an awareness of moral and ethical dilemmas that often go unconsidered by young professionals. It intends to help students develop greater cultural awareness and humility by recognizing differences in equity and global social, economic, and political structures. The course is a second eight-week offering and uses a blended learning approach with asynchronous online content combined with in-person classroom educational activities. Students apply the knowledge learned through the course by working directly with an international grassroots social organization during a 4-8 week immersion experience abroad. Course is an 8 week pre-departure training is required. Students complete a service learning placement in summer with an international grassroots organization.

SOCW 330 International Perspectives credit: 3 to 6 Hours.

This course provides cross-cultural learning experiences within the context of international community-based service learning. Students will explore human service delivery through direct involvement with international social service institutions. This cultural immersion course is a collaborative partnership between the University of Illinois School of Social Work and selected international universities. Countries visited, varies by semester. May be repeated in separate terms up to 12 undergrad hours if topics vary.

SOCW 335 Cities and Immigrants credit: 3 Hours.

Same as UP 335. See UP 335.

SOCW 350 Health Promotion Practicum credit: 3 Hours.

Same as CHLH 340. See CHLH 340.

SOCW 360 Social Work and the Military credit: 3 Hours.

This course provides an overview of military social work practice including: military culture, issues and needs of soldiers and their families, ethical considerations, and the roll of social workers. Prerequisite: For majors only.

SOCW 380 Current Topics in Social Work credit: 3 to 6 Hours.

Presents and analyzes special topics related to current social work practice, policy and research. Topics vary; see Class Schedule for current offering. May be repeated in the same or separate terms.

SOCW 400 Generalist SW Practice Methods credit: 4 Hours.

Foundation methods course that is a prerequisite for all advanced methods courses. Overview of generalist social work practice and intervention with individuals, groups, organizations and communities; introduction to core concepts, value base and ethical principles of the profession. Emphasis is given to the bio-ecological framework, person-in-environment and systems theory. Skills in developing beginning professional relationships are addressed via a skills lab component. Students begin the process of professional self-awareness to begin to identify how the personal values and beliefs they hold impact upon their interactions. 4 undergraduate hours. 4 graduate hours. Prerequisite: Admission to MSW program.

SOCW 401 Practice I credit: 4 Hours.

Overview of generalist social work practice with individuals, families, groups, organizations, and communities. Designed to introduce core concepts, values, and ethical principles of the profession as well as to provide basic skills, and knowledge related to generalist social work practice with a broad array of client systems. Emphasis is given to the biological-psychological-social-spiritual framework, person-in-environment, strengths perspective, and system theory. Skills in developing beginning professional relationships, which are characterized by mutuality, collaboration, empowerment, and client self determination within the problem-solving process are addressed. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 200.

SOCW 402 Practice II credit: 3 Hours.

Provides students with culturally responsive, micro-level skills development for working with and on behalf of individuals, families, and groups. Builds on the basic helping skills learned in SOCW 401 and offers further practice on interviewing skills, more emphasis on ethical decision-making, assessment, and intervention, evaluation applied to individuals, families, and groups. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 403 Practice III credit: 3 Hours.

Provides knowledge and skills about the theory and practice of planned change in communities and organizations using a generalist model of social work practice. Builds on the foundation knowledge and skills gained in SOCW 401 with emphasis on assessment, planning, intervention, and evaluation skills for macro-level practice. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 410 Social Welfare Pol and Svcs credit: 3 or 4 Hours.

Examination of social welfare within a historical context, addressing the economic, political, social and ideological influences that have shaped the social welfare system and programs. Critical study of the income maintenance system in the United States as a response to the problems of inequality of opportunity and income, poverty, and income security; consideration of alternative approaches with discussion of the social worker's role in the system. 3 undergraduate hours. 4 graduate hours.

SOCW 412 Hispanics in the U.S. credit: 3 or 4 Hours.

Hispanics constitute a growing population in the United States. The size and heterogeneity of Hispanics raises complex issues in crafting public policy and in designing and delivering social services. This course offers an extensive portrait of Hispanics in the United States. Students will explore questions and demographic characteristics, language and religious practices, education, criminal justice, neighborhood and economic restructuring, immigration, social service systems, and community action in the context of creating an effective public policy agenda. Same as LLS 412. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

SOCW 416 Child Welfare Issues & Trends credit: 3 or 4 Hours.

This course examines theoretical and programmatic aspects for child welfare practice. Emphasis is placed on the roles and functions of child welfare workers, including engagement, assessment, intervention and permanency planning. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOCW major.

SOCW 417 Dementia Care for Older Adults credit: 3 or 4 Hours.

This course will equip students with a body of knowledge to supervise, participate in, and facilitate care for persons with dementia throughout the lifespan. Upon completion of the course, students will be eligible for certification as approved dementia trained practitioners. The course will introduce and develop social work practice skills on all levels and choices of dementia care interventions and assessments. Special attention is given to practice skills for working with vulnerable populations and their caregivers through service learning site opportunities and assignments. The course uses an integrated health and person-center care approach with special attention to multi-cultural backgrounds and new family lifestyles related to dementia care. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior completion of SOCW 315 or other Introduction to Aging course is strongly recommended. BSW majors and MSW students only.

SOCW 418 Independent Study credit: 1 to 4 Hours.

Independent study of a topic of special interest in the field of social work. 1 to 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

SOCW 420 Subst Use in Social Context credit: 3 Hours.

Introduces students to the problem of substance abuse and its impact on society. Examines the physiological, psychological, social, and cultural aspects of substance abuse. At the individual and familial levels, the course examines the causes, development, prevention, and treatment of substance abuse. At the societal level, the course examines public policy efforts to regular and control substance use from both historical and contemporary perspective. Implications for social and economic justice are also examined. 3 undergraduate hours. No graduate credit.

SOCW 427 Social Work Research Methods credit: 3 or 4 Hours.

Basic principles of social science research and importance for social work practice: overview of research principles including the stages of a research project, design of research; quantitative and qualitative methodologies, design of questionnaires, methods of data collection and preparation of reports. Introduction to various research designs such as the survey, program evaluation, single subject design, quasi-experiments, and experimental design. Enrollment preference given to students in the MSW program. 3 undergraduate hours. 4 graduate hours.

SOCW 436 Intl SW & Development credit: 3 or 4 Hours.

This online course introduces students to policy and practice issues associated with international social work. It emphasizes ethical dilemmas, with the goal of sensitizing students to the importance of culturally sensitive practice for marginalized populations in global contexts. Weekly online discussion sessions use the Blackboard Online Platform. Students must have high speed internet connection and headset with microphone for course interaction. 3 undergraduate hours. 4 graduate hours.

SOCW 451 HBSE I: Human Development credit: 3 or 4 Hours.

Examination of the major theories that inform social work's understanding of human behavior in a variety of social contexts. A bio-ecological systems framework, together with a developmental approach in understanding the ways in which individuals, families, groups, organizations, institutions, and communities interact, is presented. Issues of gender, race, ethnicity, socioeconomic status, disability and sexual orientation are introduced so students can gain understanding of how these components affect and influence development across the lifespan. Enrollment preference given to students in the MSW program. 3 undergraduate hours. 4 graduate hours.

SOCW 455 Social Work with Women credit: 3 or 4 Hours.

Focuses on women and now cultural belief systems related to gender are instantiated through the differential treatment of females and males in our education, mental health, social welfare and health care systems; and the consequences of such practices through the lifespan. Includes consideration of policies and practices that support women emphasizing issues of special concern to women of color, lesbians, older women, impoverished women and disabled women. Same as GWS 454. 3 undergraduate hours. 4 graduate hours.

SOCW 457 Health Planning credit: 3 Hours.

Same as CHLH 457. See CHLH 457.

SOCW 461 Professional Practice Seminar I credit: 4 Hours.

The goal of this course is to begin the process of integrating all the foundation knowledge of generalist social work that students have learned and begin applying it to real life situations. Students will complete a portfolio and a service learning experience that will help them being to make the connection between the core competencies, theories and applications to real life experiences. During this course students will begin the process of being matched with the agency where they will serve their internship during the last semester of their senior year. 4 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 470 Field Practicum & Professional Seminar II credit: 15 Hours.

This course is a supervised field practice experience and seminar where students apply knowledge and skills in social work engagement, assessment, planning and interventions to individuals, groups, families, organizations, and communities. Students are expected to promote sustainable social change through planned problem solving and empowerment to enhance the well-being of others. The practicum consists of 32 hours/week for 16 weeks. 15 undergraduate hours. No graduate credit. May be repeated; instructor approval required. Prerequisite: SOCW 461. SOCW majors only.

SOCW 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as CHLH 473, LLS 473, and SOC 473. See LLS 473.

SOCW 475 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of department. Not available to freshman.

SOCW 480 UG Research Project credit: 0 to 3 Hours.

Conduct research study under the supervision of a departmental faculty member. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. Approved for letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Majors only. Not available to freshman and sophomores.

- Animal Sciences (p. 25)
- Anthropology (p. 332)
- Arabic Studies (p. 494)
- Architectural Studies (p. 244)
- Art + Design (p. 267)
- Art History (p. 319)
- Asian American Studies (p. 346)
- Astronomy (p. 349)
- Atmospheric Sciences (p. 351)
- Bioengineering (p. 234)
- Biomolecular Engineering (p. 358)
- Business for Non-Business Majors (p. 124)
- Chemistry (p. 361)
- Cinema Studies (p. 610)
- Civic Leadership (p. 531)
- Classical Archaeology (p. 374)
- Classical Civilization (p. 374)
- Communication (p. 375)
- Community-Based Art Education (p. 267)
- Computational Science and Engineering (p. 238)
- Computer Science (p. 235)
- Creative Writing (p. 409)
- Criminology, Law, and Society (p. 568)
- Crop and Soil Management (p. 34)
- Earth, Society, and Environment (p. 550)
- East Asian Languages and Cultures (p. 387)
- Ecology and Conservation Biology (p. 473)
- Electrical and Computer Engineering (p. 235)
- English (p. 397)
- English as a Second Language (p. 495)
- English as a Second Language, Teacher Education (p. 496)
- Environmental Economics and Law (p. 22)
- Food and Agribusiness Management (p. 23)
- Food and Environmental Systems (p. 85)
- Food Science (p. 64)
- French (p. 417)
- Gender and Women's Studies (p. 422)
- Geography and GIS (p. 424)
- Geology (p. 432)
- German (p. 445)
- Global Studies (p. 449)
- Global Labor Studies (p. 627)
- Global Markets and Society (p. 451)
- Greek (p. 374)
- Hindi Studies (p. 495)
- History (p. 452)
- Horticulture (p. 34)
- Informatics (p. 627)
- Integrative Biology (p. 473)
- International Development Economics (p. 23)
- International Minor in ACES (p. 86)
- International Minor in Engineering (p. 236)

Undergraduate Minors

- Adult Development (p. 66)
- African Studies (p. 328)
- African-American Studies (p. 324)
- Aging (p. 106)
- Agricultural Safety and Health (p. 15)
- American Indian Studies (p. 330)

- Islamic World, Study of the (p. 570)
- Italian (p. 417)
- Jewish Culture and Society (p. 478)
- Journalism (p. 605)
- Landscape Studies (p. 280)
- Latin (p. 374)
- Latin American Studies (p. 480)
- Latina/Latino Studies (p. 481)
- Leadership Studies (p. 87)
- LGBT/Queer Studies (p. 423)
- Linguistics (p. 495)
- Materials Science and Engineering (p. 236)
- Mathematics (p. 505)
- Mathematics: Grades 9-12, Teacher Education (p. 507)
- Medieval Studies (p. 508)
- Molecular and Cellular Biology (p. 510)
- Music (p. 284)
- Natural Resource Conservation (p. 78)
- Nutrition (p. 64)
- Philosophy (p. 519)
- Physics (p. 236)
- Political Science (p. 523)
- Political and Civic Leadership (p. 531)
- Polymer Science and Engineering (p. 237)
- Portuguese (p. 576)
- Psychology (p. 533)
- Public Relations (p. 599)
- Religious Studies (p. 547)
- Russian, East European and Eurasian Studies (p. 548)
- Russian Language and Literature (p. 559)
- Scandinavian Studies (p. 445)
- Science and Technology in Society (p. 474)
- Slavic Language, Literature and Culture (p. 559)
- Social Work (p. 618)
- Sociology (p. 568)
- South Asian Studies (p. 569)
- Spanish (p. 576)
- Spatial and Quantitative Methods in Natural Resources and Environmental Sciences (p. 79)
- Speech and Hearing Science (p. 101)
- Statistics (p. 577)
- Sub-Saharan African Languages (p. 495)
- Sustainability, Energy, and Environment Fellows Program (p. 622)
- Teacher Education Minor in Secondary School Teaching (p. 139)
- Technical Systems Management (p. 16)
- Technology and Management (p. 237)
- Theatre (p. 307)
- Urban Planning (p. 315)
- World Literature (p. 380)

Sustainability, Energy, and Environment Fellows Program (SEE FP)

<http://sustainability.illinois.edu/education/sustainability-minor/>

Why is true sustainability so hard to achieve? Behind every environmentally friendly practice is a web of consequences, trade-offs, feedbacks, and barriers — and this undergraduate minor administered by the Institute for Sustainability, Energy, and Environment (iSEE) will help you develop a systems-level perspective of the economic, environmental and social dimensions of sustainability to help you navigate them.

The Sustainability, Energy, and Environment Fellows Program (SEE FP) is a campuswide undergraduate minor that prepares students for pursuing careers in the corporate sector, nonprofit organizations, government agencies and environmental advocacy groups.

To find out more about the minor and the enrollment process, email Professor Madhu Khanna, iSEE Associate Director for Education & Outreach, at see-fellows@illinois.edu.

Code	Title	Hours
Introduction to Sustainability: choose one of the following ¹		3
ESE 200	Earth Systems	
NRES 287	Environment and Society	
ENVS 301	Tools for Sustainability	3
Economic/Policy/Social Dimensions: Choose one of the following		3-4
ACE 210	Environmental Economics	
UP 460	Transportation/Land Use Policy	
PS 225	Environmental Politics & Policy	
NRES 425	Natural Resources Law & Policy	
NRES 426	Renewable Energy Policy	
NRES 472	Environmental Psychology	
ESE 311	Environmental Issues Today	
LA 370	Environmental Sustainability	
ESE 482	Challenges of Sustainability	
Environmental/Natural Systems: Choose one of the following		3-4
CEE 330	Environmental Engineering	
IB 440	Plants and Global Change	
UP 405	Watershed Ecology and Planning	
NRES 219	Principles of Ecosystem Mgmt	
NRES 348	Fish and Wildlife Ecology	
NRES 429	Aquatic Ecosystem Conservation	
ESE 320	Water Planet, Water Crisis	
ESE 445	Earth Resources Sustainability	
ENSU 310	Renewable & Alternative Energy	
ENVS 492	Sustainability, Energy and Environment Capstone ²	4
Total Hours		16-18

¹ ESE 100 is a course planned for a future semester to be listed as an option. Please address questions to the EFP advisor.

² ENVS 492 will be available starting in the Fall, 2017 semester.

Preprofessional Programs

- Dentistry (p. 623)
- Law (p. 623)
- Medicine (p. 623)
- Nursing (p. 623)
- Occupational Therapy (p. 623)
- Optometry (p. 623)
- Pharmacy (p. 623)
- Physical Therapy (p. 623)
- Physician Assistant (p. 623)
- Veterinary Medicine (p. 623)

Dentistry

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/dentistry>

Law

<http://prelaw.illinois.edu/>

Pre-law advising is part of the Campus Center for Advising and Academic Services (<http://ccaas.illinois.edu>) (CCAAS) at the University of Illinois at Urbana-Champaign. All information on Pre-Law Advising Services (PLAS) is available on their website (<http://prelaw.illinois.edu>).

Medicine

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/medicine>

Nursing

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/nursing>

The University of Illinois-Chicago offers a Bachelor of Science in Nursing (BSN) degree. Information on this program is available at <http://www.nursing.uic.edu/bachelor-science-nursing>.

Occupational Therapy

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/occupational-therapy>

Optometry

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/optometry>

Pharmacy

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/pharmacy>

Physical Therapy

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/physical-therapy>

Physician Assistant

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/physician-assistant>

Veterinary Medicine

Health Professions advising is part of The Career Center at the University of Illinois at Urbana-Champaign. All information on Health Professions advising is available on their website.

<https://www.careercenter.illinois.edu/health-profession/veterinary-medicine>

Teacher Education

Chris Roegge, Executive Director
505 E. Green Street, Suite 203
Champaign, IL 61820

PH: 217-333-7195
FX: 217-265-5188
<http://cote.illinois.edu>

The Council on Teacher Education formulates, modifies, implements, and monitors compliance with policies related to the education of future educators. The Council also facilitates communication and promotes collaboration among all participants involved in the preparation and continuing professional development of educators. The Council is the designated unit responsible for the coordination of teacher, school support personnel, and administrator education curricula at the Urbana campus and serves as the liaison between the campus and state educator licensure and program approval authorities.

Six colleges and two schools of the University of Illinois at Urbana-Champaign offer degree programs in teacher, school support personnel,

and administrator education: the Colleges of Agricultural, Consumer and Environmental Sciences; Applied Health Sciences; Education; Fine and Applied Arts; Liberal Arts and Sciences; and the Graduate College in addition to the School of Information Sciences and the School of Social Work. The list of educator preparation curricula can be found at the end of this section.

Candidates may consult their educator preparation advisers or the Council for additional information about academic regulations and other policies affecting educator preparation. Consult the Executive Director of the Council for information about the Grievance Policy and Procedures for Students Enrolled in Educator Preparation Programs under the purview of the Council on Teacher Education.

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education (ISBE) or the Illinois General Assembly.

Requirements

Admissions

Applicants to educator preparation programs must meet the admission requirements of the colleges and departments offering the chosen curricula. Council policy mandates candidates pass an ISBE approved test of basic skills before they may be admitted to an educator preparation program. Candidates may use an ACT or SAT score to meet the test of basic skills if it meets the ISBE requirements for substitution. See www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf (http://www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf) for information regarding specific requirements.

Applicants are advised that certain felony convictions, enumerated in Articles 10-21.9 and 21B-80 of the School Code of Illinois (<http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1005&ChapAct=105%2%A0ILCS&160;5/&ChapterID=17&ChapterName=SCHOOLS&ActName=School+Code.html>), prohibit licensure or employment in public schools. Questions pertaining to this matter should be addressed to the Council.

Continuation in an Educator Preparation Program

To be eligible for continuation in an educator preparation program, candidates must satisfy all requirements of the applicable Common Assessment Plan (CAP), which includes maintaining University of Illinois at Urbana-Champaign and overall grade point averages of 2.5 (A = 4.0) or higher. In addition, candidates must meet the content area and professional education grade-point requirements specific to their programs. The full text of the three Common Assessment Plans is available on the Council website (<http://www.cote.illinois.edu/about/professional/cap.html>). The Council on Teacher Education reviews each candidate's academic progress after the fall and spring semesters. Candidates who do not meet the criteria of the appropriate CAP will receive a warning letter from the Council advising them that their continuation in the program, entry into student teaching, and receiving a recommendation for licensure from the University are at risk. Candidates will be directed to their college deans for more information. Candidates may be dropped from licensure programs by the Council if they fail to meet the criteria of the appropriate CAP after receiving an initial warning letter.

Teaching effectiveness is influenced not only by academic proficiency, but also by the dispositions and professional behaviors of the candidate. Therefore, faculty members take these characteristics into account

as they evaluate candidates' progress in the program. Teaching effectiveness can also be influenced by the candidate's health. For this reason, the University provides counseling and medical services for all students. A candidate wishing additional information about these services may call or visit the Council office.

Because it is essential that counseling and medical services be offered as soon as the need becomes apparent, educator preparation advisers and faculty members are asked to recommend for assistance or examination any candidate about whom they feel concern. A candidate who is recommended for assistance or examination will receive a written request to make an appointment to discuss the situation. It is a requirement of the Council on Teacher Education that a candidate who receives such a request must respond. Failure to do so will jeopardize the candidate's continuation in their educator preparation program. During the appointment, the candidate will be informed of the counseling (<http://www.counselingcenter.illinois.edu>) and medical services (<http://www.mckinley.illinois.edu>) available at the University. The candidate's use of these services is usually optional. In exceptional cases, however, the Council may require a candidate to satisfactorily complete a mental health or physical examination with one of the campus services. Candidates who wish to continue in teacher education must comply with such referrals.

Student Teaching

State law mandates candidates pass the appropriate content area test prior to student teaching. Students who have not passed the appropriate content area test will not be permitted to student teach. Student teaching application forms are available in the college clinical experiences office that houses each program. (Candidates may obtain referrals to the appropriate office by contacting the Council.) A candidate seeking placement in student teaching should contact the appropriate program's clinical experiences office no later than October 1 of the academic year preceding the desired placement to determine departmental deadlines and meeting dates. Departments may set earlier deadlines. Candidates who apply after their departments' deadlines cannot be guaranteed a student teaching assignment during the next academic year. A candidate who will not be on campus during the fall semester, but who expects to enroll in educational practice (student teaching) during the next school year, should secure an application form from his or her program's clinical experiences office before leaving campus. A candidate who has submitted an application will receive a student teaching assignment pending verification that he or she has completed all requirements of the appropriate Common Assessment Plan.

Only those candidates officially registered in teacher education curricula are eligible for student teaching placements. The Council reserves the right to deny student teaching placement to candidates who have not met all requirements of the appropriate Common Assessment Plan. Candidates may also be denied a student teaching placement for health reasons.

Candidates in teacher education should anticipate and plan for student teaching assignments. For most candidates, additional expense will be incurred during the semester in which student teaching is scheduled. Candidates cannot be guaranteed assignments in local schools. Student teaching is a full-time commitment on the part of teacher candidates. Teacher candidates should not plan to take additional coursework outside their program during student teaching, nor should they plan to be employed. School districts have the right to not accept a candidate and therefore, the Council cannot guarantee each candidate a placement.

However, each program will exhaust every effort to seek a placement for each candidate.

Candidates are expected to complete all field experiences, including student teaching, at the University of Illinois at Urbana-Champaign. A candidate who wishes to complete student teaching through another university, yet receive a University of Illinois at Urbana-Champaign degree and recommendation for licensure, must secure the prior approval of his or her adviser, clinical experiences program coordinator, college, and the Council on Teacher Education via petition. The petition must be supported by verification from the other university that it will accept the candidate as a student teacher and will comply with all Council on Teacher Education requirements. Approvals of such arrangements are rare, and candidates should expect to incur additional costs. Consult the Council for additional information.

Teacher Licensure

A candidate who completes all of the coursework and other requirements in a program approved for purposes of licensure by the Illinois State Board of Education is entitled to receive the recommendation of the University for the appropriate license and endorsement(s), provided the candidate has met all of the requirements of the appropriate Common Assessment Plan and has passed all licensure tests and assessments required by the State of Illinois. In addition, all professional education and content-area coursework that forms part of an application for licensure, endorsement, or approval must have been passed with a grade no lower than "C" or equivalent in order to be counted towards fulfillment of the applicable requirements. CR/NC and proficiency credit may not be used toward licensure, endorsement, or approvals. However, AP credit may be used.

In some instances a candidate may be denied a recommendation for licensure but be granted a degree by his or her college. A candidate who believes that the recommendation for licensure has been withheld unjustly may seek redress through the grievance policy established by the Council on Teacher Education.

General Education

Candidates for licensure are required to complete coursework that includes the theoretical and practical understanding generally expected of a liberally educated person. General education includes developing knowledge related to the arts, communications, history, literature, mathematics, philosophy, sciences, and the social studies from multicultural and global perspectives. This requirement is satisfied by the University of Illinois general education pattern incorporated into all undergraduate teacher education programs.

Licensure Tests

All candidates for licensure as teachers, school administrators, and school support personnel must pass tests mandated by the Illinois State Board of Education as a condition for licensure. Illinois law requires that applicants to all educator preparation programs pass a test in basic skills (reading, writing, grammar, and mathematics) and a separate test in their major area. All candidates in programs leading to teaching must also pass a teacher performance assessment (edTPA). Candidates for Learning Behavior Specialist I licensure must pass a fourth test: Special Education General Curriculum.

State law requires prospective candidates for licensure as school administrators or school support personnel pass a test of basic skills, as determined by the State, if the Illinois Test of Basic Skills was not passed previously. If the basic skill tests was not already taken and passed, the Test of Academic Proficiency must be passed prior to admission to

the educator preparation program. In addition, candidates must pass the appropriate content-area test. Candidates may use an ACT or SAT score to meet the test of basic skills if it meets the ISBE requirements for substitution. See www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf (http://www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf) for information regarding specific requirements.

Time Limit on Licensure

Because licensure requirements are subject to change at any time as a result of new mandates from the Illinois State Board of Education and the Illinois General Assembly, the University is unable to guarantee a recommendation for licensure to anyone who does not apply for licensure immediately upon completion of licensure requirements. A candidate completing an approved program is strongly encouraged to apply for licensure during his or her last term on campus and claim said license on the Educator Licensure Information System (ELIS) once it has been entitled. Applications for licensure are available on the candidate's student portal or in the Council office. Failure to claim a license through the Educator Licensure Information System once it has been entitled could result in additional requirements should candidate seek to claim license at a later date.

Background Investigation of Applicants for Field Placement and Employment

State law mandates that all candidates for public school licensure in programs under the purview of the Council on Teacher Education complete a criminal background check and checks of the Statewide Sex Offender Database and Statewide Child Murderer and Violent Offender Against Youth Database before they may be placed in schools. Candidates are responsible for all fees connected with this procedure.

Final decisions regarding the placement of candidates in schools are made in agreement between the relevant department/college/program and the school/district.

The criminal background check is typically conducted at the time a candidate enters the program and before student teaching or internship.

Each applicant for employment, which includes student teaching, in an Illinois school district is required to authorize the employing school district to initiate a criminal background check which will include a request for fingerprints. A school district may employ a person, or host a student teacher, only after a background check has been initiated and may not knowingly employ a person, or host a student teacher, who has been convicted of a felony or of attempting to commit certain offenses enumerated in The School Code of Illinois. This criminal background check is in addition to that required for field placements at the University of Illinois at Urbana-Champaign.

Curricula

A candidate seeking licensure must complete the requirements of both his or her chosen curriculum, Council on Teacher Education requirements, and all additional State mandated requirements. Teacher education, school support personnel, and administrator curricula and the colleges and departments that offer them are listed below. All curricula have been approved by the Illinois State Board of Education.

Candidates are advised that licensure requirements may be altered at any time by the Illinois State Board of Education or the legislature. In such

cases, candidates may be compelled to satisfy the new requirements to qualify for the University's recommendation for licensure.

College of Agriculture, Consumer and Environmental Sciences (p. 3)

- Agricultural Education¹

College of Applied Health Sciences (p. 87)

- Physical Education¹

College of Education (p. 125)

- Early Childhood Education, Birth - Grade 2 (Includes Early Childhood Special Education Approval)⁴
- Elementary Education, Grades 1-6²
- Learning Behavior Specialist I¹
- Teacher Education Minor in Secondary School Teaching²

College of Fine and Applied Arts (p. 241)

- Music Education¹
- Visual Arts Education¹

College of Liberal Arts and Sciences (p. 320)

- English Language Arts
- Foreign Language: Chinese (Mandarin)¹
- Foreign Language: French¹
- Foreign Language: German¹
- Foreign Language: Latin¹
- Foreign Language: Spanish¹
- Mathematics
- Science: Biology
- Science: Chemistry
- Science: Earth and Space Science
- Science: Physics
- Social Science: History

Graduate College

Graduate-level licensure programs are offered in the areas listed below. For additional information, contact the Council on Teacher Education or departmental office indicated.

Agricultural Education¹

- College of Agricultural, Consumer and Environmental Science Office of Academic Programs

Director of Special Education

- Department of Special Education

Early Childhood Education⁴

- Department of Curriculum and Instruction

Elementary Education²

- Department of Curriculum and Instruction

Foreign Language: Latin¹

- Department of Classics

Foreign Language: Spanish¹

- Department of Spanish, Italian, and Portuguese

Learning Behavior Specialist I¹

- Department of Special Education

Learning Behavior Specialist II^{1,}

- (Options: Curriculum Adaptation, Behavior Interventions, Multiple Disabilities, Transition Specialist)
- Department of Special Education

Library Information Specialist¹

- Graduate School of Library and Information Science

Music¹

- School of Music

Principal

- Department of Education Policy, Organization and Leadership

Reading Specialist

- Department of Curriculum and Instruction

School Social Worker

- School of Social Work

Secondary Education (English Language Arts, Mathematics, Sciences, Social Science: History)³

- Department of Curriculum and Instruction

Speech-Language Pathologist: Non-teaching

- Department of Speech and Hearing Science

Superintendent⁵

- Department of Education Policy, Organization and Leadership

Teacher Leader

- Department of Education Policy, Organization and Leadership

¹ Individuals completing these programs who wish to be able to teach departmentalized subjects in grades five through eight must complete additional coursework and receive the endorsement prior to January 1, 2018. Contact the Council on Teacher Education for additional information.

² Individuals who entered the Elementary Education program Fall 2014 or after will be entitled for grades 1-6 upon completion of all requirements. Individuals who were admitted Fall 2013 or before will be entitled for K-9 upon completion of all requirements if their program is completed by September 1, 2018 and a license is claimed prior to September 1, 2019. Candidates in this category who wish to be able to teach departmentalized subjects in grades five through eight must complete additional coursework and receive the endorsement prior to January 1, 2018. Contact the Council on Teacher Education for additional information.

³ This minor is a required component of the teaching option within the following Science and Letters majors in the College of Liberal Arts and Sciences: biology, chemistry, English, geology, history, mathematics, and physics. It is available only to students registered in these programs.

⁴ Per State rules, no candidates may be admitted into this program on or after September 1, 2017. Individuals entering this program must complete program no later than August 31, 2019.

⁵ Per State rules, no candidate may be admitted into this program on or after September 1, 2016.

Teacher Education Minors

- English as a second language (must be able to obtain ESL endorsement no later than August 31, 2018 as requirements are changing.)
- Mathematics: Grades 9-12

Candidates should be aware that the state recognizes teaching fields that are not listed above. Candidates may obtain subsequent teaching endorsements for any fields for which they satisfy the state minimum requirements. Contact the Council on Teacher Education for additional information regarding the endorsement fields available and the qualifications for each. Endorsement requirements (<http://www.cote.illinois.edu/certification/Endorsements.html>) are also listed on the Council on Teacher Education Web site. (<http://cote.illinois.edu>) Further questions may be directed to the Council on Teacher Education.

Minor in Informatics

Allen Renear, Interim Director, Illinois Informatics Institute
3014 NCSA
1205 W. Clark, MC-257
Urbana, IL 61801
PH: 217-333-4930
FX: 217-333-5878
<http://informatics.illinois.edu>

Contact info- (inf-minor@illinois.edu)minor@illinois.edu, or Karin Readell, the Informatics Education Coordinator at 244-1220, if you have any questions.

The Minor in Informatics will teach you to become a better creator and user of computing technology in your major area and to think critically about new technology's role in society. No other field has, and will have, a greater influence on humanity in our generation.

Informatics studies the design, application, use and impact of information technology. The ability to handle vast amounts of information cheaply has changed the way we live. Advances in computer power, the World Wide Web, search engines, social networking, mobile technology, GIS, and large-scale collaborative initiatives, to name a few, have revolutionized the way knowledge is created and shared. Information has become a ubiquitous, indispensable component of our everyday lives, as we strive to manage information, create knowledge, and make decisions.

The Informatics Minor signals that you have concrete expertise in computing and Information Technology (IT) and understand their human implications.

Students from any major interested in applying technology or studying its affect on humanity are encouraged to apply, preferably by the end of sophomore year. Although there are no prerequisites, basic familiarity with computers is expected.

To receive the Informatics Minor students must complete three core courses plus three upper-level classes with sufficient informatics or computational content from an approved list of courses offered from a

wide range of disciplines. The core courses are INFO 102, CS 105, and INFO 202. INFO 102 is a broad introduction to computer science and provides an understanding of the nature, capabilities, and limitations of IT. CS 105 is an introduction to computer programming for non-science and non-engineering majors. INFO 202 explores the ways in which IT has and is transforming society and how these technologies affect a range of social, political, and economic issues from the individual to societal levels. Some substitutions can be made. The list of upper-level courses that count toward the minor is here: <http://www.informatics.illinois.edu/informatics-minor/upper-level-related-course/>. This list is dynamic as new classes are added.

Course requirements for students who are not CS majors or minors or ECE majors:

Code	Title	Hours
INFO 102	Little Bits to Big Ideas	4
INFO 202	Social Aspects Info Tech	3
Select one of the following:		3
CS 105	Intro Computing: Non-Tech	
CS 101	Intro Computing: Engrg & Sci	
CS 125	Intro to Computer Science	
ECE 120 & ECE 220	Introduction to Computing and Computer Systems & Programming	
3 upper-level courses from an Informatics-approved list of courses from a variety of disciplines, all with sufficient informatics or computational content		9-12
Total Hours		19-22

Course requirements for CS and ECE majors and CS minors:

Code	Title	Hours
INFO 202	Social Aspects Info Tech	3
Select one of the following:		3-4
CS 101	Intro Computing: Engrg & Sci	
CS 125	Intro to Computer Science	
ECE 220	Computer Systems & Programming	
4 upper-level, non-CS courses from an Informatics-approved list		12
Total Hours		18-19

Visit <http://www.informatics.illinois.edu/informatics-minor/633-2/> for information about the Informatics Minor. This minor is offered by the Illinois Informatics Institute, <http://www.informatics.illinois.edu>, 333-4930.

Minor in Global Labor Studies

Global Labor Studies analyzes the interplay of class, gender, race, and labor organizations in the workplace, the economy, and the political arena from a multi-disciplinary and global perspective. A minor in Global Labor Studies requires 18 credit hours in LER Global Labor Studies Courses.

A minimum grade point average of 2.75 is required for completion of the minor and all courses required for the minor must be taken for a grade.

Email: illinoislabored@illinois.edu

Web address: www.illinoislabored.org (<http://catalog.illinois.edu>HTTP://www.illinoislabored.org)

Code	Title	Hours
LER 100	Introduction to Labor Studies	3
LER 130	Intro Labr Wrkng Class History	3
Minimum of six hours 300- or 400-level courses.		6
Two courses that focus on international or comparative labor issues. (LER 200, LER 240, LER 330 and LER 410).		6
<hr/> Total Hours		18

GRADUATE

The Graduate College offers more than 130 master's programs and more than 90 doctoral programs in a wide range of disciplinary fields. Some of these degree programs are offered in part or entirely online.

Available Programs

Degree Programs (emphasis)	School/College	Graduate
Accountancy	BUS	MAS (p. 637), MSA (p. 638), PhD (p. 635), CONC (Tax) (p. 637), CONC (Accy) (p. 639), CONC (Data) (p. 639), Minor (p. 636)
Acting	FAA	CONC (p. 909)
Actuarial Science	LAS	CONC (p. 825)
Advanced Analytics in Industrial Enterprise Systems Engineering	ENGR	CONC (p. 790)
Advanced Clinical Concentration	SOCW	CONC (p. 891)
Advertising	MDIA	MS (p. 639)
Aerospace Engineering	ENGR	MS (p. 642), PhD (p. 643)
African American Studies	LAS	CONC (p. 644), Minor (p. 644)
African Studies	LAS	MA (p. 646), Minor (p. 647)
Agricultural Education	ACES	MS (p. 647)
Agricultural Production	ACES	PSM (p. 648)
Agricultural and Applied Economics	ACES	MS (p. 653), PhD (p. 654)
Agricultural and Biological Engineering	ENGR	MS (p. 651), PhD (p. 650)
American Indian and Indigenous Studies	LAS	Minor (p. 923)
Analytics	LAS	CONC (p. 905)
Animal Sciences	ACES	MS (p. 657), PhD (p. 657), CONC (p. 658)
Anthropology	LAS	MA (p. 659), PhD (p. 659)
Applied Mathematics	LAS	MS (p. 824)
Applied Statistics	LAS	CONC (p. 905)
Architectural Studies	FAA	MS (p. 661)
Architecture	FAA	MARCH (p. 663), PhD (p. 661), CONC (p. 662)
Art Education	FAA	EdM (p. 667), MA (p. 667), PhD (p. 665)
Art History	LAS FAA	MA (p. 666), PhD (p. 666), Minor (p. 665)
Art and Design	FAA	MFA (p. 667)
Asian American Studies	LAS	Minor (p. 923)
Astrochemistry	LAS	CONC (p. 668)
Astronomy	LAS	MS (p. 670), PhD (p. 670)
Atmospheric Sciences	LAS	MS (p. 672), PhD (p. 673)
Audiology	AHS	AuD (p. 902)
Balkan Studies	LAS	Minor (p. 884)
Biochemistry	LAS	MS (p. 675), PhD (p. 675)
Bioengineering	ENGR	MENG (p. 678), MS (p. 678), PhD (p. 677), CONC (p. 678)
Bioinformatics		MS (p. 787)
Biological Sciences, Teaching of	LAS	MS (p. 907)
Biology	LAS	MS (p. 683)
Biomechanics	ENG	CONC (p. 836)
Biophysics and Quantitative Biology	LAS	MS (p. 684), PhD (p. 684)
Bioprocessing and Bioenergy	ACES	PSM (p. 676)
Business Administration	BUS	MBA (p. 695), ExecMBA (p. 693), MS (p. 690), PhD (p. 686), CONC (p. 687)
Cancer Nanotechnology	ENG	CONC (p. 679)
Cell and Developmental Biology	LAS	MS (p. 697), PhD (p. 697)
Chemical Engineering	LAS	MS (p. 701), PhD (p. 700)
Chemical Physics		PhD (p. 698)
Chemical and Biomolecular Engineering	LAS	CONC (p. 700)
Chemistry	LAS	MA, MS (p. 703), PhD (p. 702)
Chemistry Teaching	LAS	MS (p. 703)
Choral Music	FAA	CONC (p. 850)
Cinema Studies	MDIA	Minor (p. 924)
Civic Leadership	LAS	CONC (p. 873)
Civil Engineering	ENGR	MS (p. 706), MENG (p. 707), PhD (p. 706)
Classical Philology	LAS	PhD (p. 709)
Classics	LAS	MA (p. 709)
College Teaching	EDUC	Minor (p. 745)
Communication	LAS	MA (p. 713), PhD (p. 712)
Communications and Media	MDIA	PhD (p. 795)
Community Health	AHS	MSPH (p. 719), MS (p. 718), PhD (p. 715)
Comparative Biomedical Sciences	VMED	PhD (p. 916)
Comparative Literature	LAS	MA (p. 721), PhD (p. 721)
Computational Engineering	ENGR	CONC (p. 833)
Computational Science and Engineering	ENGR	CONC (p. 711)
Computer Science	ENGR	MS (p. 725), MCS (p. 724), PhD (p. 723), CONC (p. 722)
Corporate Governance International Business	BUS	Minor (p. 689)
Corporate Law, Commercial Law, and Trade		CONC (p. 810)
Crafts	FAA	CONC (p. 667)
Creative Writing	LAS	MFA (p. 726)
Criminal Law	LAW	CONC (p. 811)
Crop Sciences	ACES	MS (p. 729), PhD (p. 727), CONC (p. 728)
Curriculum and Instruction	EDUC	EdM (p. 732), MA (p. 734), MS (p. 734), CAS (p. 731), EdD (p. 731), PhD (p. 732)
Dance	FAA	MFA (p. 735), Minor (p. 736)
Design and Technology	FAA	CONC (p. 910)
Digital Libraries	LIS	CONC (p. 815)
Early Childhood Education	EDUC	EdM (p. 733)
Earth Science Teaching	LAS	MS (p. 779)
East Asian Languages and Cultures	LAS	PhD (p. 738)
East Asian Studies	LAS	MA (p. 737)
Ecology, Ethology Evolution	LAS	CONC (p. 655)
Ecology, Evolution and Conservation Biology	LAS	MS (p. 875), PhD (p. 875)
Economics	LAS	MS (p. 739), PhD (p. 739)
Education Policy, Organization and Leadership	EDUC	EdM (p. 742), MA (p. 742), EdD (p. 743), PhD (p. 743), CAS (p. 744)
Educational Administration and Leadership	EDUC	CONC (p. 745)
Educational Psychology	EDUC	EdM (p. 751), MA (p. 752), MS (p. 752), CAS (p. 749), PhD (p. 750)

Electrical and Computer Engineering	ENGR	MENG (p. 755), MS (p. 755), PhD (p. 754)	Latin American and Caribbean Studies	LAS	Minor (p. 808)
Elementary Education	EDUC	EdM (p. 733)	Latin, Teaching of	LAS	MA (p. 710)
Energy Systems	ENGR	CONC (p. 860)	Latina/Latino Studies	LAS	Minor (p. 926)
Engineering	ENGR	MENG (p. 711)	Law	LAW	LLM (p. 810), MSL (p. 810), JSD (p. 809)
English	LAS	MA (p. 757), PhD (p. 758), CONC (p. 734)	Leadership and Social Change	SOCW	CONC (p. 891)
Entomology	LAS	MS (p. 759), PhD (p. 760)	Learning Design and Leadership	EDU	CONC (p. 745)
Environmental Engineering in Civil Engineering	ENGR	MS (p. 706), PhD (p. 706)	Linguistics	LAS	MA (p. 819), MATESL (p. 819), PhD (p. 818)
European Union Studies	LAS	MA (p. 761), Minor (p. 761)	Management	BUS	MS (p. 692)
Finance	BUS	MS (p. 762), PhD (p. 763), Minor (p. 763)	Materials Engineering	ENGR	MENG (p. 822)
Financial Engineering	BUS ENGR	MS (p. 765)	Materials Science and Engineering	ENGR	MS (p. 823), PhD (p. 821)
Food Science	ACES	CONC (p. 766)	Mathematics	LAS	MS (p. 824), PhD (p. 824),
Food Science and Human Nutrition	ACES	MS (p. 767), PSM (p. 767), PhD (p. 767)	Mathematics Teaching	LAS	MS (p. 827)
French	LAS	MA (p. 773), PhD (p. 772)	Mechanical Engineering	ENGR	MS (p. 833), MENG (p. 833), PhD (p. 831)
Gender Relations in International Development	SOCW	Minor (p. 890)	Medieval Studies	LAS	CONC (p. 837)
Gender and Women's Studies	LAS	Minor (p. 924)	Metals	FAA	CONC (p. 667)
Geography	LAS	MA (p. 774), MS (p. 774), PSM (p. 774), PhD (p. 774)	Microbiology	LAS	MS (p. 839), PhD (p. 839)
Geology	LAS	MS (p. 778), PhD (p. 777)	Molecular and Integrative Physiology	LAS	MS (p. 841), PhD (p. 841)
German	LAS	MA (p. 780), PhD (p. 781)	Museum Studies	LAS	Minor (p. 660)
Global Studies	LAS	Minor (p. 925)	Music	FAA	MMus (p. 844), AD (p. 844), AMusD (p. 845)
Global Studies in Education	EDU	CONC (p. 745)	Music Composition	FAA	CONC (p. 844)
Graphic Design	FAA	CONC (p. 667)	Music Education	FAA	MME (p. 849), PhD (p. 848)
Greek	LAS	CONC (p. 710)	Music Theory	FAA	CONC (p. 844)
Health Communication	LAS	MS (p. 713)	Musicology	FAA	PhD (p. 849), CONC (p. 844)
Heritage Studies	FAA	Minor (p. 926)	Natural Resources and Environmental Sciences	ACES	MS (p. 854), PhD (p. 855)
Higher Education	EDU	CONC (p. 745)	Neuroscience		PhD (p. 856)
History	LAS	MA (p. 782), PhD (p. 783)	Nuclear, Plasma and Radiological Engineering	ENGR	MS (p. 860), PhD (p. 859)
Human Development and Family Studies	ACES	MS (p. 785), PhD (p. 785)	Nutritional Sciences		MS (p. 861), PhD (p. 862)
Human Resource Development	EDU	CONC (p. 745)	Painting	FAA	CONC (p. 667)
Industrial Design	FAA	CONC (p. 667)	Performance and Literature (Music)	FAA	CONC (p. 852)
Industrial Engineering	ENGR	MS (p. 793), PhD (p. 790)	Philosophy	LAS	MA (p. 864), PhD (p. 864)
Informatics		PhD (p. 787)	Photography	FAA	CONC (p. 667)
Information Management	LIS	MS (p. 815)	Physics	LAS	MS (p. 868), PhD (p. 867)
Information Sciences	IS	MS (p. 816), CAS (p. 815), PhD (p. 813), CONC (p. 816)	Physics, Teaching of	LAS	MS (p. 868)
Information Technology and Control	BUS	Minor (p. 689)	Piano Pedagogy	FAA	CONC (p. 844)
Instrumental Conducting (Band)	FAA	CONC (p. 844)	Plant Biology	LAS	MS (p. 870), PhD (p. 869)
Instrumental Conducting (Orch)	FAA	CONC (p. 845)	Plant Biotechnology	LAS	PSM (p. 871)
Instrumental Conducting (Wind Band)	FAA	CONC (p. 845)	Political Science	LAS	MA (p. 873), PhD (p. 872)
Intellectual Property and Technology Law	LAS	CONC (p. 811)	Portuguese	LAS	MA (p. 896), PhD (p. 895)
International and Comparative Law	LAS	CONC (p. 811)	Printmaking	FAA	CONC (p. 667)
Italian	LAS	MA (p. 773), PhD (p. 773)	Psychology	LAS	MS (p. 879), MS (p. 879), PhD (p. 878)
Jazz Performance	FAA	CONC (p. 850)	Public Health	AHS	MSPH (p. 719), MPH (p. 718)
Journalism	MDIA	MS (p. 796)	Queer Studies	LAS	Minor (p. 925)
Justice, Democracy, and Legal Rights	LAW	CONC (p. 810)	Railway Engineering	ENG	CONC (p. 707)
Kinesiology	AHS	MS (p. 798), PhD (p. 799)	Real Estate	BUS	CONC (p. 764)
Labor and Employment Relations	LER	MHRIR (p. 801), PhD (p. 802)	Recreation, Sport and Tourism	AHS	MS (p. 880), PhD (p. 880)
Landscape Architecture	FAA	MLA (p. 804), PhD (p. 805)	Regional Planning	FAA	PhD (p. 913)
Latin	LAS	CONC (p. 710)	Regulation, Sustainability, and Compliance	LAW	CONC (p. 811)
Latin American Studies	LAS	MA (p. 807)	Rehabilitation	AHS	MS (p. 719)
			Religion	LAS	MA (p. 881), Minor (p. 882)
			Romance Linguistics	LAS	CONC (p. 882)

Russian, East European and Eurasian Studies	LAS	MA (p. 884), Minor (p. 885)
Science Teaching	LAS	CONC (p. 734)
Sculpture	FAA	CONC (p. 667)
Second Language Acquisition and Teacher Education	LAS	CONC (p. 885)
Secondary Education	EDUC	EdM (p. 734)
Slavic Languages and Literatures	LAS	MA (p. 888), PhD (p. 888)
Social Studies Teaching	EDUC	EdM (p. 734)
Social Work	SOCW	MSW (p. 889), PhD (p. 890)
Sociology	LAS	MA (p. 892), PhD (p. 893)
South Asian and Middle Eastern Studies	LAS	MA (p. 894)
Spanish	LAS	MA (p. 895), PhD (p. 895)
Spanish Linguistics	LAS	CONC (p. 896)
Spanish Literatures Cultures	LAS	CONC (p. 896)
Special Education	EDUC	EdM (p. 897), MS (p. 897), CAS (p. 898), PhD (p. 898)
Speech and Hearing Science	AHS	MA (p. 901), AuD (p. 902), PhD (p. 902)
Statistics	LAS	MS (p. 904), PhD (p. 904), Minor (p. 904)
Strategic Brand Communication	BUS/MDIA	MS (p. 690)
Structures	FAA	CONC (p. 662)
Supply Chain Management	BUS	CONC (p. 688), Minor (p. 690)
Systems and Entrepreneurial Engineering	ENGR	MS (p. 790), PhD (p. 790)
Taxation	BUS	CONC (p. 635), MS (p. 638)
Technical Systems Management	ACES	MS (p. 652), PSM (p. 652)
Technology Management	BUS	MS (p. 692)
Theatre	FAA	MA (p. 909), MFA (p. 908), PhD (p. 908)
Theoretical and Applied Mechanics	ENGR	MS (p. 836), PhD (p. 832)
Translation and Interpreting	LAS	MA (p. 911)
U.S. Legal Practice Skills	LAW	CONC (p. 812)
Urban Planning	FAA	MUP (p. 911), PhD (p. 913)
Veterinary Medical Science - Comparative Biosciences	VMED	MS (p. 917)
Veterinary Medical Science - Pathobiology	VMED	MS (p. 918)
Veterinary Medical Sciences - Veterinary Clinical Medicine	VMED	MS (p. 920)
Vocal Coaching Accompanying	FAA	CONC (p. 844)
Writing Studies	LAS	CONC (p. 922)

Legend

Colleges and Schools

ACES	College of Agricultural, Consumer and Environmental Sciences
AHS	College of Applied Health Sciences
BUS	College of Business
EDUC	College of Education
ENGR	College of Engineering
FAA	College of Fine and Applied Arts
GRAD	Graduate College
IS	School of Information Sciences
LAS	College of Liberal Arts and Sciences

LAW	College of Law
LER	School of Labor and Employment Relations
MDIA	College of Media
SOCW	School of Social Work
VMED	College of Veterinary Medicine

Degrees

AD	Artist Diploma
AMusD	Doctor of Musical Arts
CAS	Certificate of Advanced Study
DVM	Doctor of Veterinary Medicine
EdD	Doctor of Education
EdM	Master of Education
JSD	Doctor of the Science of Law
LLM	Master of Laws
MA	Master of Arts
MARCH	Master of Architecture
MAS	Master of Accountancy Science
MBA	Master of Business Administration
MCS	Master of Computer Science
MENG	Master of Engineering
MFA	Master of Fine Arts
MHRIR	Master of Human Resources of Industrial Relations
MLA	Master of Landscape Architecture
MMus	Master of Music
MME	Master of Music Education
MPH	Master of Public Health
MS	Master of Science
MSL	Master of Studies in Law
MSPH	Master of Science in Public Health
MSW	Master of Social Work
MUP	Master of Urban Planning
PSM	Professional Science Masters Concentration
PhD	Doctor of Philosophy

Concentrations

A graduate concentration constitutes a coherent program of study requiring additional breadth or considerable depth of knowledge. A concentration may refer to a subfield within a discipline, or to an interdepartmental and/or interdisciplinary area of knowledge. Concentrations appear on academic transcripts.

Some concentrations (major-based) are only open to a student majoring in the offering department. Other concentrations (floating) are open to students in a broad range of majors. Both types are listed here, with the eligible programs listed below each concentration.

Accountancy (p. 639)

- Business Administration (M.B.A. (p. 694) and M.S. (p. 685))
- Finance (M.S.) (p. 762)
- Technology Management (M.S.) (p. 685)

Acting

- Theatre (M.F.A.) (p. 909)

Actuarial Science

- Applied Mathematics (M.S.) (p. 824)

Advanced Analytics

- Industrial & Enterprise Engineering (M.S.) (p. 790)

Advanced Clinical

- Social Work (M.S.W. on-campus and extramural) (p. 891)

African American Studies (p. 644)

- African Studies (M.A.) (p. 646)
- Educational Policy Studies (M.A. and Ph.D.) (p. 741)
- Educational Psychology (all, except online degrees) (p. 747)
- History (all) (p. 781)
- Political Science (all) (p. 871)
- Sociology (all) (p. 892)

Analytics

- Statistics (M.S.) (p. 905)

Animal Sciences

- Bioinformatics (M.S.) (p. 656)

Applied Statistics

- Statistics (M.S.) (p. 905)

Astrochemistry (p. 668)

- Astronomy (Ph.D.) (p. 670)
- Chemistry (Ph.D.) (p. 702)

Bioengineering (p. 678)

- Bioinformatics (M.S.) (p. 676)

Biomechanics (p. 836)

- Bioengineering (M.S.) (p. 678)
- Materials Engineering (MENG) (p. 822)
- Electrical and Computer Engineering (M.S., Ph.D.) (p. 755)
- Materials Science and Engineering (M.S.) (p. 823)
- Mechanical Science and Engineering (M.S., MENG, Ph.D.) (p. 833)
- Theoretical and Applied Mechanics (M.S. (p. 836), Ph.D. (p. 832))

Business Data Analytics (p. 687)

- Business Administration (M.B.A. (p. 694) and M.S. (p. 685))

Business and Public Policy (p. 764)

- Accountancy (M.A.S., M.S.) (p. 635)
- Business Administration (M.S.) (p. 685)
- Finance (M.S.) (p. 762)
- Technology Management (M.S.) (p. 685)

Cancer Nanotechnology (p. 679)

- Bioengineering (M.S.) (p. 678)
- Electrical and Computer Engineering (M.S.) (p. 755)
- Materials Science and Engineering (M.S.) (p. 823)
- Mechanical Science and Engineering (M.S.) (p. 833)

Chemical and Biomolecular Engineering

- Bioinformatics (M.S.) (p. 699)

Choral Music

- Music (M.Mus. and A.Mus.D.) (p. 842)

Civic Leadership

- Political Science (M.A.) (p. 873)

Computational Engineering

- Engineering (M.Eng.) (p. 833)

Computational Science and Engineering (p. 711)

- Aerospace Engineering (M.S. (p. 642), Ph.D. (p. 643))
- Agricultural & Biological Engineering (M.S. (p. 651), Ph.D. (p. 650))
- Applied Mathematics (M.S. (p. 826), Actuarial Science M.S. (p. 825))
- Astronomy (Ph.D. (p. 670))
- Atmospheric Sciences (M.S. (p. 672), Ph.D. (p. 673))
- Bioengineering (Ph.D. (p. 677))
- Biophysics & Quantitative Biology (Ph.D. (p. 684))
- Chemical Engineering (Ph.D. (p. 700))
- Chemistry (Ph.D. (p. 702))
- Civil Engineering (Ph.D. (p. 706))
- Computer Science (M.S. (p. 725), Ph.D. (p. 723))
- Electrical & Computer Engineering (M.S. (p. 755), Ph.D. (p. 754))
- Environmental Engineering in Civil Engineering (M.S. (p. 706), Ph.D. (p. 706))
- Financial Engineering (M.S. (p. 765))
- Geography (M.S. (p. 776), Ph.D. (p. 774))
- Industrial Engineering (M.S. (p. 793))
- Materials Science & Engineering (M.S. (p. 823), Ph.D. (p. 821))
- Mathematics (M.S. (p. 828), Teaching of Mathematics M.S. (p. 827), Ph.D. (p. 824))
- Mechanical Engineering (M.S. (p. 833), Ph.D. (p. 831))
- Nuclear, Plasma, & Radiological Engineering (M.S. (p. 860), Ph.D. (p. 859))
- Physics (Ph.D. (p. 867))
- Statistics (Ph.D. (p. 904))
- Systems & Entrepreneurial Engineering (M.S. (p. 793))
- Theoretical & Applied Mechanics (M.S. (p. 836), Ph.D. (p. 832))

Computer Science

- Bioinformatics (M.S.) (p. 722)

Corporate Governance and International Business (p. 687)

- Accountancy (M.A.S., M.S.) (p. 635)
- Business Administration (M.B.A. (p. 694) and M.S. (p. 685))
- Finance (M.S.) (p. 762)

Corporate Law, Commercial Law, and Trade (p. 810)

- Master of Studies in Law (LL.M.) (p. 810)

Crafts

- Art and Design (M.F.A.) (p. 667)

Criminal Law (p. 811)

- Master of Studies in Law (LL.M.)

Crop Sciences

- Bioinformatics (M.S.) (p. 726)

Data Analytics in Accountancy (p. 639)

- Master of Accounting Science (M.A.S.) (p. 637)
- Master of Science in Accountancy (M.S.A.) (p. 638)

Design and Technology

- Theatre (M.F.A.) (p. 910)

Digital Libraries

- Library and Information Science (C.A.S. on-campus and online) (p. 815)

Ecology, Ethology & Evolution

- Biology (M.S., Ph.D.) (p. 655)

Educational Administration and Leadership

- Educational Organization and Leadership (Ed.M., M.S., C.A.S., Ed.D., Ph.D.) (p. 741)

Energy Systems

- Engineering (M.Eng.) (p. 711)

English

- Secondary Education (Ed.M.) (p. 734)

Finance (p. 764)

- Accountancy (M.A.S.) (p. 637)

Food Science

- Food Science and Human Nutrition (M.S., Ph.D.) (p. 766)

Geography and Geographic Information Sciences

- Professional Science Master's in Geographic Information Science (p. 775)

Global Studies in Education

- Educational Policy Studies (Ed.M., M.A., Ph.D.) (p. 741)

Graphic Design

- Art and Design (M.F.A.) (p. 667)

Greek

- Classics (M.A.) (p. 710)

Higher Education

- Educational Organization and Leadership (Ed.M., M.S., C.A.S., Ed.D., Ph.D.) (p. 741)

Human Nutrition

- Food Science and Human Nutrition (M.S., Ph.D.) (p. 766)

Human Resource Development

- Human Resource Education (Ed.M., Ed.M. online, M.S., Ph.D.) (p. 741)

Industrial Design

- Art and Design (M.F.A.) (p. 667)

Information Technology and Control (p. 688)

- Accountancy (M.A.S., M.S.) (p. 635)
- Business Administration (M.B.A. (p. 694))

- Finance (M.S.) (p. 762)

- Technology Management (M.S.) (p. 685)

Instrumental Conducting (Band)

- Music (M.Mus.) (p. 844)

Instrumental Conducting (Orch)

- Music (M.Mus. and A.Mus.D.) (p. 842)

Instrumental Conducting (Wind Band)

- Music (A.Mus.D.) (p. 844)

Intellectual Property and Technology Law (p. 811)

- Master of Laws (LL.M.) (p. 810)

International and Comparative Law (p. 811)

- Master of Laws (LL.M.) (p. 810)

Jazz Performance

- Music (M.Mus. and A.Mus.D.) (p. 842)

Justice, Democracy, and Legal Rights (p. 810)

- Master of Laws (LL.M.) (p. 810)

Latin

- Classics (M.A.) (p. 710)

Leadership and Social Change

- Social Work (M.S.W. on-campus) (p. 889)

Library and Information Science

- Bioinformatics (M.S.) (p. 812)

Mathematics

- Secondary Education (Ed.M.) (p. 734)

Medieval Studies (p. 837)

- Architecture (M.Arch., Ph.D.) (p. 660)
- Art History (all) (p. 664)
- Classical Philology (Ph.D.) (p. 709)
- Classics (M.A.) (p. 709)
- Communication (all) (p. 712)
- Comparative Literature (all) (p. 720)
- English (all) (p. 756)
- French (all) (p. 771)
- German (all) (p. 779)
- History (all) (p. 781)
- Italian (all) (p. 771)
- Landscape Architecture (all) (p. 804)
- East Asian Languages and Cultures (Ph.D.) (p. 738)
- Musicology (Ph.D.) (p. 849)
- Philosophy (all) (p. 863)
- Portuguese (all) (p. 894)
- Spanish (all) (p. 894)

Metals

- Art and Design (M.F.A.) (p. 667)

Music Composition

- Music (M.Mus. and A.Mus.D.) (p. 842)

Music Theory

- Music (M.Mus.) (p. 844)

Musicology

- Music (M.Mus.) (p. 844)

Painting

- Art and Design (M.F.A.) (p. 667)

Performance and Literature

- Music (M.Mus. and A.Mus.D.) (p. 842)

Photography

- Art and Design (M.F.A.) (p. 667)

Piano Pedagogy

- Music (M.Mus.) (p. 844)

Policy Economics

- Economics (M.S.) (p. 741)

Printmaking

- Art and Design (M.F.A.) (p. 667)

Professional Science Master's (p. 874)

- Agricultural Production (M.S.) (p. 649)
- Bioenergy (M.S.) (p. 676)
- Food Science and Human Nutrition (M.S.) (p. 770)
- Plant Biotechnology (M.S.) (p. 871)
- Technical Systems Management (M.S.) (p. 652)

Railway Engineering

- Engineering (M.Eng.) (p. 707)

Real Estate (p. 764)

- Accountancy (M.A.S. (p. 637))
- Business Administration (M.B.A. (p. 694))

Regulation, Sustainability, and Compliance (p. 811)

- Master of Laws (LL.M.) (p. 810)

Romance Linguistics (p. 882)

- French (Ph.D.) (p. 772)
- Italian (Ph.D.) (p. 773)
- Linguistics (Ph.D.) (p. 818)
- Portuguese (Ph.D.) (p. 895)
- Spanish (Ph.D.) (p. 895)

Sciences

- Secondary Education (Ed.M.) (p. 734)

Sculpture

- Art and Design (M.F.A.) (p. 667)

Second Language Acquisition and Teacher Education (p. 885)

- Anthropology (Ph.D.) (p. 659)
- Communication (Ph.D.) (p. 712)
- Curriculum & Instruction (Ph.D.) (p. 732)
- East Asian Languages and Cultures (Ph.D.) (p. 738)
- Educational Psychology (Ph.D.) (p. 748)
- French (Ph.D.) (p. 772)
- German (Ph.D.) (p. 781)
- Italian (Ph.D.) (p. 773)

- Linguistics (Ph.D.) (p. 818)
- Portuguese (Ph.D.) (p. 895)
- Psychology (Ph.D.) (p. 878)
- Spanish (Ph.D.) (p. 895)
- Speech and Hearing Science (Ph.D.) (p. 902)

Social Studies

- Secondary Education (Ed.M.) (p. 734)

Spanish Linguistics

- Spanish (M.A.) (p. 896)

Spanish Literatures & Cultures

- Spanish (M.A.) (p. 896)

Structures (p. 662)

- Architecture (M.S.) (p. 664)

Supply Chain Management (p. 688)

- Accountancy (M.A.S., M.S.) (p. 635)
- Business Administration (M.B.A. (p. 694) and M.S. (p. 685))
- Technology Management (M.S.) (p. 685)

Taxation

- Accountancy (M.A.S.) (p. 637)

U.S. Legal Practice Skills (p. 812)

- Master of Studies in Law (LL.M.) (p. 810)

Writing Studies (p. 922)

- Art Education (Ph.D.) (p. 665)
- Art History (Ph.D.) (p. 666)
- Communication (Ph.D.) (p. 712)
- Curriculum & Instruction (Ph.D.) (p. 732)
- English (Ph.D.) (p. 758)
- Library and Information Science (Ph.D.) (p. 813)

Vocal Coaching & Accompanying

- Music (M.Mus. and A.Mus.D.) (p. 842)

Graduate Programs

Legend:

College/School

ACES	College of Agricultural, Consumer and Environmental Sciences
AHS	College of Applied Health Sciences
BUS	College of Business
EDUC	College of Education
ENGR	College of Engineering
FAA	College of Fine and Applied Arts
GRAD	Graduate College
IS	School of Information Sciences
LAS	College of Liberal Arts and Sciences
LAW	College of Law
LER	School of Labor and Employment Relations
MDIA	College of Media

SOCW	School of Social Work
VMED	College of Veterinary Medicine

Programs

AD	Artist Diploma
AMusD	Doctor of Musical Arts
CAS	Certificate of Advanced Study
DVM	Doctor of Veterinary Medicine
EdD	Doctor of Education
EdM	Master of Education
JSD	Doctor of the Science of Law
LLM	Master of Laws
MA	Master of Arts
MARCH	Master of Architecture
MAS	Master of Accountancy Science
MBA	Master of Business Administration
MCS	Master of Computer Science
MENG	Master of Engineering
MFA	Master of Fine Arts
MHRIR	Master of Human Resources of Industrial Relations
MLA	Master of Landscape Architecture
MMus	Master of Music
MME	Master of Music
MPH	Master of Public Health
MS	Master of Science
MSL	Master of Science in Law
MSPH	Master of Science in Public Health
MSW	Master of Social Work
MUP	Master of Urban Planning
PSM	Professional Science Masters Concentration
PhD	Doctor of Philosophy

Accountancy

W. Brooke Elliott
 360 Wohlers Hall
 1206 South Sixth Street
 Champaign, IL 61820
 PH: (217) 333-0857
<http://www.business.illinois.edu/accountancy>

E-mail: accy@illinois.edu

Major: Accountancy
 Degrees Offered: M.A.S., M.S., Ph.D.
 Graduate Concentration: Business and Public Policy (p. 764) (M.A.S., M.S.), Corporate Governance and International Business (p. 687) (M.A.S., M.S.), Data Analytics in Accountancy (p. 639) (M.A.S., M.S.), Finance (p. 764) (M.A.S. only), Information Technology and Control (p. 688) (M.A.S., M.S.), Real Estate (M.A.S., M.B.A), Supply Chain Management (p. 688) (M.A.S., M.S.), Taxation (M.A.S. only)

Graduate Minor: Accountancy

Graduate Concentration: Accountancy

Off Campus Program: Major: Taxation (not currently accepting applications; suspended effective Summer, 2018)
 Degrees Offered: M.S.

Graduate Degree Programs

The Department of Accountancy offers on campus graduate programs leading to the degrees of Master of Accounting Science (M.A.S.), Master of Science in Accountancy (M.S.A.), and Doctor of Philosophy in Accountancy. The M.A.S., M.S.A. and Ph.D. degrees are offered on the Urbana-Champaign campus. The master's degree requirements can be completed in one year. The Ph.D. degree takes approximately four to five years of full-time study and research.

Admission

All applicants for the M.S.A. and Ph.D. programs, domestic or international, are required to take the Graduate Management Admission Test (GMAT). This test should be taken early enough to ensure that the results will be available to the department before action on admission. The admission requirements of the Graduate College also apply, including prior academic performance and references. In addition, all international applicants must take the Internet-Based Test of English as a Foreign Language (TOEFL iBT) or the International English Language Testing System (IELTS) test. Applications for admission to the doctoral program, supported by three letters of recommendation, must be approved by the department admissions committee, which may require an oral or a written examination.

- Master of Accounting Science (M.A.S.) (p. 637)
- Master of Accounting Science (M.A.S.), Taxation Concentration (p. 637)
- Master of Science in Accountancy (p. 638)
- Master of Science in Taxation (p. 638)

Doctor of Philosophy

The student's doctoral program is determined in consultation with a faculty advisory committee. The student's evolving plans for the doctoral thesis serve as a guide in planning the program. Program coursework is comprised of two general categories: core studies and advanced studies within an area of specialization (i.e., a supporting field). The latter coursework is tailored to facilitate the student's dissertation.

In addition, candidates must pass a written accountancy core examination and both oral preliminary and oral final examinations on the doctoral thesis. In the accountancy core examination, candidates must demonstrate a thorough knowledge of research methods and accounting theory; a general acquaintance with the subject matter of the variety addressed within accountancy doctoral core studies; and proficiency in the required areas of economic theory, quantitative methods, behavioral science and financial economics.

Requirements

Code	Title	Hours
Graduate study, at least 16 hours of which are in a supporting field (e.g., economics, finance, psychology).		24
A two-course introduction to mathematical statistics and probability theory		8
Accountancy core doctoral seminars:		16
ACCY 592	Intro to ACCY Research	

ACCY 585	Constructs in Atg Research	
ACCY 593	Special Research Problems (section B)	
ACCY 593	Special Research Problems (section C)	
ACCY 593	Special Research Problems (section S)	4
ACCY 594	Doctoral Research Seminar (in area of specialization)	4
	Microeconomics at the graduate level (ECON 500), and another economics course at the graduate level from an approved listing	8
ACCY 599	Thesis Research	32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 56

Minimum 500-level Hours Required Overall: 60

Students must present a research paper at the Accountancy Research Forum in the beginning of their third year.

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the accountancy Ph.D. program.

Masters Degree Required for Admission to PhD? No

Qualifying Exam Required (Accountancy Core Examination) Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/accountancy/programs/phd>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Accountancy

The minor in Accountancy seeks to develop business leaders who understand the role of accountancy and accounting in the conduct of business and the allocation of resources within society.

This minor requires twelve graduate hours of coursework. Admission to the minor requires an application to the Department and admission to one of the M.S. programs in the College of Business or a graduate program in a related discipline approved by the Department. Admission is limited and acceptance is on a competitive basis.

Note: Students within the major cannot minor in the same program.

Code	Title	Hours
ACCY 501	Accounting Analysis I	4
ACCY 502	Accounting Analysis II	4

ACCY 503	Managerial Accounting	4
or ACCY 517	Financial Statement Analysis	
or substitute graduate accountancy courses approved by a program advisor		
Total Hours		12

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

- Accountancy (p. 639)
- Data Analytics in Accountancy (p. 639)

The online Master of Science in Accountancy (<https://onlinemsa.illinois.edu>) (iMSA) is a fully online program. The highly-engaged delivery format and our world-renowned faculty provide students with a hands-on and practice-oriented learning experience. The iMSA prepares students for success in accounting careers and provides the academic prerequisites for candidates who wish to take the United States Uniform Certified Public Accountant (CPA) exam.

The iMSA is designed for those already working in the accounting field looking to refresh their skill set and for those who intend to use the degree to enter the field for the first time. A mirror of the on-campus Master of Science in Accountancy (p. 638) (MSA) curriculum, the online MSA (iMSA) uses a flexible program format. It allows students to balance academic life with other obligations. The degree can be completed in as few as four semesters (18 months) or as many as eight semesters (36 months).

The University of Illinois at Urbana-Champaign has **consistently ranked among the top accountancy schools in the United States**. The Public Accounting Report and Accounting Degree Review have rated the Illinois graduate accounting program as one of the top accountancy masters programs in the United States.

The iMSA program begins in August and in January each year.

Code	Title	Hours
ACCY 501	Accounting Analysis I	4
ACCY 502	Accounting Analysis II	4
ACCY 503	Managerial Accounting	4
ACCY 504	Auditing	4
ACCY 505	Federal Taxation	4
or substitute graduate accountancy courses approved by a program advisor		
Graduate electives with at least 4 hours credit in a non-accountancy graduate course		12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 20 (of the total 32 required)

Students shall earn at least 24 of the 32 total graduate hours while enrolled in the Graduate College at Urbana-Champaign.

Electives shall form a coherent program of study approved by a program advisor.

Minimum MSA program coursework 3.0 cumulative GPA, both by semester and program overall

Minimum MSA accountancy 3.0 coursework cumulative GPA, both by semester and program overall

An optional CPA Review course (ACCY 398) is available. The credit hours for the CPA Review Course do not count towards the 32 credit hours required to graduate.

¹ For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/accountancy/programs/msa>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Accounting Science (M.A.S.) in Accountancy

The M.A.S. program is a one-year program for students who have completed or are pursuing a Bachelor of Science in Accountancy from the University of Illinois at Urbana-Champaign. Each student will select either a Taxation or Audit Option as a primary focus. Each Option (listed below) includes room for graduate electives. By design, the program emphasizes the emerging trend of data analytics in the practice of accounting, with a standard course plan that leads to a graduate concentration in data analytics in accountancy (p. 639) to fulfill the graduate electives. Students have the choice of remaining in the standard course plan or selecting from among the following alternative graduate concentrations to fulfill the graduate elective requirement: finance (p. 764), corporate governance and international business (p. 687), information technology and control (p. 688), business and public policy (p. 764), real estate, and supply chain management (http://catalog.illinois.edu/graduate/graduate-majors/bus-admin-ms/graduate_concentration_in_supply_chain_mgmt).

Students who wish to deviate from the standard course plan, but do not wish to pursue a listed graduate concentration, may petition to take other graduate courses of interest subject to approval of an Accountancy Advisor. Admission to a concentration requires application to the Department no later than January 15 for fall admission. Admission to some concentrations may be competitive.

Taxation Option

Code	Title	Hours
ACCY 451	Advanced Income Tax Problems ¹	4
or ACCY 410	Advanced Financial Reporting	
or ACCY 510	Financial Reporting Standards	
ACCY 551	Corporate Income Taxation	4
ACCY 552	Partnership Income Taxation	4
ACCY 554	International Taxation	4
ACCY 556	Tax Research	4
Graduate Electives		12
Total Hours		32

Audit Option

Code	Title	Hours
ACCY 510	Financial Reporting Standards	4
ACCY 515	Auditing & Assurance Standards	4

ACCY 517	Financial Statement Analysis	4
ACCY 451	Advanced Income Tax Problems ¹	4
or ACCY 410	Advanced Financial Reporting	
ACCY 511	External Risk Measurement and Reporting	4
or ACCY 518	Financial Statement Fraud	
Graduate Electives		12
Total Hours		32

¹ ACCY 451 and ACCY 410 are currently offered for differential credit (3 hours undergraduate or 4 hours graduate credit). Students in the Taxation option that complete both of these courses during the undergraduate timeframe will take ACCY 510 instead. Students in the Audit Option that complete both ACCY 451 and ACCY 410 for 3 hours of undergraduate credit would either take both ACCY 518 and ACCY 511, or an approved elective. All graduate electives must be approved by an Accountancy Advisor.

Other Requirements ²

Other requirements may overlap

All 32 graduate hours must be completed at the University of Illinois at Urbana-Champaign.

Minimum GPA: 3.0

² For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/accountancy/programs/mas>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Accounting Science (M.A.S.) in Accountancy, Taxation Concentration

The M.A.S. program is a one-year program for students who have completed or are pursuing a Bachelor of Science in Accountancy from the University of Illinois at Urbana-Champaign. The Concentration in Taxation is one of the primary options available within the MAS program.

Students in the Taxation concentration may pursue a second optional concentration. If admitted to a second concentration, the coursework for the second concentration may also count toward the graduate electives requirements for the MAS degree. Second concentration options include:

- Business and Public Policy
- Data Analytics for Accountancy
- Finance
- Corporate Governance and International Business
- Information Technology and Control
- Real Estate
- Supply Chain Management

Code	Title	Hours
ACCY 451*	Advanced Income Tax Problems, ACCY 410*, Advanced Financial Accounting, or ACCY 510, Financial Reporting Standards	4
ACCY 551	Corporate Income Taxation	4
ACCY 552	Partnership Income Taxation	4
ACCY 556	Tax Research	4
ACCY 554	International Taxation	4
	Graduate electives (students have the option to pursue one of the Concentrations open to MAS students).	12
Total Hours		32

*ACCY 451 and ACCY 410 are currently offered for differential credit (3 hours undergraduate or 4 hours graduate credit). Students in the Taxation option that complete both of these courses during the undergraduate timeframe will take ACCY 510 instead.

Course substitutions may be approved by the Department of Accountancy.

Other requirements may overlap.

For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/accountancy/programs/mas>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Accountancy

The University of Illinois at Urbana-Champaign has **consistently ranked among the top accountancy schools in the United States**. The Public Accounting Report and Accounting Degree Review have rated the Illinois graduate accounting program as one of the top accountancy masters programs in the United States.

The MS in Accountancy (MSA) program offers a **one year accounting degree**. Our students include those with limited prior accounting education as well as students with an undergraduate degree in accounting. The MSA core curriculum applies to all of our students. However, for those students who have previously taken significantly equivalent courses to any of those in our core curriculum, we will work with our students to find a suitable replacement to recognize the sufficiency of their prior accounting education. Our MSA program prepares students for success in accounting careers and provides the academic prerequisites for candidates who wish to take the United States Uniform Certified Public Accountant (CPA) exam.

Although successful completion of our students' academic requirements will always take top priority, our MS in Accountancy program also **strives for a balanced approach** to our students' experience. We aim to help every student become a **more complete accounting professional** by delivering an intentional multi-faceted student experience that focuses on technical and non-technical business skill development. We will deliver on our commitment to provide each student with more than just an accountancy degree. That's what makes our MSA program **distinctive**.

The MSA program begins in June each year with Summer Session II.

Requirements

Code	Title	Hours
ACCY 501	Accounting Analysis I	4
ACCY 502	Accounting Analysis II	4

ACCY 503	Managerial Accounting	4
ACCY 504	Auditing	4
ACCY 505	Federal Taxation	4
or substitute graduate accountancy courses approved by a program advisor		
Graduate electives with at least 4 hours credit in a non-accountancy graduate course		12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required
Overall: 20 (of the total 32 required)

Students shall earn at least 24 of the 32 total graduate hours while enrolled in the Graduate College at Urbana-Champaign.

Electives shall form a coherent program of study approved by a program advisor.

Minimum MSA program coursework 3.0 cumulative GPA, both by semester and program overall

Minimum MSA accountancy 3.0 coursework cumulative GPA, both by semester and program overall

An optional CPA Review course (ACCY 398) is available. The credit hours for the CPA Review Course do not count towards the 32 credit hours required to graduate.

International students with TOEFL scores below 613 (paper-based), 257 (computer-based), or 103 (internet-based), or IELTS score below 7.0, are required to take the English Placement Test (EPT) when they arrive on campus. After taking the EPT, most students are required to take a Business English course sequence. For these students, completion of the ESL course sequence is **mandatory** but does not count towards the 32 hour degree requirement.

¹ For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/accountancy/programs/msa>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Taxation

This program is suspended effective Summer, 2018.

The Master of Science in Taxation (M.S.T) is an executive-style degree offered only at the Illini Center in Chicago. The M.S.T. is a one-year program for students with at least two years of work experience. The program begins in May and meets weekly on Friday afternoons and all day Saturday. Students applying for admission should have acquired a background in business and an accounting undergraduate major from an accredited college or university. Graduation requires 36 graduate hours of study that consists of twelve required courses delivered in three thirteen-week semesters.

Code	Title	Hours
ACCY 550	Multistate Taxation	2
ACCY 551	Corporate Income Taxation	4

ACCY 552	Partnership Income Taxation	4
ACCY 554	International Taxation	4
ACCY 555	Income Tax Accounting	2
ACCY 558	Taxation of Closely-Held Bus.	4
ACCY 559	Tax Policy	2
ACCY 556	Tax Research	2
ACCY 557	Accounting Periods and Methods	2
ACCY 561	Taxes and Business Strategy	4
ACCY 562	Tax Procedures	2
ACCY 563	Consolidated Returns	2
ACCY 564	Reorganizations	2
Total Hours		36

Other Requirements ¹

Minimum 500-level Hours Required 36

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's program information online (<https://business.illinois.edu/mst>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Concentration in Accountancy

This concentration is available to students in the following degree programs:

- Master of Science in Finance (MSF)
- Master of Science in Technology Management (MSTM)
- Master of Business Administration (MBA)
- Master of Science in Business Administration (MSBA)

Code	Title	Hours
ACCY 501	Accounting Analysis I	4
ACCY 502	Accounting Analysis II	4
ACCY 503	Managerial Accounting	4
or ACCY 517	Financial Statement Analysis	
Or, substitute graduate accountancy courses approved by an Accountancy MSA program advisor.		
Total Hours		12

Other Requirements

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Graduate Concentration in Data Analytics in Accountancy

The Data Analytics in Accountancy Concentration is designed to develop leaders who understand (1) how to apply data analytics in a variety of accounting and business contexts, (2) critically solve business problems using data-intensive business and accounting information, and (3)

synthesize and effectively communicate data-intensive information, findings, and conclusions to other environment-constituents, including supervisors, peers, and subordinates, clients, and regulatory agencies. This concentration will not only provide a strong foundational knowledge of data analytics, but also provide students multiple opportunities to apply this knowledge via experiential learning opportunities.

Code	Title	Hours
ACCY 570	Data Analytics Foundations for Accountancy	4
ACCY 571	Statistical Analyses for Accountancy	4
ACCY 575	Data Analytics Applications in Accountancy	4
Total Hours		12

Other requirements

Other requirements may overlap.

Advertising

Sela Sar, Director of Graduate Studies

229 Gregory Hall
810 S. Wright Street
Urbana, IL 61801
PH: (217) 244-1229

<https://media.illinois.edu/degrees/advertising-bs-ms>

selasar@illinois.edu (pargas@illinois.edu)

Major: Advertising
Degrees Offered: MS

Major: Strategic Brand Communication
Degrees Offered: MS

Web: <http://SBC.illinois.edu>

Email: [MS-SBC@ \(sbc@illinois.edu\)illinois.edu](mailto:MS-SBC@illinois.edu)

Graduate Degree Program

I. The Department of Advertising offers a graduate program on campus leading to the Master of Science degree. This program is designed to prepare graduates for an advanced degree in advertising research or industry careers in research and strategy. The preparatory nature of the curriculum combines the theoretical foundations, methodological tools, and practical applications. The Department of Advertising at the University of Illinois is the oldest such program in the country. We are grounded in the principles of our founder and "father of advertising education" Charles H. Sandage, that students must understand the theory of advertising as well as the practice. His goal was to enable students to become leaders and problem solvers. We honor that vision by maintaining a cohesive curriculum that provides foundational courses, but also allows for flexibility of interest through electives both within and outside the college.

II. The Master of Science in Strategic Brand Communication (MS SBC) degree is an online program jointly sponsored by the Charles H. Sandage Department of Advertising in the College of Media and the Department of Business Administration in the College of Business. The degree program launched in December 2016, and graduates from this program receive the MS SBC degree awarded by the Graduate College. Strategic Brand Communication (SBC) is a data-driven, purposeful conversation with a

brand's stakeholders. SBC combines traditional advertising practices with contemporary business thinking that pertains to delivering consistent, meaningful messages to consumers. In so doing, SBC seeks to integrate multiple consumer contact points that occur through the purchase of commercial messages in paid, earned, and owned media to deliver persuasive and impactful statements about brands and companies.

This management process integrates all aspects of strategic brand marketing communications such as advertising, public relations, digital media, social media, promotion, and revenue development marketing. Such integration impacts a firm's business-to-business, marketing channel, customer-focused, and strategic integrated communications.

The MS SBC degree program is designed for working professionals. The proposed online program is designed to be completed in 15 months. The curriculum will prepare students to be strategic leaders in an ever-changing global medial environment; be analytic and integrative thinkers; be effective brand communicators and managers; respond agilely to new technologies, emerging media, new demographics, and market trends; be team-oriented in their approach to management and communications; and be prepared to continue to learn as the media environment evolves.

Admission

I. Admission to graduate study in advertising requires completion of the requirements for a bachelor's degree in an accredited institution of recognized standing. Applicants are required to submit results from either the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT) and are required to upload to the application a short essay indicating why they want to pursue graduate work in advertising. The Department of Advertising requires non-native English-speaking applicants to show evidence of English proficiency, which is provided by a satisfactory score on the Test of English as a Foreign Language (TOEFL). Minimum scores for TOEFL (international students only): 253 (CBT), 104 (IBT), 607 (PBT), and IELTS greater than 6.5. Three letters of recommendation are required. Transcripts from all universities that you have attended must be submitted (note: can be uploaded in your application). The required method of applying is online through the Graduate College Web site, and the Graduate College admission requirements also apply, see <http://www.grad.illinois.edu/admissions/apply/requirements>. Completed applications are due February 1, and applications are accepted for fall admission only.

II. Admission to the MS in Strategic Brand Communication program, applicants are expected to have a minimum grade point average of at least 3.0 (A = 4.0) for the last two years of undergraduate study and a 3.0 for any previous graduate work completed. All applicants whose native language is not English must submit a minimum Test of English as a Foreign Language (TOEFL) score of 102 (iBT), 253 (CBT), or 610 (PBT) or minimum International English Language Testing System (IELTS) exam scores of 6.5 overall and 6.0 in all subsections. Prerequisite: course in Statistics or Calculus from an accredited institution. The admissions criteria will be based upon an evaluation of each applicant's academic and professional experience, GPA, English aptitude, and letters of recommendation.

A minimum GPA of 2.75 is required for continued enrollment.

Faculty Research Interests

Faculty profiles (<https://media.illinois.edu/degrees/advertising-bs-ms/faculty/faculty-profiles>) are available at the Advertising Department's Web site.

- Master of Science in Advertising (p. 640)
- Master of Science in Strategic Brand Communication (p. 690)

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the [joint program requirements](#) and contact the M.B.A. program and their major department office for more information.

Master of Science in Advertising

Students are required to complete 36 hours towards the degree, including a professional project or thesis requirement. Full-time status requires 12 hours per semester, making it possible to complete the degree in three semesters. Admission is only granted for fall semester.

A graduate course listing (<https://courses.illinois.edu>) for Advertising students is available online.

Thesis Option

Code	Title	Hours
ADV 550	Foundations of Advertising	3
ADV 580	Advertising Theory	3
ADV 581	Quant Research Methods in Adv	3
ADV 582	Qualitative Rsrch in Advert	3
ADV 587	Graduate Seminar I	3
ADV 588	Graduate Seminar II	3
Graduate-level electives (at least 1 course from College/Department and 1 course from outside the College)		12
ADV 599	Thesis Research (min/max applied toward degree)	6
Total Hours		36

Other Requirements ¹

Other requirements may overlap.

Thesis option must have faculty approval.

Minimum hours required within the 24 unit:

Minimum number of 500-level hours 24 required overall in the program:

Additional background courses that do not count toward graduation may be required, as determined by the advisor.

Minimum GPA: 2.75

¹ For additional details and requirements for all degrees, please refer to the department's *Graduate Degree Requirements at the Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
ADV 550	Foundations of Advertising	3
ADV 580	Advertising Theory	3

ADV 581	Quanti Research Methods in Adv	3
ADV 582	Qualitative Rsrch in Advert	3
ADV 587	Graduate Seminar I	3
ADV 588	Graduate Seminar II	3
Graduate-level electives (at least 1 course from College/ Department and 1 course from outside the College)		12
ADV 598	Professional Project (must have faculty approval)	6
Total Hours		36

Other Requirements ¹

Other requirements may overlap.

Minimum hours required within the 24 unit:

Minimum number of 500-level hours 24 required overall in the program:

Additional background courses that do not count toward graduation may be required, as determined by the advisor.

Minimum GPA: 2.75

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Degree Requirements at the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Aerospace Engineering

Philippe Geubelle

306 Talbot Laboratory
104 South Wright Street
Urbana, IL 61801
PH: (217) 333-2651
<http://aerospace.illinois.edu/>

Director of Graduate Programs: Gregory S. Elliott

E-mail: ae@illinois.edu (aerospace@illinois.edu)

Major: Aerospace Engineering
Degrees Offered: M.S. and Ph.D.

Online Program: Aerospace Engineering. M.S.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Aerospace Engineering and Doctor of Medicine (M.D. through the Medical Scholars Program (<http://www.med.illinois.edu/msp>))

Graduate Degree Programs

The Department of Aerospace Engineering (AE) offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy. The AE graduate program provides students with a strong background in engineering and applied science while placing emphasis on aircraft and spaceflight engineering. Students may major in one of the following general areas: aerodynamics, astrodynamics, combustion and propulsion, control systems, dynamical systems, fluid mechanics, structural mechanics, and materials. Opportunity also exists for specializing in:

1. computational science and engineering,
2. energy and sustainability engineering, and
3. systems engineering within the department's graduate programs

via the Computational Science and Engineering (CSE) (<http://www.cse.illinois.edu/education>) transcriptable certificate, the Energy and Sustainability Engineering (EaSE) Option, (<http://ease.illinois.edu>) and the Systems Engineering Option (SE) (<http://aerospace.illinois.edu/graduate-programs/aerospace-systems-engineering>).

The Medical Scholars Program (<http://www.med.illinois.edu/msp>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Aerospace Engineering. Additional information about the Aerospace Engineering graduate program may be found on the department's graduate program Web site (<http://www.ae.illinois.edu/graduate-programs>).

Admission

The Department of Aerospace Engineering accepts applications for admission to the graduate program for both fall and spring semesters. The application deadline for the fall semester for the Ph.D. and M.S. with Thesis programs and for full consideration for funding opportunities is January 1. The application deadline for the MS Non-thesis and the MS Non-thesis Systems Engineering option for the fall semester is July 1. The deadline for spring admission for all programs is October 8.

Typically, the prerequisite for graduate study is the equivalent of the B.S. in aerospace engineering (<http://aerospace.illinois.edu/undergraduate-programs>); however, graduates of curricula leading to degrees in other fields of engineering, the physical sciences, or mathematics may also be admitted to advanced study. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. However, having a GPA higher than the minimum is no guarantee of admission. Scores on the Graduate Record Examination (GRE) (<http://ets.org>) general test are required of all applicants. There are no minimum score requirements.

Applicants to the Aerospace Engineering graduate program are asked to complete a supplemental form that will capture additional information about their specific interests. Applicants receive an email after submitting the online application which contains the link to the supplemental form. Applicants may select up to three areas from the following list:

- aerodynamics
- aeroelasticity
- astrodynamics
- combustion
- computational mechanics
- control and estimation
- dynamical systems
- experimental mechanics
- fluid mechanics
- information technology
- materials
- propulsion
- robotics
- structural mechanics-structural dynamics
- systems engineering

All applicants whose native language is not English are required to submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. No exemptions from the TOEFL are granted by the department. Full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for those meeting the minimum requirements and having taken the TOEFL or IELTS since the scores required for admission to Aerospace Engineering are above the minimum scores demonstrating an acceptable level of English language proficiency. Applicants wishing to be considered for teaching assistantships must score 24 on the SPEAK portion of the TOEFL exam.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Aerospace Engineering and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Aerospace Engineering graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217)-333-8146, mospo@illinois.edu).

Full information on admission requirements and how to apply, see the department's graduate programs Web site (<http://www.ae.illinois.edu/graduate-programs>).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<http://med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Aerospace Engineering graduate degree.

Graduate Teaching Experience

M.S. students are not required to hold a teaching assistantship. Ph.D. students are required to hold a 25% teaching assistantship for at least one semester in order to meet the requirements for the Department of Aerospace Engineering doctoral program. Information about teaching assistantships can be found in the department's Web site (<http://aerospace.illinois.edu/graduate-programs/funding-opportunities>).

Faculty Research Interests

Research activities in the AE Department encompass a wide range of problem areas in aerospace engineering and related engineering disciplines cited in the Graduate Programs section above and more fully described at the department's research area Web site (<http://aerospace.illinois.edu/research>).

Centers, Programs, and Institutes

Several nationally renowned interdisciplinary centers exist within the College of Engineering in which Aerospace Engineering faculty members along with many other campus faculty engage in research. A list of these, along with links to full descriptions, appears at the department's interdisciplinary centers Web site (<http://aerospace.illinois.edu/research/interdisciplinary-centers>). Among these are the Beckman Institute for Advanced Science and Technology, the Center for the Simulation of Advanced Rockets (CSTAR), the Coordinated Science Laboratory (CSL), the Micro and Nanotechnology Laboratory, and the National Center for Supercomputing Applications (NCSA).

Facilities and Resources

Members of the Aerospace Engineering Department have access to a wide range of excellent research facilities. These laboratories support a wide range of activity and are described at the department's research laboratories Web site (<http://aerospace.illinois.edu/research/research-laboratories>).

Financial Aid

Students in the M.S. non-thesis option are not provided funding by the department. Financial aid for graduate students in thesis graduate programs is available in the form of fellowships, teaching and research assistantships. A block grant from the National Aeronautics and Space Administration supports a multidisciplinary research and training program. Qualified candidates are considered for financial support upon application. In addition, graduate students making satisfactory progress toward their degrees may also be considered for financial support. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://www.grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

Master of Science in Aerospace Engineering

Thesis Option

Code	Title	Hours
AE 599	Thesis Research (min-max applied toward the degree)	8
AE 590	Seminar (registration of 0 hours every term while in residence)	0
Aerospace Engineering breadth requirement (http://aerospace.illinois.edu/graduate-programs/graduate-degree-programs/breadth-and-mathematics-requirements)		6-8
One mathematics course from an approved list (http://aerospace.illinois.edu/graduate-programs/graduate-degree-programs/breadth-and-mathematics-requirements)		3-4
Elective courses chosen in consultation with an advisor (subject to Other Requirements and Conditions below)		12-15
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 16 hours of AE course work at the 400-level and above. (May include up to 8 hours of AE 599.)

A minimum of 12 500-level credit hours overall applied toward the degree, with 8 hours being AE courses. (May include up to 4 hours of AE 599.)

No hours of AE 597 (or other independent study) may be applied in this option.

Attendance at all Aerospace Engineering AE 590 seminars each semester while on campus.

Minimum GPA: 3.0

A departmental petition is required to change from the thesis to the non-thesis option.

¹ For additional details and requirements refer to the department's Website (<http://aerospace.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
AE 590	Seminar (registration for 0 hours every term while in residence)	
Aerospace Engineering breadth requirement (http://aerospace.illinois.edu/graduate-programs/graduate-degree-programs/breadth-and-mathematics-requirements)		9-12
One mathematics course from an approved list (http://aerospace.illinois.edu/graduate-programs/graduate-degree-programs/breadth-and-mathematics-requirements)		3-4
Elective courses chosen in consultation with an advisor (subject to Other Requirements and Conditions below)		16-20
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 16 hours of AE course work at the 400-level and above.

A minimum of 12 500-level credit hours overall applied toward the degree, with 8 hours being AE courses.

A maximum of 4 hours of AE 597 (or other independent study) may be applied toward the elective course work requirement.

Attendance at all Aerospace Engineering AE 590 seminars each semester while on campus.

Minimum GPA: 3.0

Generally, students holding a research assistantship will not be allowed in the non-thesis option.

A departmental petition is required to change from the thesis to the non-thesis option and vice-versa.

¹ For additional details and requirements refer to the department's Website (<http://aerospace.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Doctor of Philosophy

Entering with an approved M.S. Degree

Code	Title	Hours
AE 599	Thesis Research (min-max applied toward degree)	40
AE 590	Seminar (continuous registration through the 4th semester after the qualifying exam for 0 hours)	0
One advanced 500-level mathematics course from an approved list .		3-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below).		20-21
Total Hours		64

Other Requirements and Conditions ¹

Minimum GPA: 3.0

A minimum of 8 hours of AE course credit overall at the 500-level, beyond the master's degree.

A minimum of 16 credit hours overall at the 500 level, beyond the master's degree, including the 8 hours of 500-level AE courses.

A maximum of 4 hours of AE 597 (or other independent study) may be applied toward the elective coursework requirement.

A 25% or more teaching assistantship for at least one semester.

Qualifying exam ²	Yes
Preliminary exam	Yes
Final exam or dissertation defense	Yes
Dissertation deposit	Yes

Entering with an approved B.S. degree

Code	Title	Hours
AE 599	Thesis Research (min-max applied toward degree)	48
Coursework:		48
24 Hours of 500-level coursework, including 12 hours of 500-level AE coursework		
7-8 hours of Math (4 of the 7-8 taken must be at the 500-level and count toward the 24 hour requirement)		
20-21 hours of 400/500 elective AE coursework per advisor approval		
AE 590	Seminar (continuous registration through the 4th semester after the qualifying exam for 0 hours)	0
Total Hours		96

Other Requirements and Conditions¹

Minimum GPA: 3.0

A maximum of 4 hours of AE 597 (or other independent study) may be applied toward the elective course work requirement.

A 25% or more teaching assistantship for at least one semester.

Qualifying exam² Yes

Preliminary exam Yes

Final exam or dissertation defense Yes

Dissertation deposit Yes

¹ For additional details and requirements refer to the department's Website (<http://aerospace.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam information

Online Program

The degree requirements are the same as for the on-campus non-thesis M.S. program (p. 642)—32 hours of course work—and the degree awarded to online students is the same degree awarded to resident students. Online students have five years to complete the program.

Students should develop a course program plan in consultation with their advisor. Suggested program tracts (<http://aerospace.illinois.edu/graduate-programs/graduate-degree-programs/suggested-program-tracks>) are provided for each of the three main technical divisions in the department:

1. Aerodynamics, Fluid Mechanics, Combustion and Propulsion (AFMCP);
2. Astrodynamics, Controls and Dynamical Systems (ACDS); and
3. Structural Mechanics and Materials (SMM).

The Aerospace Systems Engineering option (<http://aerospace.illinois.edu/graduate-programs/aerospace-systems-engineering>) is also available online.

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 696) (link to MBA POS) and contact the M.B.A. program and their major department office for more information.

African American Studies

Ronald Bailey

1201 West Nevada
Urbana, IL 61801

PH: (217) 333-7781

FX: (217) 244-4809

<http://www.afro.illinois.edu/>E-mail: aasrp@illinois.edu

Graduate Concentration: African American Studies

Participating Programs: African Studies (M.A.), Educational Policy, Organization and Leadership (M.A. and Ph.D.), Educational Psychology (all, except online degrees), History (all degrees), Political Science (all degrees), Sociology (all degrees)

Graduate Minor: African American Studies

Graduate Minor in African American Studies

The Department of African American Studies also offers a graduate minor in African American Studies. The minor is designed to complement graduate work in a variety of disciplines. Students wishing to take advantage of the minor must be in good standing, and must apply for acceptance into the minor.

Code	Title	Hours
AFRO 500	Core Probs African-Am Studies	4
Elective hours from approved departmental list, 4 of which must be at the 500 level		8
Total Hours		12

¹ For additional details and requirements refer to the department's program information online (<http://www.afro.illinois.edu/education/gradminor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Concentration in African American Studies

The Department of African American Studies (DAAS) offers an interdisciplinary graduate concentration in African American Studies. This concentration is designed to complement doctoral work in the social sciences or humanities; applicants must demonstrate an interest in African American Studies and be in good standing in one of the following doctoral programs:

- History
- Educational Policy, Organization and Leadership
- Educational Psychology
- African Studies
- Sociology
- Political Science

Those wishing to apply for the concentration must submit three letters of recommendation, as well as a brief personal essay describing their background and career plans and explaining how a concentration in African American Studies enhances their primary program of study. Students must be accepted into the concentration. Students also would be expected to have a faculty member affiliated with the department on their doctoral committee. For admission to the concentration or for more information, please contact DAAS. A student's intent to pursue a graduate concentration must be approved by the student's adviser and graduate program director.

Code	Title	Hours
AFRO 500	Core Probs African-Am Studies	4
AFRO 597	Problems in African-Am Studies	4
AFRO 598	Res Sem in African-Am Studies	4

Elective hours from approved departmental list	12
Total Hours	24

Other Requirements ¹

In addition to the graduate concentration requirements, students must also complete the requirements of their major degree.

¹ For additional details and requirements refer to the department's program information online (<http://www.afrst.illinois.edu/education/gradminor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

African Studies

<http://afrst.illinois.edu>

Teresa Barnes, Director
210 International Studies Building
910 South Fifth Street
Champaign, IL 61820
(217) 333-6335
Fax: (217) 244-2429
E-mail: african@illinois.edu

Major: African Studies
Degrees offered: M.A.
Graduate Concentration: African American Studies

Graduate Minor: African Studies

Joint Degree Program: African Studies and Library and Information Science
Degrees offered: M.A. and M.S.

Graduate Degree Programs

The Center for African Studies administers a two-year program of area studies courses and intensive African language instruction leading to a Master of Arts degree designed to give students an interdisciplinary perspective on the study of Africa. The program provides both language and area training for three constituencies of students: those seeking to match area expertise with professional training; those proceeding to disciplinary-based doctoral work; and those for whom the degree would stand on its own. For more information about the Center's graduate programs, please visit: <http://www.afrst.illinois.edu/academics/grad/>.

Admissions

The Center for African Studies admits students in the fall term only. Applicants to the Masters degree in African Studies should hold at least a Bachelor's degree from an accredited college or university in the United States or from a recognized institution of higher education abroad. All graduate college admission requirements also apply. The Center does not require the Graduate Record Examination (GRE) scores, but it is highly recommended for students applying for the Foreign Language and Area Studies (FLAS) fellowship. Successful applicants should have a grade point average of at least 3.0 (4.0=A) calculated for the last 60 semester hours of undergraduate course work. International applicants or applicants whose native language is not English must have a minimum TOEFL score of 550 on the paper-based test (PBT) -- 213 on the computer-based test (CBT) or 79 on the internet-based test (IBT). For more information about the Center's admission requirements and procedures, and deadlines please visit www.afrst.illinois.edu/academics/

[grad/apply/](http://www.afrst.illinois.edu/academics/grad/apply) (<http://www.afrst.illinois.edu/academics/grad/apply>). Students interested in the minor must be in good standing in a graduate program, have permission from the major program, and demonstrate an interest in African Studies. For more information, contact the Center.

Faculty Research

The Center for African Studies' has both core and affiliate faculty represented in over 34 units across campus encompassing various disciplines in the humanities and social sciences, as well as in professional schools. The faculty is the backbone of the Center and constitutes the most critical element of the graduate experience. They excel in teaching at all levels and have a strong commitment to innovative research. Both Center faculty and teaching assistants have received numerous college and campus teaching awards. For more information about the Center faculty, please visit: <http://www.afrst.illinois.edu/people/faculty/>

Facilities and Resources

Established since 1970, the Center for African Studies is one the largest and most dynamic African National resource Centers in the country. The Center promotes excellence in research and teaching on Africa in all disciplines. The Center also exists to increase and disseminate knowledge about Africa to the larger community through various outreach activities to colleges, schools, community groups and businesses. At a time when the university of Illinois is expanding its international dimension, the Center for African Studies is dedicated to promoting a vibrant African Studies program and to fostering an understanding of Africa and African peoples through research, teaching and various Africa-related programs and events. The Center organizes a wide range of activities including conferences, lectures, film festivals, art exhibits, language institutes, workshops, and symposia. In addition, the Center regularly hosts visitors from the United States and abroad, namely Africa, and is strongly committed to developing linkages with individuals and institutions based in the African continent.

The Africana Library is among the finest in the world. The collection covers all African countries and includes materials in more than 150 African languages. The collections are interdisciplinary, in all formats, and concentrated mainly in the humanities, social sciences, and agriculture. The Library has an extraordinary collection of primary source materials for Africana, and has acquired approximately 100 printed sources and 85 microform collections (over 10,000 pieces) covering all areas of Africa. The collection also includes 120,000 pages of Arabic manuscripts and thousands of government documents. African materials in European and African languages at the University of Illinois Libraries include more than 180,000 books (including 15,000 in Arabic, and 3,000 in Bamana, Hausa, Lingala, Swahili, and Zulu); 2,800 journals; 46,000 maps; 10,000 microforms; over 250 videotapes, 37 newspapers, and several CD-ROMs.

The African studies bibliographer runs the Africana library and teaches IS 530, one of the Center's core courses and plays a key role in the Center's graduate program. For further information about the Africana library, please visit: <http://www.library.illinois.edu/ias/africana/>

Financial Aid

The Center for African Studies is a Title VI African National Resource Center funded by the U.S. Department of Education. Each year the center is generally able to assist a limited number of graduate students in area studies through awards of Foreign Language and Area Studies (FLAS) Fellowships. The Center evaluates and ranks incoming students on the

basis on academic promise. Funding usually covers the fall and spring semesters. The center cannot guarantee multiple years of funding, but considers it a priority to provide financial support to eligible students until completion of their program. African Studies MA Students can also apply for the FLAS fellowship through the Center for Global Studies. The Center for African Studies has graduate assistantships which include a tuition and fee waiver, but they are very limited. Students may be eligible to compete for other fellowships on campus. Students are also encouraged to check with the graduate fellowships office (<https://www.grad.illinois.edu/fellowship>) for funding opportunities. Students in the joint program that do not hold a FLAS fellowship are eligible for, but not guaranteed, fellowship or assistantship support in the semesters in which they are enrolled in GSLIS. Any assistantship awarded to these students provides a waiver of the base in-state tuition and service fee as well as a stipend. Non-Illinois residents must pay the difference between in- and out-of-state tuition. More information about funding opportunities is available at: <http://www.afrst.illinois.edu/academics/grants/>.

Master of Arts in African Studies

Thesis Option

Code	Title	Hours
IS 530	Information Needs of Particular Communities	2 or 4
AFST 515	Practicum in African Studies (recommended)	2
AFST 522	Development of African Studies	4
Elective area studies courses, drawn from at least three different academic units		16-18
Independent Study (4 max applied toward degree)		4
Language Requirement: Must study or demonstrate proficiency in a language indigenous to Africa at the advanced (third-year) level, but these hours cannot count toward the degree requirements.		0
AFST 599	Thesis Research ((8 max applied toward degree))	8
Total Hours		32-34

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 16

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.afrst.illinois.edu/academics/grad/masters>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
IS 530	Information Needs of Particular Communities	2 or 4
AFST 515	Practicum in African Studies (recommended)	2
AFST 522	Development of African Studies	4
Elective area studies courses, drawn from at least three different academic units		16-18
Independent Study (4 max applied toward degree)		4

Language Requirement: Must study or demonstrate proficiency in a language indigenous to Africa at the advanced (third-year) level, but these hours cannot count toward the degree requirements.	0
---	---

Total Hours	32-34
-------------	-------

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 16

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.afrst.illinois.edu/academics/grad/masters>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.S. African Studies and M.S. Library and Information Science

This joint master's degree includes a program of language and area studies courses leading to an interdisciplinary Master of Arts degree in African Studies as well as a program of study leading to the Master of Science in Library and Information Science. The joint degree matches area expertise with professional education, and prepares students for professional careers in all types of information organizations, including libraries. Students will enroll in LIS their first semester and thereafter be enrolled as students in African Studies.

Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 530	Information Needs of Particular Communities	2 or 4
IS 590	Advanced Problems in Information Sciences	1 to 4
IS 502	Libraries, Information and Society	2 or 4
LIS elective courses selected in consultation with an advisor who is a member of the GSLIS faculty. (LIS 591, 2 hours and LIS 592, up to 4 hours, may be included)		12-14
AFST 522	Development of African Studies	4
African language proficiency at level of 6 semesters of course work (includes Arabic) NOTE: Hours for language cannot be applied toward degree requirements		0
Elective courses from the approved African Studies course list selected in consultation with an advisor who is a member of the African Studies faculty (coursework must be from 3 different disciplines; 8 hours must be at the 500-level, excluding AFST 550 and AFST 599; Maximum 4 hours of AFST 550 may be used) Electives and thesis must total at least 24 hours.		16-24
Thesis Hours Required in African Studies (8 max applied toward degree)		8
Total Hours		49-56

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.afrst.illinois.edu/academics/grad/degree>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 530	Information Needs of Particular Communities (Section M)	4
IS 590	Advanced Problems in Information Sciences (Section IL)	4
IS 502	Libraries, Information and Society	2-4
LIS elective courses selected in consultation with an advisor who is a member of the GSLIS faculty. (LIS 591, 2 hours and LIS 592, up to 4 hours, may be included)		12-14
AFST 522	Development of African Studies	4
African language proficiency at level of 6 semesters of course work (includes Arabic) NOTE: Hours for language cannot be applied toward degree requirements		0
Elective courses from the approved African Studies course list selected in consultation with an advisor who is a member of the African Studies faculty (coursework must be from 3 different disciplines; 8 hours must be at the 500-level, excluding AFST 550 and AFST 599; Maximum 4 hours of AFST 550 may be used) Electives must total at least 24 hours.		24
Total Hours		56

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.afrst.illinois.edu/academics/grad/degree>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in African Studies

The interdisciplinary graduate minor in African Studies promotes training in African Studies for masters and doctoral students in other disciplines interested in complementing their degree program with an interdisciplinary perspective on Africa.

Note: Students within the major cannot minor in the same program.

Code	Title	Hours
AFST 522	Development of African Studies	4
Electives hours that relate to Africa that are outside the student's major department. At least four hours must be at the 500 level.		8
A minimum of four semesters of college level study of an African language. NOTE: Hours for language cannot be applied toward minor requirements.		
Total Hours		12

Other Requirements ¹

If the student's thesis deals in whole or in part with Africa, it is strongly recommended that a faculty member from the Center be a formal member of the student's committee.

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.afrst.illinois.edu/academics/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Agricultural Education

David Rosch, Graduate Program Coordinator
174 Bevier Hall
905 South Goodwin Avenue
Urbana, IL 61801
PH: (217) 333-3165
<http://aged.illinois.edu/>

E-mail: aces-aged@illinois.edu

Major: Agricultural Education
Degrees offered: M.S.

Online and Off-Campus Programs: Agricultural Education
Degrees offered: M.S.

Graduate Degree Programs

The M.S. in Agricultural Education is a professional degree for training classroom-based educators and community and organizational developers to address issues as they pertain to teaching and learning in and about the agricultural, life, and environmental sciences. Students are typically interested in either furthering their career in Extension, agricultural classrooms in secondary education, professional organizations in training and supervisory roles, or community development. We also work with students interested in gaining licensure for teaching agriculture in Illinois public schools for grades 9-12.

Admission

We are looking for highly motivated students with strong academic records. Students with backgrounds in agriculture, education, behavioral or social sciences are especially encouraged to apply. The minimum undergraduate grade-point average for admission is 3.0 (A = 4.0). Applicants for the online/off-campus program are not required to take the Graduate Record Examination (GRE). International applicants from non-English-speaking countries must have official TOEFL scores of at least 575 (written version) or 233 (computer-based version) to be eligible for admission. To receive full consideration for admission (and financial aid opportunities if you are applying for the full-time, on-campus program), please apply by February 15 for possible admission the following fall semester or September 15 for possible admission to the following spring semester.

In addition to meeting the above criteria, applicants interested in gaining a teaching license in the state of Illinois must pass the Illinois Certification Testing System test of Basic Skills test prior to admission.

If taking this examination prior to admission presents substantial hardship (e.g., the applicant is from another state), the applicant should

contact the director of the agricultural education graduate program to discuss the possibility of a conditional admission. Students conditionally admitted must pass the examination by the end of the first semester of enrollment. Each applicant's undergraduate transcript will be evaluated for completion of general education courses required for certification by the Illinois State Board of Education. Students with deficiencies may be admitted with the stipulation that these be met before completion of the master's program.

Financial Aid

We are committed to funding as many of full-time on-campus students who are making timely progress as possible. The duration and amount of our commitment varies. Funding may include fellowships, research assistantships, and/or teaching assistantships. These opportunities typically include stipends and tuition waivers. In some cases, fees are also waived. All applicants are automatically considered for all department funding opportunities; there is no separate application process. Federal and state financial aid is completely separate from the support provided by our department. For information regarding federal and state financial aid, please refer to www.osfa.illinois.edu/ (<http://www.osfa.illinois.edu/>).

Master of Science in Agricultural Education

Thesis Option

Code	Title	Hours
Agricultural Education Foundations ¹		
AGED 400	Foundations of Ag & Extn Ed	3
AGED 420	Curr Design & Instruction	3
Instructional Methods & Design		
AGED 430 or AGED 490	Youth Development Programs Adult Learning Principles	4
Educational Research		
AGED 545	Research Methods & Design	4
Agricultural Education electives		3-4
Electives in agriculture or education ²		10-11
Thesis Research – AGED 599 (min-max applied toward the degree) ³		4-8
Total Hours		32

Other Requirements⁴

Other requirements may overlap

Minimum 500-level Hours Required Overall: 12, 8 must be in the unit

Minimum GPA: 2.75

¹ Requirement may be waived if taken as an undergraduate at UIUC. If waived, student may substitute this credit requirement with an agricultural education or technical subject matter elective.

² Students may take up to four credit hours in agricultural education to fulfill the technical subject matter course requirements. This is only recommended for students completing a thesis (AGED 599 credits) or for students who desire to take an agriculture content course for teachers (i.e. AGED 500).

³ The applied research option requires the completion of a thesis, and the program development and online options require the completion of a project in the area of agricultural education, broadly defined, and submission of a research/professional paper.

⁴ For additional details and requirements refer to the department's Graduate Program Information (<http://aged.illinois.edu/grad/reqs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Agricultural Education Foundations ¹		
AGED 400	Foundations of Ag & Extn Ed	3
AGED 420	Curr Design & Instruction	3
Instructional Methods & Design		
AGED 430 or AGED 490	Youth Development Programs Adult Learning Principles	4
Educational Research		
AGED 545	Research Methods & Design	4
Agricultural Education electives		3-4
Electives in agriculture or education ²		10-11
Independent Study Hours Required–AGED 549 ³		4
Total Hours		32

Other Requirements⁴

Other requirements may overlap

Minimum 500-level Hours Required Overall: 12, 8 must be in the unit

Minimum GPA: 2.75

¹ Requirement may be waived if taken as an undergraduate at UIUC. If waived, student may substitute this credit requirement with an agricultural education or technical subject matter elective.

² Students may take up to four credit hours in agricultural education to fulfill the technical subject matter course requirements. This is only recommended for students completing a thesis (AGED 599 credits) or for students who desire to take an agriculture content course for teachers (i.e. AGED 500).

³ The applied research option requires the completion of a thesis, and the program development and online options require the completion of a project in the area of agricultural education, broadly defined, and submission of a research/professional paper.

⁴ For additional details and requirements refer to the department's Graduate Program Information (<http://aged.illinois.edu/grad/reqs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Online Program

Agricultural Education can be pursued as an online degree. Please refer to <http://aged.illinois.edu/grad/online-MS> for more information.

Agricultural Production

<http://www.psm.illinois.edu>

Program Coordinator: Robert Knox
Correspondence and Admissions: Carolyn Thomas
110 Animal Sciences Lab
1207 W. Gregory Dr.
Urbana, IL 61801
(217) 333-1044
E-mail: cdthoma2@illinois.edu

Illinois PSM: psmdegree@illinois.edu

Major: Agricultural Production

Degrees Offered: M.S.

Graduate Concentration: Professional Science Master's (M.S. only)

Graduate Degree Programs

The College of Agricultural, Consumer and Environmental Sciences (ACES) offers graduate work leading to the Master of Science degree with a Major in Agricultural Production and Concentration in Professional Science Master's (PSM). Fields of specialization within this interdisciplinary program include Food Animal Production, Crop Production, and Sustainable Production Systems. In addition to the rigorous scientific training in the area of agricultural production, instruction is provided in applied business knowledge and skills. This program is designed for those who seek careers in a science-based setting with significant managerial and leadership responsibilities.

Admission

Candidates for admission to the M.S. and Ph.D. programs must have a bachelor's degree from an accredited institution equivalent to those from the University of Illinois at Urbana-Champaign. A grade point average of 3.0 or higher (A = 4.0) for the last 60 hours of undergraduate work and for any graduate study is required for admission. Graduate Record Examination (GRE) scores are required of all applicants and the minimum acceptable Test of English as a Foreign Language (TOEFL) score is 590 on the paper-based test, 243 on the computer-based test, or 79 on the internet-based test. Applications are only accepted for the fall semester. Transfer credit may not be applied.

Financial Aid

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted.

Master of Science in Agricultural Production, Professional Science Master's Concentration

Code	Title	Hours
ACES 501	Advanced Bioenergy Topics ²	4
28 hours of coursework required from departmental approved list in any ONE of the three specialty areas (Food Animal Production, Crop Production, Sustainable Production Systems), with a minimum of 8-hours required at the 500-level		28
Business courses prescribed by the Illinois PSM program		10
PSM 501	PSM Industry Seminar I	0
PSM 502	PSM Industry Seminar II	0
PSM 503	PSM Industry Seminar III	0
PSM 555	PSM Internship	0
Total Hours		42

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 2.75

¹ For additional details and requirements for all degrees, please refer to the program's Graduate Degree Requirements (<http://www.psm.illinois.edu/prospectivestudents/programs/agripro.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

² Students are required to take this course twice.

Agricultural and Biological Engineering

Head of the Department: K.C. Ting

Director of Graduate Studies: Y. Zhang

338 Agricultural Engineering Sciences Building

1304 West Pennsylvania Avenue

Urbana, IL 61801

(217) 333-3570

Department Website: abe.illinois.edu (<http://abe.illinois.edu>)

E-mail: abe@illinois.edu

Major: Agricultural and Biological Engineering

Degrees offered: M.S. and Ph.D.

Major: Technical Systems Management

Degrees offered: M.S.

Graduate Concentration: Professional Science Master's

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Agricultural and Biological Engineering and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Agricultural and Biological Engineering offers a graduate degree program which is at the forefront of the application of engineering principles to solve problems of agricultural production, utilization, environmental control, and biological systems and to improve the quality of life. Students may concentrate study in one of the faculty research interest areas listed below. Supporting course work includes: mathematics; computer science; statistics; engineering mechanics; chemical, civil, electrical, and mechanical engineering; animal science; crop sciences; food science; and other appropriate fields. Opportunity also exists for specializing in

1. computational science and engineering and
2. energy and sustainability engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<http://cse.illinois.edu/education/cse-educational-programs-overview>) and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>)

The Medical Scholars Program (<http://med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Agricultural and Biological Engineering.

Admission

Admission requirements for either master's program include completion of an undergraduate program equivalent to the Agricultural and Biological Engineering (ABE) curriculum (in the case of the ABE M.S.) or the Technical Systems Management (TSM) curriculum (in the case of the TSM M.S.), with at least a 3.0 grade point average (A = 4.0) for the last two

years of undergraduate course work. Applicants must submit Graduate Record Examination (GRE) scores.

Admission to the Ph.D. program is limited to individuals who have demonstrated exceptional ability through outstanding performance in obtaining a Master of Science degree and/or through a high degree of technical and professional accomplishment. Candidates must also satisfy entrance requirements for the M.S. degree program.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 88 (iBT), 230 (CBT) or 570 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Agricultural and Biological Engineering and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Agricultural and Biological Engineering graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217) 333-8146, mospo@illinois.edu).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Agricultural and Biological Engineering graduate degree.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program. For details of expectations, see the department's Graduate Handbook (<http://abe.illinois.edu/graduate/handbook>).

Faculty Research Interests

Current research interests of the faculty include off-road equipment engineering (robotics and machinery automation, remote sensing and precision agriculture, machinery management systems, pesticide application technology, engines and biofuels); soil and water resources (hydrology, erosion and sediment transport, water management, wetlands, and water quality); bioenvironmental engineering (building environment and energy conservation, air quality, renewable energy, biomass to bioenergy conversion, structural analysis and facility design, building materials evaluation, environmental control and ergonomic design for plant, animal, and human housing systems and facilities); food and bioprocess engineering (engineering properties of foods, physical properties of biological products, grain drying, grain quality evaluation,

dry-grind corn processing, wet and dry milling, modified bioprocesses for improved co-products, fuel and chemicals, fermentation, and transport phenomenon in biological materials); or electronic and electrical systems (biosensors and controls, energy systems, machine vision, near-infrared spectroscopy applications, bionanotechnology, microfabricated devices, bioconjugation techniques, transcriptional control, modeling life support systems, and multiscale biological processes). For more details, visit the department's graduate program Web site. (<http://abe.illinois.edu/graduate/areas>)

Financial Aid

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted. For all other students, fellowships, supported by University, College of Agricultural, Consumer and Environmental Sciences, and College of Engineering funds, are available on a competitive basis. A limited number of assistantships, providing both teaching and research experience, are often available on a half-time basis. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Science in Agricultural and Biological Engineering (p. 651)
- Master of Science in Technical Systems Management (p. 652)
- Master of Science in Technical Systems Management, Professional Science Masters Concentration (p. 652)

Doctor of Philosophy in Agricultural and Biological Engineering

Code	Title	Hours
ABE 594	Graduate Seminar (0 hours registration every term while in residence)	0
	One MATH course beyond differential equations from an approved list (http://abe.illinois.edu/graduate/handbook)	3-4
	One course in statistical design and analysis from an approved list (http://abe.illinois.edu/graduate/handbook) ¹	3-5
	pagelink http://abe.illinois.edu/graduate/handbook :One course in instrumentation and measurement from an approved list	3-5
	One 500-level course (taken for at least 3 credit hours) in an area of specialization – chosen in consultation with advisor	3-5
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	11-22
ABE 599	Thesis Research (min-max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other Requirements and Conditions may overlap

	A maximum of 4 hours of ABE 597 (or other independent study) may be applied toward the elective course work requirement.
	Teaching experience determined in consultation with advisor with guidance provided by the department's Graduate Handbook.
	The minimum program GPA is 3.0.
	A Masters degree is required for admission to the Ph.D. program.
Ph.D. exam and dissertation requirements:	
	Qualifying exam
	Preliminary exam
	Final Exam or dissertation defense
	dissertation deposit

¹ For additional details and requirements for all degrees, please refer to the program's Graduate Degree Requirements (<http://www.psm.illinois.edu/prospectivestudents/programs/agripro.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Agricultural and Biological Engineering

Thesis Option

Code	Title	Hours
ABE 599	Thesis Research (min-max applied toward the degree)	8
ABE 594	Graduate Seminar (registration for 0 hours every term while in residence)	0
	One MATH course beyond differential equations from an approved list (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-4
	One course in statistical design and analysis from an approved list (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-5
	One course in instrumentation and measurement from an approved list (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-5
	One 500-level course (taken for at least 3 credit hours) in an area of specialization – chosen in consultation with advisor	3-5
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	4-13
Total Hours		33

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

	A maximum of 4 hours of ABE 597 (or other independent study) may be applied toward the elective course work requirement.
	A minimum of 12 500-level credit hours applied toward the degree.
Minimum GPA	3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://abe.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>)

Non-Thesis Option

Code	Title	Hours
ABE 594	Graduate Seminar (registration for 0 hours every term while in residence)	0
	One MATH course beyond differential equations from an approved list (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-4
	One course in statistical design and analysis from an approved list (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-5
	One course in instrumentation and measurement from an approved list (3-5 hours) (http://abe.illinois.edu/graduate-students/abe-graduate-student-course-requirements)	3-5
	One 500-level course (taken for at least 3 credit hours) in an area of specialization – chosen in consultation with advisor	3-5
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	15-24
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

	A maximum of 4 hours of ABE 597 (or other independent study) may be applied toward the elective course work requirement.
	A minimum of 12 500-level credit hours applied toward the degree.
	The non-thesis option is only allowed with departmental approval at or before initiation of graduate study, and a final report is required.
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://abe.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>)

Master of Science in Technical Systems Management

Thesis Option

Code	Title	Hours
ABE 599	Thesis Research (min-max applied toward the degree)	8
TSM 594	Graduate Seminar (registration for 0 hours every term while in residence)	0
	One course in statistics from an approved list	3-5
	One course in research methods including experimental design from an approved list	3-5
	One 500-level elective course chosen in consultation with advisor	3-5
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	8-16
Total Hours		33

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 12 500-level credit hours applied toward the degree, and 8 of those must be in the TSM rubric.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://abe.illinois.edu/graduate/handbook>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
TSM 594	Graduate Seminar (registration for 0 hours every term while in residence for thesis and non-thesis options; every fall term in residence for the PSM concentration)	0
	One course in statistics from an approved list	3-5
	One course in research methods including experimental design from an approved list	3-5
	One 500-level elective course chosen in consultation with advisor	3-5
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below) (19-25 hours)	19-27
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 12 500-level credit hours applied toward the degree, and 8 of those must be in the TSM rubric.

The non-thesis option is only allowed with departmental approval at or before initiation of graduate study, and a final report is required.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://abe.illinois.edu/graduate/handbook>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Technical Systems Management, Professional Science Masters Concentration

Code	Title	Hours
TSM 594	Graduate Seminar (0 hours registration every term while in residence every fall term in residence for the PSM concentration)	0
	One course in statistics from an approved list	3-5
	One course in research methods including experimental design from an approved list	3-5
	One 500-level elective course chosen in consultation with advisor	3-5
	PSM concentration courses from an approved list	10
	Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	15-23
PSM 555	PSM Internship	0
Total Hours		42

Other Requirements ¹

Other requirements may overlap

A minimum of 12 500-level credit hours applied toward the degree, and 8 of those must be in the TSM rubric.

The minimum program GPA is 2.75.

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://abe.illinois.edu/graduate/handbook>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Agricultural and Consumer Economics

Head of Department: Sean Fox
326 Mumford Hall, MC-710
1301 West Gregory Drive
Urbana, IL 61801
<http://www.ace.illinois.edu>

(217) 333-1810
Fax: (217) 333-5538
Director of Graduate Studies: Nick Paulson
Director of Graduate Recruiting and Admissions: Madhu Khanna

E-mail: ace-grad@illinois.edu

Major: Agricultural and Applied Economics

Degrees offered: M.S. and Ph.D.

Graduate Degree Programs

The Department of Agricultural and Consumer Economics (ACE) offers courses of study that lead to the Master of Science and the Doctor of Philosophy degrees. Applicants with a baccalaureate degree are initially admitted to the M.S. program. Students who fulfill specific requirements in the first year of the M.S. program may request transfer into the Ph.D. program.

Admission

Graduate College requirements apply, including a 3.0 (A = 4.0) GPA for the last two years of undergraduate coursework and any graduate work completed. International applicants whose native language is not English must have a Test of English as a Foreign Language (TOEFL iBT) score of at least 88 (230 computer-based and 570 paper-based) or an International English Language Testing System (IELTS) academic examination overall score of at least 6.5 with a minimum sub-section score of 6 in each of the four modules (speaking, listening, writing, and reading). Graduate Record Examination (GRE) general test scores are required for candidates seeking financial aid and are requested for all applicants. Applicants to the Ph.D. program are requested to provide a sample of their academic writing. Students having an inadequate background in theory or quantitative methods will be asked to take additional coursework to prepare for graduate study. An applicant with a master's degree in an appropriate discipline will be considered for the Ph.D. degree. Students may commence study in either semester, but initial enrollment in fall semester is preferable.

Student Thesis and Dissertation Research

Our students' research uses economics to address important social and economic challenges. Thesis and dissertation topics include designing policies for environmental protection and resource management, evaluating international efforts to reduce poverty and hunger, and enhancing the performance of commodity and speculative markets.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program and is strongly recommended for those intending to pursue an academic career.

Financial Aid

Graduate fellowships, assistantships, and tuition and fee waivers are awarded on a competitive basis.

Fellowships. The department offers fellowships from internal resources and by nominating students for college and campus fellowships. These fellowships, often combined with assistantship support, provide monetary stipends and, in most cases, exemptions from tuition and some student fees. Recipients must register for the equivalent of at least 12 hours of graduate credit in each semester and four hours in an eight-week summer session. Fellowship holders are encouraged to involve themselves with research and teaching in the department.

Assistantships. Research and teaching assistantships provide an opportunity for graduate students to work with faculty. Most research

assistantships are funded by grants and contracts involving the analysis of contemporary issues. Most assistantships carry waivers of tuition and some fees.

Tuition and Fee Waivers. Waivers may be awarded. In most cases they are awarded to students with fellowship support from certain external programs.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Agricultural and Applied Economics. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Master of Science in Agricultural and Applied Economics

The M.S. offers considerable flexibility. Students using the degree as a foundation for a doctorate emphasize economic theory and analytical research tools. Students seeking the terminal master's degree focus their study on the concepts and analytical techniques used by analysts and managers in industries, governments, and other organizations.

Students must earn a 3.0 (A = 4.0) GPA for a minimum of 32 graduate hours of credit. M.S. students entering the ACE graduate program will be admitted only to the Thesis Option. For the Thesis Option, a thesis is prepared under the supervision of a faculty advisory committee. The thesis is defended in a formal oral examination, which usually coincides with an open departmental seminar, administered by the thesis committee. The Non-Thesis Option requires advanced coursework in lieu of a thesis. The Non-Thesis Option is available only to students already enrolled in the Thesis Option of the ACE M.S. program or in the ACE Ph.D. program. Application for admission to the Non-Thesis Option is by petition to the Department after at least two semesters of graduate coursework have been completed.

Thesis Option

Code	Title	Hours
Select one of the following:		4
ACE 500	Applied Economic Theory	
ACE 592	Special Topics (Microeconomics)	
ECON 500	Microeconomics	
6 hours in quantitative and research methods from departmental list (these do not count toward the 500 level course requirement)		6
Electives		14
ACE 599	Thesis Research ¹	8-48
Total Hours		32

Other Requirements²

Other requirements may overlap

Only 2 hours of ACE 566 may count towards the degree

Minimum Hours Required Within the Unit: 8 at the 500 level, not including 566, 599 or independent study

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 3.0

¹ *If students enter the program with a bachelor's degree only, a maximum of 48 thesis hours may be applied toward the total. If students enter the program with a master of science degree, a maximum of 32 thesis hours may be applied toward the total.*

² *For additional details and requirements refer to the department's Graduate Program information for the Master's degree (<http://ace.illinois.edu/grad/masters>) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).*

Non-Thesis Option

Code	Title	Hours
	24 hours selected from the ACE doctoral core sequence, including at least 12 hours in applied economic theory and 8 hours in quantitative methods	24
	Electives	8
	Total Hours	32

Other Requirements¹

Other requirements may overlap

Only 2 hours of ACE 566 may count towards the degree

Minimum Hours Required Within the Unit: 20 at the 500 level, not including ACE 566, 599 or independent study

Minimum 500-level Hours Required Overall: 20

Minimum GPA: 3.0

¹ *For additional details and requirements refer to the department's Graduate Program information for the Master's degree (<http://ace.illinois.edu/grad/masters>) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).*

Doctor of Philosophy in Agricultural and Applied Economics

The Doctor of Philosophy is a research-oriented degree that prepares successful candidates for positions in higher education, governmental agencies, nongovernmental organizations, and the research and management functions of the private sector. In consultation with a faculty advisor, students develop an area of specialization to fit their career aspirations. Typical areas of specialization include:

- agricultural finance
- environmental and natural resource economics
- family and consumer economics
- farm and agribusiness management
- international and policy economics
- price analysis and agricultural marketing
- regional economics and public policy

Students pursue coursework in theory, quantitative methods, and their area of specialization; pass a written core exam, a second-year research paper requirement, an oral preliminary examination which includes the

formal proposal for dissertation research; and complete and defend a dissertation. The core courses cover the theory and quantitative methods upon which advanced research, teaching, and service in ACE are based. The specialty courses build on the knowledge gained in the core courses and provide an understanding of the application of economic theory and the tools of economic analysis. Students are encouraged to complete substantial coursework in other departments, such as economics, finance, and business administration.

A 3.0 (A = 4.0) GPA is required in all courses completed in the program.

Code	Title	Hours
	Core courses	24-28
	4 hours (minimum) of quantitative methods beyond the courses specified in the core	4
	16 hours at the 500 level to define two fields of expertise. At least 8 of those 16 hours must be in ACE	16
	4 hours in Advanced Research and Scholarly Communication (ACE 561)	4
ACE 599	Thesis Research (max applied toward degree)	32
	Total Hours	64

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit at the 500-Level: 16 excluding indep study, 599 and core courses

A written paper in the form of a journal article approved by the research paper committee and presented at a department conference.

Masters Degree Required for Admission to PhD?	Yes, but students meeting specific conditions may petition to move from the M.S. to the Ph.D. program within three semesters. Students who take this route must complete 96 total hours.
Written Core Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ *For additional details and requirements refer to the department's Graduate Program information for the Ph.D. degree (<http://ace.illinois.edu/graduate/phd-requirements>) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).*

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the [joint program requirements](#) and contact the M.B.A. program and their major department office for more information.

M.U.P. Joint Degree Program

For joint programs, at least 40 hours must be in Urban Planning, including all core courses and capstone requirements. The two programs must total a minimum of (a) 80 hours, or (b) the sum of 40 Urban Planning hours plus the required number of hours for the second degree, whichever is greater. (In the latter case, the other program may at its discretion count up to 8 hours of Urban Planning courses as electives in meeting its degree requirements as long as students are required to take no fewer than 40 additional hours in that program.) The MUP capstone requirement may be waived for a thesis completed in another program provided faculty from both programs participate on the thesis committee. Students must be in residence in Urban Planning for at least two semesters.

Consult the department's M.U.P. joint degree (http://www.urban.illinois.edu/academic-programs/mup/mup_joint.html) web page for more information about the admissions process and joint degree requirements. For additional guidance, please contact the Director of the M.U.P. Program.

Animal Biology

www.life.illinois.edu/animalbiology (<http://www.life.illinois.edu/animalbiology>)

Head of the Department: Andrew Suarez

515 Morrill Hall

505 South Goodwin Avenue

Urbana, IL 61801

(217) 333-7801

E-mail: ab@life.illinois.edu

Major: Biology

Degrees Offered: M.S., Ph.D.

Graduate Concentration: Ecology, Ethology & Evolution (in all degrees)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Biology-Ecology, Ethology & Evolution and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Animal Biology administers graduate degree programs as concentrations in biology. Areas of training include physiological, population, community, and evolutionary ecology; population, molecular and quantitative genetics; evolutionary biology, behavioral ecology and evolution, physiology, evolution and development, functional anatomy, systematics, and conservation biology.

Admission

Acceptance for graduate study in animal biology is based on the applicant's research potential and academic achievement. An undergraduate degree in the life sciences is the usual preparation, but students majoring in mathematics, computer science, or the physical and social sciences are also considered. Courses required for admission are inorganic and organic chemistry, a year of physics, and mathematics through calculus. Students lacking one or more of these courses may be admitted with the provision that such deficiencies be completed in addition to the normal graduate course load. A grade point average of at least 3.0 (A = 4.0) for the last two years of undergraduate work in a four-year undergraduate degree program or the last three years of a five-year undergraduate program and for any graduate study is mandatory, and good scores on the Graduate Record Examination (GRE)

are necessary. Considerable emphasis is placed on a student's interest and ability in research as demonstrated by previous work and letters of recommendation. Applications are considered for fall admission only. The deadline for application materials is January 1. A minimum paper-based Test of English as a Foreign Language (TOEFL) score of 570 (230 on the computer-based version, 88 on the internet-based version) is preferred for international applicants.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Biology-Ecology, Ethology & Evolution. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Financial Aid

Financial aid is available in the form of fellowships and teaching and research assistantships for qualified students.

Master of Science in Biology with Concentration in Ecology, Ethology & Evolution

Thesis Option

Code	Title	Hours
BIOL 599	Thesis Research (0 min applied toward degree)	0
Total Hours		32

Other Requirements¹

A concentration is required

Masters Thesis Deposit Required Yes

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Total Hours		32

Other Requirements¹

A concentration is required

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Biology with Concentration in Ecology, Ethology & Evolution

Candidates for the Ph.D. degree must demonstrate excellence by examination and, in consultation with an adviser and doctoral committee, plan and carry out original thesis research with distinction. A preliminary examination evaluating the ability of students to integrate subject matter related to their fields is given during the third year. Additional requirements may be prescribed by the adviser and doctoral committee. A final examination, in which the student defends the thesis, and a presentation of the thesis at the departmental seminar complete the program.

Code	Title	Hours
Courses in statistics are required		
BIOL 599	Thesis Research (0 min applied toward degree)	0 to 16
Total Hours		64

Other Requirements ¹

A concentration is required.

Experience in Teaching is required as part of the academic work of all PH.D. candidates in this program

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (additional 32 hours)
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Animal Sciences

<http://www.ansci.illinois.edu>

Interim Head of the Department: Douglas Parrett
 Graduate Program Coordinator: Sandra Rodriguez-Zas
 110 Animal Sciences Laboratory
 1207 West Gregory Drive
 Urbana, IL 61801
 (217) 244-0418
 E-mail: ansci-gradprog@illinois.edu

Major: Animal Sciences
 Degrees offered: M.S., Ph.D.

Major: Bioinformatics
 Degrees offered: M.S.

Graduate Concentration: Animal Sciences

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Animal Sciences and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Animal Sciences offers graduate work leading to the Master of Science and Doctor of Philosophy degrees. Fields of specialization include:

- animal breeding and genetics
- animal behavior
- biochemistry
- environmental physiology
- immunobiology
- meat science and muscle biology
- microbiology
- nutrition
- systems of animal management and production
- physiology of lactation
- physiology of reproduction

Beef and dairy cattle, horses, poultry, sheep, swine, and a variety of companion and laboratory animals are available for study.

The genomic and proteomic projects are generating large amounts of complex biological data that require effective storage, retrieval, analysis and interpretation. The bioinformatics degree program provides students with the skills necessary to augment the understanding and use of agricultural, biological and medical information and resources through the application of molecular, chemical, physical, computational, statistical, mathematical and informatic techniques. Students interested in this program may come with undergraduate training in one of the following areas:

1. biological and agricultural sciences,
2. statistical, mathematical and computer sciences,
3. informatics and engineering sciences.

Graduates from the Bioinformatics program will be able to integrate basic and applied concepts in the three areas and applied them to biotechnology and medical research.

Admission

Candidates for admission to the M.S. and Ph.D. programs must have a bachelor's degree from an accredited institution equivalent to those from the University of Illinois at Urbana-Champaign. Candidates for admission to the Ph.D. program must meet Masters level requirements. A grade point average of 3.0 or higher (A = 4.0) for the last two years of undergraduate work and for any graduate study is required for admission. Students must take the Graduate Record Examination (GRE) and are recommended to take the advanced test in biology. English proficiency requirement for admission follow Graduate College requirement. Emphasis is placed on a student's interest and ability in research as demonstrated by previous work and letters of recommendation. Admission is possible for spring and summer semesters.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Animal Sciences. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is encouraged as part of the academic work of students in this program.

Financial Aid

Financial aid for graduate students is available in the form of fellowships, teaching and research assistantships, tuition and partial fee waivers, and traineeships. Qualified candidates are considered for financial support upon application. Graduate students making satisfactory progress toward their degrees generally receive a full tuition waiver and a partial fee waiver, as well as a stipend.

- Master of Science in Animal Sciences (p. 657)
- Master of Science in Bioinformatics, Animal Sciences Concentration (p. 658)

Doctor of Philosophy in Animal Sciences (Entering with an approved Master's Degree)

Students must pass preliminary and final examinations administered by committees appointed by the dean of the Graduate College.

Code	Title	Hours
	Advanced lecture and laboratory courses (400- and 500-level courses; excludes ANSC 590 and ANSC 599)	20-28
	Graduate seminar (ANSC 590) enrollment is required every semester (max 4 hours can be applied to the degree)	4
ANSC 599	Thesis Research (min/max applied toward degree)	32-40
Total Hours		64

Other Requirements ¹

Other requirements and conditions may overlap

Masters Degree Required for Admission to PhD?	Masters level requirements must be met
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes

Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

Doctor of Philosophy in Animal Sciences (Entering with an approved baccalaureate degree)

Students must pass a qualifier examination and preliminary and final examinations administered by committees appointed by the dean of the Graduate College.

Students enrolled in this baccalaureate to Doctor of Philosophy program will not be granted automatically a Master in Animal Sciences degree. Students enrolled in the baccalaureate to Doctor of Philosophy that wish to receive a Master degree will be transferred to the Master in Animal Sciences program and will be expected to fulfill the requirements to secure a Master degree. Students that secure a Masters in Animal Sciences can be transferred to the Doctor of Philosophy program.

Code	Title	Hours
	Advanced lecture and laboratory courses (400- and 500-level courses; excludes ANSC 590 and ANSC 599)	42-50
	Graduate seminar (ANSC 590) enrollment is required every semester (max 4 hours can be applied to the degree)	6
ANSC 599	Thesis Research (min/max applied toward degree)	40-48
Total Hours		96

Other Requirements ¹

Other requirements and conditions may overlap

Masters Degree Required for Admission to PhD?	No
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://ansci.illinois.edu/grads/degree-requirements>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Animal Sciences

Code	Title	Hours
	Lecture and laboratory classes (400- and at least 2 hours of 500-level courses; excludes ANSC 590 and ANSC 599)	22
	Graduate seminar (ANSC 590) enrollment is required every semester (max 2 hours can be applied to the degree)	2
ANSC 599	Thesis Research (min/max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other Requirements and conditions may overlap

Minimum Hours Overall Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

A comprehensive oral examination concerning the thesis and other areas of animal agriculture are required.

Thesis Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://ansci.illinois.edu/grads/degree-requirements>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Bioinformatics, Animal Sciences Concentration

Code	Title	Hours
	From the Bioinformatics MS Biology core course list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	From the Bioinformatics MS Bioinformatics core course list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	From the Bioinformatics MS Computer Science core course list (CS 411 or CS 473) (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	Graduate seminar (ANSC 590) enrollment is required every semester (max 2 hours can be applied to the degree)	2
ANSC 599	Thesis Research (min/max applied toward degree)	8
	Electives	14
	Total Hours	36

Other Requirements ¹

Other Requirements and conditions may overlap

A concentration is required.

Minimum Hours Overall Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

A comprehensive oral examination concerning the thesis and other areas of Bioinformatics and Animal Sciences is required.

Thesis Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://ansci.illinois.edu/grads/degree-requirements>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Anthropology

<http://www.anthro.illinois.edu>

Head of the Department: Virginia Dominquez

Director of Graduate Studies: Ellen Moodie

Museum Studies Program Coordinator: Susan Frankenberg

109 Davenport Hall
607 South Mathews Avenue
Urbana, IL 61801
(217) 333-3616
E-mail: anthro@illinois.edu

Major: Anthropology
Degrees offered: M.A., Ph.D.
Graduate Concentration: Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Graduate Minor: Museum Studies

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Anthropology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>).

Graduate Degree Programs

The Department of Anthropology offers graduate programs leading to the Master of Arts and the Doctor of Philosophy degrees. We generally do not accept students for a terminal M.A.

Admission

Students without the equivalent of the department's undergraduate concentration may be admitted to either degree program, but they may be required to make up any deficiencies in their anthropological backgrounds. In addition to the Graduate College admission requirements, students are required to submit Graduate Record Examination (GRE) scores. Students whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) (<http://www.grad.illinois.edu/admissions/instructions/04c>), with minimum scores set by the Graduate College. Students are admitted for the fall term only.

Students wishing to pursue the minor in Museum Studies must be in good standing in the graduate program of an academic department, and must apply for acceptance into the minor. Admission to the minor is contingent upon approval of the student's home department and the Museum Studies Steering Committee. Students may apply to the minor during the first week of the fall and spring semesters in any academic year, and should contact the Museum Studies Program Coordinator for application instructions or more information.

Degree Requirements

Each subfield (Archaeology, Biological Anthropology, and Sociocultural/Linguistic Anthropology) requires a specific set of courses for graduation. Achieving doctoral candidacy in all three subfields entails passing (a) language (and/or skill) exam(s), (b) passing a set of preliminary examinations, and (c) successfully submitting a predissertation paper, and/or a doctoral proposal, all to be defended in an oral examination. For specific details and requirements for admission to and navigation of the Ph.D. program, please refer to the Anthropology Department Graduate Programs Handbook (<http://www.anthro.illinois.edu/programs/graduate/resources/AnthGradHandbook.pdf>) and the University of Illinois Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Anthropology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while

in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146, or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, the Anthropology Department recognizes the importance of teaching experience as part of a graduate education. Most Anthropology graduate students will have the opportunity to work as teaching assistants, to learn to design their own classes, and possibly teach their own classes.

Faculty Research Interests and Facilities

Courses and individualized study provide broad coverage of sociocultural, linguistic, archaeological, and physical anthropology. The department provides special emphases in the analyses of state ideologies and cultural transformations; complex societies in transition; kinship and gender relations; politics, economics, and business studies; social movements and youth; border studies, criminalities, violence, and security; religion, race, and ethnicity; democracy, governance, and policing; social classification; performance and embodiment; food and environment; language and culture; discourse and narrative analysis; transnationalism and diasporas; human evolution; agricultural origins and development; landscape histories and heritage; hunter-gatherer adaptations; climate change and sustainability; diet and nutrition; paleoecology and paleobiology; evolutionary genetics; population genetics; peopling of the Americas; ancient DNA; biomechanics of locomotion; exercise and neurobiology; functional morphology; comparative and analytical osteology; forensics; demography; immunology; evolutionary medicine; microbe-host interaction; reproductive ecology; female reproductive physiology; conservation; and nonhuman primate evolution, morphology, behavior, and ecology. The department's research facilities include laboratories for archaeology, GIS and spatial computing, faunal analysis, casting, stable-isotope analysis, ethnography, ancient DNA, skeletal biology, locomotion and motion analysis, and endocrinology.

Departmental funds and a grant from the National Science Foundation, as well as from area studies centers, are available for graduate students' summer field research. An archaeology field school is held at various locations in Illinois and outside of the US (location varies from year to year). Graduate student programs are enriched by close departmental relationships with the various interdisciplinary units, including area studies centers on campus (African, East Asian and Pacific, European Union, Latin America and Caribbean, Russian and East European; South Asian and Middle Eastern Studies), the ethnic and gender studies units (the American Indian Studies Program and the departments of African-American Studies, Asian American Studies, Gender and Women's Studies, and Latina/Latino Studies), along with the Women and Gender in Global Perspectives Program, Spurlock Museum, the Museum of Natural History, Krannert Art Museum, the Institute for Genomic Biology, and the Program in Ancient Technologies and Archaeological Materials.

Agreements between the University and various governments and institutes facilitate research in many nations. Training is available in various languages (some with funding available), including Arabic,

Bengali, Burmese, Chinese, Hausa, Hebrew, Hindi, Indonesian, Japanese, Korean, Portuguese, Quechua, Lingala, Russian, Shona, Swahili, Thai, and Urdu. Students have ready access to the extensive computer facilities of the University and to the department's facilities.

Financial Aid

University fellowships, Graduate College fellowships for under-represented minorities, and teaching and research assistantships provide variable levels of funding for most graduate students who do not hold external awards. Tuition and service fee waivers accompany most fellowships and assistantships. Foreign Language and Area Studies (FLAS) fellowships are available through various area centers. University of Illinois public archaeology programs, including the Illinois State Archaeological Survey and the Public Service Archaeology and Architecture Program, have provided support and research employment for graduate students in the past, as has the U.S. Army Construction Engineering Research Laboratory in Champaign.

Master of Arts in Anthropology

The master's degree can be a first stage toward the doctorate or may be used by students wishing to apply knowledge of anthropology to a related field. Candidates must present a thesis or paper in lieu of a thesis acceptable to their advisers and another member of the graduate faculty within the department.

Thesis Option

Code	Title	Hours
ANTH 599	Thesis Research (min/max applied toward degree)	4
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 8 at the 500 level

Minimum Hours Required Within the Unit: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
ANTH 590	Dissertation Readings (4 min)	4
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 8 at the 500 level

Minimum Hours Required Within the Unit: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Anthropology

The preliminary examination consists of a pre-dissertation research paper, a proposal for doctoral research, and a written examination designed by the student's doctoral committee followed by a two-hour oral examination. The final examination is a defense of the doctoral thesis.

Fieldwork is strongly recommended, although not required.

Code	Title	Hours
Master's degree or equivalent number of hours		32
Electives		32
Language Requirement: High proficiency in one, or reading ability in two, foreign languages is required. Statistics, computer modeling, or similar expertise, however, may be used in lieu of one foreign language.		
ANTH 599	Thesis Research (min/max applied toward degree)	0-32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	No
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Museum Studies

The Graduate Minor in Museum Studies is designed for MA and PhD students who wish to complement their degree program with interdisciplinary study of the theory, organization and management of museums and museum collections. The program offers broad coverage of different disciplines' approaches to museum theory, and practice, including interdisciplinary perspectives from Anthropology, Art History, Landscape Architecture, History, Education, and Library and Information Sciences. The program also focuses on the collaborative, international and multicultural nature of museum work in curating, researching and communicating the tangible and intangible evidence of people and their environment. Students acquire the applied theory required to successfully work on, with or in museums. Students may tailor the minor to their career goals by choosing among electives that emphasize different theoretical and technical aspects of museum studies.

Code	Title	Hours
MUSE 500	Core Prob Museum Theory & Prac	4
Electives from an approved list of museum-related courses, at least one of which must be at the 500-level.		12

The student must participate in a capstone experience consisting of an approved museum-based internship, museum-related project or museum-related research paper. Every student must provide a product of this experience in the form of either a formal professional presentation or a written document. If a student chooses to write their MS thesis or PhD dissertation on a museum topic, this will fulfill (but is not required for) the capstone experience, provided that a member of the Museum Studies Steering Committee is a formal member of the student's thesis or dissertation committee. Student may receive academic credit for their capstone experience through their home department or MUSE 590.

Total Hours 16

Other Requirements ¹

Minimum 500-level Hours Required 8
Overall

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Architecture

<http://arch.illinois.edu>

Director of the School: Peter Mortensen (Interim)

Director of Graduate Studies: Randy Deutsch

117 Temple Hoyne Buell Hall

611 Taft Drive

Champaign, IL 61820

(217) 244-4723

E-Mail: arch-grad@illinois.edu

Major: Architecture

Degrees Offered: M. Arch, PhD

Graduate Concentration: Medieval Studies (p. 837) (M. Arch and PhD)

Major: Architectural Studies

Degrees Offered: M.S.

Graduate Concentration: Structures (p. 662) (M.S.)

Joint Degree Program: the master of Architecture can be earned jointly with the following degrees offered:

- Masters in Architectural Studies
- Masters in Business Administration
- Masters in Computer Science
- Masters in Urban Planning
- Master of Science in Civil Engineering (Construction Engineering and Management) or (Structures)

Graduate Degree Programs

The School of Architecture offers two graduate programs, leading to a Masters degree:

1. a two-year Master of Architecture (Professional Degree) and
2. a one-year Master of Science in Architectural Studies (Post-professional Degree).

The Master of Architecture program is for students holding a four-year Bachelor of Science in Architectural Studies (or similar degree

in architecture). One may be admitted to the Master of Architecture program with Limited Standing if the student holds a bachelor's degree (or higher) in any field other than architecture. Student in M. Arch (Limited Standing) typically take two years to complete undergraduate prerequisite courses to attain full standing in the M. Arch program. The Master of Architecture degree is a professional degree accredited by the National Architectural Accreditation Board (NAAB).

The Master of Science in Architectural Studies (Post-professional Degree) program is for students holding a five-year Bachelor of Architecture professional degree. The MSAS degree is not accredited by NAAB.

The School of Architecture, together with the graduate programs of business administration, computer science, urban and regional planning, and civil and environmental engineering, offers graduate programs leading to the following joint degrees: Master of Architecture and Master of Business Administration, Master of Architecture and Master of Computer Science, Master of Architecture and Master of Urban Planning, and Master of Architecture and Master of Science in Civil and Environmental Engineering (Construction Engineering and Management) (Structures).

The School of Architecture, together with the Department of Landscape Architecture, offers a graduate program leading to the Doctor of Philosophy degree.

Admission

The admission grade point average for full standing in the Graduate College and the school must be at least 3.0 (A = 4.0). For applicants who meet the other requirements but have an admission GPA under 3.0, admission with limited standing may be permitted if evidence of exceptional qualification is presented.

Applicants are selected for admission on the basis of undergraduate academic performance and profession-related experience. Application material is evaluated by faculty members. The faculty's recommendations are based upon an appraisal of the admission grade point average determined from official transcripts, a portfolio or brochure of applicant's past work in architecture, a statement of objectives, three letters of recommendation, and relevant professional work experience.

Application forms for graduate admission and financial aid may be obtained from the Web site above. Application may be made on-line. Completed applications for the Masters or Doctoral programs must reach the Graduate Programs Office by January 15; students are admitted in the fall semester only. Graduate Record Examination (GRE) scores are not required for School of Architecture Masters Degree applicants; the GRE is required for all Doctor of Philosophy applicants.

All applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores. A minimum score of 590 on the paper-based test or 243 on the computer-based test or 96 on the internet-based test is required. The University of Illinois also accepts IELTS (academic exam) score in lieu of TOEFL, with a minimum score of 6.5 and 6.5 in all sub-sections required.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Financial aid for graduate students in architecture is available in the form of fellowships and assistantships (teaching, research, and graduate or resource). Qualified candidates are considered for financial support upon application and in subsequent years of study.

- Master of Architecture (Professional Degree) (p. 663)
- Master of Architecture (Limited Standing) (p. 663)
- Master of Science in Architectural Studies (Post-professional Degree) (p. 664)

Doctor of Philosophy in Architecture

This program offers advanced, rigorous education for those students whose goal is the advancement of the intellectual base of the discipline through a career of research and scholarship. Three areas of concentration are offered: history and theory, environment and technology, and behavioral and cultural factors in design. The program is administered jointly with the Department of Landscape Architecture.

Code	Title	Hours
All students are required to enroll in the PhD colloquium during the fall of their first year of course work.		
	Elective coursework in major field	28
ARCH 589	PhD Colloquium (twice)	2
	Outside study (courses outside of Landscape Architecture and Architecture)	8
	Electives	32
Language Requirement: Required for all students in the History/Theory option and for some Social and Cultural Factors students		
ARCH 599	Thesis Research (min/max applied toward degree)	32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 24 (not including 599)
Overall:

Professional Degree Required for Admission to PhD? No

Qualifying Exam Required No

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/phd-architecture>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Architecture and Master of Science in Architectural Studies

The School of Architecture offers a joint Master of Architecture (M.Arch.)/Master of Science in Architectural Studies (MS in AS) degree

program for students interested in pursuing both an M.Arch. degree as well as one of the concentrations offered through the MS in AS degree program. Completion of in-depth programs (e.g. Structures) will result in recording of the Concentration on the student's transcript under the MS in AS degree. Per Graduate College guidelines, students in a joint degree program are permitted to count up to 12 hours of course work from one degree as electives toward the second degree.

Students interested in participating in the joint M.Arch./MS in AS degree program must be admitted to and meet all requirements of each degree program and complete a minimum of 82 credit hours of graduate work. Students with no undergraduate degrees in architecture and participating in the four-year M.Arch. degree program may petition to enter the joint M.Arch./MS in AS degree program upon completion of their required undergraduate courses.

The M.Arch. degree is a professional degree accredited by the National Architectural Accreditation Board (NAAB), but the MS in AS degree is not accredited.

Master of Architecture and Master of Urban Planning

This joint degree program offers an opportunity to obtain an education for a career that combines the disciplines of architecture and urban planning. For entry into this program, applicants must satisfy the admission requirements of each academic unit. Application for admission may be made either simultaneously to both units or in sequence.

Candidates entering the program with a four-year baccalaureate in architectural studies must complete at least 86 hours of graduate work (54 in Architecture and 32 in Urban Planning) and, if admitted with full status, may complete the program in six semesters and one summer session. Candidates entering the program with a five-year Bachelor of Architecture degree must complete at least 64 hours of graduate work (32 in Architecture and 32 in Urban Planning) and, if admitted with full status, may complete the program in four semesters and a summer session.

Master of Architecture and Master of Business Administration

This joint master's degree program prepares graduate degree candidates for the broad range of management activity now developing in architectural practice.

For entry into this program, applicants must satisfy the admission and performance requirements of each academic unit. Application for admission may be made simultaneously to both units or admission to one unit may be sought after gaining entry to the other.

Candidates entering the Master of Architecture/Master of Business Administration joint degree program with a four-year baccalaureate in architectural studies must complete 110 hours of graduate work, 50 hours in Architecture and 60 hours for the M.B.A.

Master of Architecture and Master of Computer Science

This joint master's degree program prepares graduate degree candidates for the broad range of management activity now developing in architectural practice.

For entry into this program, applicants must satisfy the admission and performance requirements of each academic unit. Application for admission may be made simultaneously to both units or admission to one unit may be sought after gaining entry to the other.

The combination of Master of Architecture and Master of Computer Science degrees requires 74 graduate hours if no prerequisites are needed in computer science. Candidates entering either of these programs with a five-year bachelor of architecture degree must complete at least 64 hours of graduate work and, if admitted with full status, may complete the program in four semesters.

Master of Architecture and Master of Science in Civil Engineering (Construction Management) or (Structures)

This joint degree program offers qualified applicants the opportunity to develop competence in a career that combines the disciplines of architecture and civil engineering (construction management) or (structures). For entry into these programs, applicants must satisfy the admission and performance requirements of each academic unit. Application for admission should be made to the School of Architecture. Admission to the other unit may be sought after the first semester of graduate study in architecture.

Candidates entering the program with a four-year baccalaureate in architectural studies must complete at least 78 (32 in Civil Engineering and 46 in Architecture) hours of graduate work and, if admitted with full status, may complete the program in five semesters. Candidates entering the program with a five-year Bachelor of Architecture degree must complete 64 hours of graduate work and, if admitted with full status, may complete the program in four semesters.

- Structures Concentration (p. 662)
- Medieval Studies Concentration (<http://catalog.illinois.edu/graduate/graduate-majors/medieval-studies/#concentrationtext>)

Master of Science in Architectural Studies (Structures Concentration)

The School of Architecture offers a Structures Concentration under its MS in AS degree program. Completion of this in-depth plan of study will result in recording of Structures as a Concentration on the student's transcript under the MS in AS degree. Students interested in participating in the Structures Concentration must be admitted to the School of Architecture's MS in AS degree program; register their intent to enter the Structures Concentration with the School's Graduate Office prior to completing their first semester in their degree program and complete 27 graduate credit hours of architectural structures courses from the required courses list below. Prerequisite subjects for the Structures Concentration include the following: calculus I and II; statics and dynamics; mechanics of materials; one course in structural steel design and one course in reinforced concrete design. Students without these

prerequisites may enter the Structures Concentration upon completion of their prerequisite courses.

Code	Title	Hours
ARCH 550	Reinforced Concrete Design	4
ARCH 551	Structural Analysis	4
ARCH 552	Soil Mech and Foundations	3
ARCH 553	Adv Reinforced Concrete Design	3
ARCH 554	Adv Steel Design	3
ARCH 556	Advanced Structural Planning	4
ARCH 560	Advanced Structural Analysis	3
ARCH 595	Spec Prob Struct Theory & Des (Section EQ, Seismic Design)	2 to 4
Total Hours		27

Master of Architecture Limited Standing

The variable-length professional degree program has been designed for applicants who have a bachelor's degree in any field other than architecture. Emphasis is placed on the development of sufficient background in introductory architectural studies so that the applicants may successfully complete the equivalent of the two-year graduate program described above.

Applicants accepted into this program will initially be admitted with limited status. Full status may be attained by completion of introductory architectural studies. Once full status is attained, a minimum of 54 hours of graduate work is required for completion.

The time necessary to complete the program will depend on the nature of undergraduate coursework completed by the applicant.

Candidates attaining full standing may complete the program in two years of full-time academic study.

Thesis Option

Code	Title	Hours
One course in architectural practice		
One core elective each from a select list of courses in architectural thought		
One core elective each from a select list of courses in professional practice		
Four studios including two semesters of comprehensive design		
One course in structural planning		
Students must also complete prerequisites, which are determined individually and do not count toward the required number of hours required		
ARCH 599	Thesis Research (min/max applied toward degree)	0
Total Hours		54

Other Requirements¹

Other requirements may overlap

Candidates must spend at least four semesters and earn at least half of the required graduate hours in residence.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/master-architecture>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
One course in architectural practice		
One core elective each from a select list of courses in architectural thought		
One core elective each from a select list of courses in professional practice		
Four studios including two semesters of comprehensive design		
One course in structural planning		
Students must also complete prerequisites, which are determined individually and do not count toward the required number of hours required		
Total Hours		54

Other Requirements¹

Other requirements may overlap

Candidates must spend at least four semesters and earn at least half of the required graduate hours in residence.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/master-architecture>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Architecture Professional Degree

The two-year professional degree program, intended for students entering with a four-year baccalaureate in architectural studies, emphasizes further study in architectural disciplines. Students may elect to concentrate in any one of several areas of specialization aligned with research-oriented program areas.

Candidates admitted with full or limited status to the two-year professional degree program must complete at least 62 hours of

graduate work. Candidates admitted with full status may complete the program in two years of full-time academic study.

Code	Title	Hours
ARCH 501	Architectural Practice	3
ARCH 517	Architectural History 1850-Present	3
ARCH 536	Planning and Design of Structural Systems	4
ARCH 537	Environmental Control Systems II	4
ARCH 538	Econ Issues in Arch Develop	4
Three graduate design studios		18
ARCH 577	Theories of Architecture	4
ARCH 575		
Electives (Architecture graduate seminars and other approved courses)		16
Total Hours		62

Other Requirements ¹

Other requirements may overlap

Candidates must spend at least four semesters and earn at least half of the required graduate hours in residence

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

Must earn a letter grade of C or better in all core courses.

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/master-architecture-2>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Architectural Studies

Post-Professional Degree

Applicants who hold the five-year Bachelor of Architecture degree are considered to have earned the first professional degree. For those applicants, a one-year degree program has been developed emphasizing further study in depth of one optional area of concentration and/or participation in research, which is similar to the final year of the professional degree program.

Candidates admitted with full status may complete the program in one year of full-time academic study.

Thesis Option

Code	Title	Hours
Architectural Electives from dept. list		0-16
Electives		16
ARCH 599	Thesis Research (min/max applied toward degree)	0-16
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Candidates must spend at least two semesters and earn at least half of the required graduate hours in residence.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/master-architecture>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Architectural Electives from dept. list		16
Electives		16

Other Requirements ¹

Other requirements may overlap

Candidates must spend at least two semesters and earn at least half of the required graduate hours in residence.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's program page (<http://www.arch.illinois.edu/degrees/master-architecture>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Art and Design

<http://www.art.illinois.edu>

(Including Art Education, Art History, Ceramics, Graphic Design, Industrial Design, Metals, Painting, Photography, New Media, and Sculpture)

Director: Nan Goggin

Executive Associate Director: Alan Mette

Associate Director & Director of Graduate Studies: Lisa Rosenthal

Advisors of Graduate Studies:

Oscar Vazquez oscarv@illinois.edu; MA; PhD in Art History

Paul Duncum pduncum@illinois.edu; MA; EdM; PhD in Art Education

Melissa Pokorny mpokorny@illinois.edu; MFA in Studio

Ernesto Scott scott@illinois.edu; MFA in Design

For information contact: Ellen de Waard

138 Art and Design Building

408 East Peabody Drive

Champaign, IL 61820

(217) 333-0642

ADgradadmissions@illinois.edu

Major: Art and Design
Degree offered: M.F.A.
Concentrations: Crafts, Graphic Design, Industrial Design, Metals, Painting, Photography, Printmaking, Sculpture

Major: Art Education
Degrees offered: Ed.M., M.A., Ph.D.
Graduate Concentrations: Writing Studies (Ph.D. only)

Major: Art History
Degrees offered: M.A., Ph.D.
Graduate Concentrations: Medieval Studies (available to M.A. and Ph.D.); Writing Studies (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Art Education or Art History and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The School of Art and Design offers the Master of Arts in Art Education and in Art History, the Master of Education in Art Education, the Master of Fine Arts in Art and Design, the Doctor of Philosophy in Art Education, and the Doctor of Philosophy in Art History. In addition to the listed concentrations, we also offer a specialization in New Media in the M.F.A. program.

Admission

Applications are considered for Fall Semester admissions only. The Art History Program requires Graduate Record Examination (GRE) scores. International applicants or applicants who are not native English speakers must present a TOEFL score of at least 590 on the paper-based version, 250 score on the Computer-based exam, and a score of 96 on IBT exam. Applications are not currently being accepted for the concentration in Printmaking.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Art History and Art Education. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience for master and doctoral students.

Facilities and Resources

Resources for graduate students in art and design include the Krannert Art Museum's excellent permanent collections and changing exhibitions; the Ricker Library of Art and Architecture, one of the largest art and architecture libraries in the nation; the Krannert Center for the Performing

Arts; School of Art and Design facilities, which include extensive computer laboratories, digital photography and video editing equipment, wireless networking, ink-printing facilities, ceramic, woodworking, and metal shops, rapid prototyping and laser cutting, black/white and color darkrooms, shooting studios, and a wide selection of production and presentation equipment via reservation and checkout facility. A variety of lectures, symposia, musical programs, dramatic productions, and other cultural events associated with a large and progressive university complement the Art and Design Facilities.

Financial Aid

Fellowships, assistantships, and tuition and service fee waivers are awarded each year on a competitive basis, with consideration given to the applicant's grade point average and, in the case of applicants for the M.F.A. programs, quality of creative work.

- Master of Education in Art Education (p. 667)
- Master of Arts in Art Education (p. 667)
- Master of Arts in Art History (p. 666)
- Master of Fine Arts in Art and Design (p. 667)
- Doctor of Philosophy in Art Education (p. 665)
- Doctor of Philosophy in Art History (p. 666)

Minor in Art History

The Graduate Minor in Art History is designed to provide UIUC graduate students, both at the master's and doctoral levels from any discipline, a foundation in the histories, theories and methods of art history and visual cultures. The Minor is taken in conjunction with, and is intended to complement the student's work in their primary disciplines.

In addition to the minor requirements, students must also complete the requirements of their major degree. Students interested in the Art History Graduate Minor should contact the Director of Graduate Studies in Art History.

Code	Title	Hours
ARTH 593	Theory and Methodology	4
	Two different 500-level graduate seminars in Art History chosen with the prior approval of the Graduate Minor Advisor.	8
Total Hours		12

¹ For additional details and requirements refer to the department's Graduate Program's Web page (<http://www.asianam.illinois.edu/academics/grad-minor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Art Education

The doctoral program in art education is designed for advanced graduate students who want to pursue scholarly study and research in art education. Doctoral level coursework includes studies in both art education and in relevant disciplines and departments within the university. Applicants for admission must hold a master's degree in art education or the equivalent from an accredited institution. Admission is determined by a sample of academic writing, official records of previous education and experience, and letters of recommendation.

Code	Title	Hours
Course work Hours in residency on this campus		32
ARTE 599	Thesis Research (Thesis Research min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Art History

The program leading to the degree of Doctor of Philosophy in Art History is designed to prepare students for scholarship and for teaching at the college level. Applicants must have the Master of Arts in Art History or the equivalent. Students earning the master's degree must pass the qualifying examination with a high score and write a thesis or research paper of superior quality in order to be admitted to the doctoral program. Students taking the master's degree elsewhere must satisfy the Graduate Committee on the History of Art and Architecture as to their preparation to undertake work on a doctoral level. Students usually elect to major and write a dissertation in one of various fields:

- Classical
- Medieval
- Renaissance
- Baroque
- Modern
- Contemporary
- American
- African
- Asian or Latin American

Code	Title	Hours
Coursework Hours (in residency on this campus)		32
Language Requirement: An effective reading knowledge two languages chosen with the approval of the student's academic adviser and the program chair is required. Language requirements must be met before the student has earned 32 hours of graduate credit beyond the requirements for the master's degree.		
ARTH 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Students also elect a minor in another field of art history in consultation with their major adviser and appropriate faculty.	
Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Art History

This program provides basic preparation for teaching at the college level, background in the history of art for museum work, and preliminary study for the doctoral degree. In addition to the general requirements, the prerequisite for admission is ordinarily an undergraduate degree in art history or a strong preparation in related humanistic studies. Applicants with little background in art history but who have done exceptionally well as undergraduates in other disciplines will be seriously considered. A thesis or scholarly essay is required for completion of the degree.

Thesis Option

Code	Title	Hours
Graduate hours in the history of art and architecture, including 16 hours in art history graduate seminars		24
Language Requirement: Proficiency in a language outside of English and appropriate to the student's field of study must be demonstrated by the end of the first year of residence.		
ARTH 599	Thesis Research (min applied toward degree)	2
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 12	
Minimum GPA: 2.75	

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Graduate hours in the history of art and architecture, including 16 hours in art history graduate seminars		24
Language Requirement: Proficiency in a language outside of English and appropriate to the student's field of study must be demonstrated by the end of the first year of residence.		

Electives	8
Total Hours	32

Other Requirements

Other requirements may overlap

Scholarly essay required

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts, Art Education

The program of study leading to the degree of Master of Arts in Art Education is designed to provide advanced level professional study for students who are interested in research in art education. It can serve as preparation for a variety of careers, such as museum education, community arts, arts advocacy, arts policy formation; professional development for art teachers and supervisors in the public schools; and as preparation for the doctoral degree.

In addition to required courses in art education, students can choose electives from studio, art education and art history, and any other graduate courses offered by the university that complement their studies or professional aspirations. Specific course selection is determined in consultation with the student's adviser. Students may simultaneously study for teaching certification but graduate credit is not usually granted for such study. A thesis is required.

Code	Title	Hours
ARTE 402	Artistic Development	4
ARTE 501	Issues in Art Education	4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
Thesis Hours Required—ARTE 599 (min/max applied toward degree)		4
Electives		12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Candidates must spend at least two semesters or the equivalent in residence.

Minimum 500-level Hours Required 12

Overall:

Certification requirements, if needed: 40-44

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Education in Art Education

The program of study leading to the degree of Master of Education in Art Education is designed to provide advanced level study for students of two main kinds. It serves as professional development for art teachers and supervisors in the public schools and as preparation for those interested in a variety of careers, such as museum education, arts advocacy or community arts.

In addition to required courses in art education, students may choose electives in studio, art education or art history, and any other graduate courses offered by the university that complement their studies or professional aspirations. Specific course selection is determined in consultation with the student's adviser. Students may simultaneously study for teaching certification but graduate credit is not usually granted for such study. A thesis is not required.

Code	Title	Hours
ARTE 402	Artistic Development	4
ARTE 502	Curriculum Development in Art	4
ARTE 505	Foundations of Art Education	4
Electives		20
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Candidates must spend at least two semesters or the equivalent in residence.

Minimum 500-level Hours Required 12

Overall:

Certification requirements, if needed: 40-44

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Fine Arts in Art and Design

The degree of Master of Fine Arts in Art and Design is designed to prepare qualified individuals for distinctive achievement in the professional area of their choice. Fields of concentration include Graphic Design, Industrial Design, Photography, Metal, Ceramics, and an interdisciplinary Studio which includes concentrations in Painting, Sculpture, and specialization in New Media. A minimum of 64 hours of graduate credit is required for the M.F.A. degree. Individual studio space and specialized resources essential to the acquisition of a high-quality professional education are available to students in all areas of study. The Graphic Design, Photography, Metal, Ceramics, and interdisciplinary Studio which includes Painting, Sculpture, and New Media programs require a graduation exhibition of creative work and a written thesis approved by a thesis committee for deposit in the School of Art and Design's graduate office. The Industrial Design Program requires a graduation exhibition, a written thesis approved by a thesis committee and a thesis deposit in the Graduate College Thesis Office. Admission for all programs is determined by a faculty review of a portfolio of the applicant's creative work, records of previous education and experience,

letters of recommendation, and other significant achievements that may be viewed as predictors for success in the program.

All Programs except Industrial Design

Code	Title	Hours
Research/Project Hours (min/max applied toward degree) (2 min):		2
Electives		62
Total Hours		64

Other Requirements ¹

Other requirements may overlap

A concentration is not required in the case of students in the New Media specialization.

Seminar, enrollment varies by program 8 min

Minimum 500-level Hours Required Overall 12

Minimum GPA 2.75

Concentration in Industrial Design

Code	Title	Hours
Electives		62
ARTD 599	Industrial Design Thesis (min applied toward degree)	2
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Seminar, enrollment varies by program 8 min

Minimum 500-level Hours Required Overall 12

Minimum GPA 2.75

¹ For additional details and requirements refer to the department's graduate studies requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Astrochemistry

Ben McCall, Coordinator
166 Roger Adams Laboratory
600 S. Mathews Avenue
Urbana, Illinois 61801
PH: (217) 244-0230

E-mail: bjmccall@illinois.edu

Graduate Concentration: Astrochemistry
Participating Programs: Astronomy (PhD only) and Chemistry (PhD only)

Graduate Degree Programs

Astrochemistry is an interdisciplinary area of knowledge at the intersection between chemistry and astronomy. As a few examples, topics of active research in this area include identifying organic

molecules in interstellar space, building models of the chemical reactions that occur in interstellar space, laboratory measurements of astronomically important molecules, searching for Earthlike planets using molecular signatures, and understanding the contributions of interstellar molecules to the chemical origin of life. In order to succeed in this field, students require training in both of the traditional disciplines of chemistry and astronomy.

The Astrochemistry graduate concentration (<http://astrochemistry.illinois.edu>) is intended for Ph.D. students in Chemistry or Astronomy who wish to gain the necessary background to perform original research in the emerging interdisciplinary field of astrochemistry.

It is an addition to the Chemistry and Astronomy Ph.D. programs at Illinois and offers transcript recognition that will ensure that students are recognized as qualified by scientists in both traditional fields (chemistry and astronomy).

Admission

As the Astrochemistry graduate concentration (<http://astrochemistry.uiuc.edu/concentration.php>) is a part of the Chemistry and Astronomy Ph.D. programs, students should submit applications directly to either the Department of Chemistry (<http://chemistry.uiuc.edu/graduates>) or the Department of Astronomy.

Faculty Research Interests

A variety of faculty members in the departments of Chemistry, Astronomy, and Physics have research interests related to astrochemistry. A partial listing of research groups is available on the Astrochemistry concentration website (<http://astrochemistry.illinois.edu/groups.php>).

Facilities and Resources

Facilities that can be utilized by astrochemistry students in their thesis research include a wide variety of laboratory spectroscopy equipment in Chemistry, the Combined Array for Research in Millimeter-wave Astronomy, computing facilities in both Chemistry and Astronomy, and other national and international observational astronomy facilities.

Financial Aid

Financial aid in the form of teaching assistantships and/or research assistantships is generally provided for admitted students by the Departments of Chemistry and Astronomy.

The requirements for the Astrochemistry graduate concentration (<http://astrochemistry.illinois.edu/concentration.php>) are supplemental to the degree requirements of the Ph.D. in either Chemistry or Astronomy, and are summarized in the table below. For this concentration, at least 24 hours of graduate level coursework (at the 400- and 500- level) are required, of which at least 12 must be in chemistry courses and at least 12 in astronomy courses. A list of recommended courses is given on the Astrochemistry concentration website (<http://astrochemistry.illinois.edu/concentration.php>), but students may substitute other courses with consent of the Astrochemistry concentration steering committee.

All students in the concentration are required to take CHEM/ASTR 450, Astrochemistry, which may count toward either the astronomy or chemistry requirements. Students concentrating in astrochemistry should have at least one member from each department on their thesis committee.

Code	Title	Hours
Graduate level Chemistry courses		12
Graduate level Astronomy courses		12
ASTR/CHEM 450	Astrochemistry (required, but may be taken to satisfy required Chemistry or Astronomy courses above)	4
Total Hours		24

Other Requirements¹

Other requirements may overlap

At least one member of each department must serve on the PhD thesis committee.

Thesis research must be related to astrochemistry.

In addition to the graduate concentration requirements, students must also complete the requirements of their major degree.

¹ For additional details and requirements refer to the department's graduate concentration program (<http://astrochemistry.illinois.edu/concentration.php>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Astronomy

<http://www.astro.illinois.edu>

Chair of the Department: Leslie Looney
103 Astronomy Building
1002 West Green Street
Urbana, IL 61801
(217) 333-3090
E-mail: astronomy@illinois.edu

Major: Astronomy
Degrees offered: M.S., Ph.D.
Graduate Concentration: Astrochemistry (p. 668) (Ph.D. only)

Graduate Degree Programs

The Department of Astronomy offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. The goal of the graduate program in astronomy is to provide broadly based training in modern astrophysics and astronomy for a small and carefully selected student body. Individually designed programs involving close contact with faculty members are encouraged, and an understanding of fundamental principles and techniques and their applications to research problems of current interest is emphasized. Students are expected to acquire a solid knowledge of modern physics as well as of general astronomy. A major objective is to maintain an exciting intellectual environment in which students can develop their scientific creativity and their enthusiasm for astronomy.

Admission

Admission to the astronomy graduate program requires an outstanding record of accomplishment and clear evidence of considerable academic promise, as judged by test scores, resume (or c.v.), letters of recommendation, personal statement, and strong intellectual

achievements. A bachelor's degree or its equivalent in astronomy, physics, chemistry, mathematics, or another related technical field from an accredited college or university in the U.S. or an approved institution of higher learning abroad is required for admission.

A minimum grade point average of 3.0 (A = 4.0) and satisfactory scores on the Graduate Record Examination (GRE) (verbal, quantitative, and advanced physics portions) are required for admission. Course preparation in intermediate and advanced undergraduate physics and astronomy are essential. Students are expected to make up deficiencies during the first graduate year.

All applicants whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency, as required by Graduate College policy. More information on the English Proficiency Requirement can be found at the Graduate College Admissions Web site (<http://www.grad.illinois.edu/admissions/instructions/04c>).

Admission decisions are normally made once a year in the spring. Applications for admission and financial assistance must be received by January 15. In rare circumstances, applicants may be admitted for the spring semester, in addition to the customary fall semester admissions.

See the Astronomy graduate admissions Web site (www.astro.illinois.edu/academics/graduate/) (<http://www.astro.illinois.edu/academics/graduate/>) for more information and application materials.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Faculty Research Interests

Research activity in the Department of Astronomy includes observational and theoretical investigations of a wide array of astronomical objects:

- Early-universe cosmology (inflation, particle dark matter, cosmic nucleosynthesis)
- Large-scale structure of the universe (cosmic microwave background, galaxy clusters)
- Extragalactic systems (galaxy structure and evolution, interacting galaxies, active galaxies, jets, and quasars)
- Interstellar medium (multiple phases, molecular clouds, HII regions, bubbles and superbubbles, planetary nebulae, supernova remnants, magnetic fields, and galactic structure)
- Stars (formation, structure and evolution, atmospheres, nucleosynthesis, novae, supernovae, pulsars, and stellar statistics)
- Compact objects (black holes, neutron stars, white dwarfs)

Theoretical astrophysics is also a strong research interest many faculty members in the Department of Astronomy and the Department of Physics. Current activity centers on:

- Astrophysical fluid dynamics, magnetohydrodynamics and radiation hydrodynamics
- Physics of dense stellar matter
- Accretion phenomena
- High energy and relativistic astrophysics
- Cosmic inflation and structure formation

- Nuclear and particle processes in cosmology and astrophysics
- Black hole physics and astrophysics
- Gravitational lensing
- Gravitational wave phenomena

Facilities and Resources

- The Dark Energy Survey
- The Large Synoptic Survey Telescope
- The South Pole Telescope
- Astronomy students and faculty successfully compete for time on national facilities. These include ground-based telescopes of the National Radio Astronomy Observatory, such as the Atacama Large Millimeter Telescope and the Very Large Array, and the National Optical Astronomy Observatory telescopes. Illinois research involves many space-based telescopes, including the Hubble, Planck, Spitzer, Herschel, Chandra, and Fermi.
- A number of projects in the Department of Astronomy partner with the National Center for Supercomputing Applications (NCSA) at Illinois. This includes development and application of astrophysical simulations such as the FLASH package and general relativistic magnetohydrodynamic codes that provide insight into the nature of structure formation and the physics of black holes. Astronomy faculty also leverage NCSA's pioneering development of cyberinfrastructure environments to facilitate data transport for the Sloan Digital Sky Survey (SDSS), the Dark Energy Survey, the Square Kilometer Array, and the Large Synoptic Survey Telescope. NCSA and the Astronomy Department also jointly founded the Laboratory for Cosmological Data Mining to apply novel algorithms to the rich datasets now available for cosmological analysis, including those from the SDSS and Wilkinson Microwave Anisotropy Probe.
- Illinois is the home of the Blue Waters National Petascale Computing Facility, one of the most powerful supercomputers in the world, and the most powerful on a university campus. A portion of Blue Waters time is dedicated to Illinois faculty, and Astronomy students and faculty use Blue Waters for their research.

Financial Aid

University fellowships are available and may be combined with part-time teaching assistantships. Most resident students are supported for their first two or three years by half-time teaching assistantships. The typical teaching assistant takes two or three graduate courses per semester and spends twenty hours per week handling quiz sections in elementary astronomy courses. Teaching assistantships are responsible positions, and the concomitant duties are considered to be a valuable part of the student's educational experience. Advanced students may compete for research assistantships offered by faculty members whose research is partially supported by federal grants.

Master of Science in Astronomy

Code	Title	Hours
ASTR 501	Radiative Processes	4
ASTR 502	Astrophysical Dynamics	4
Additional formal coursework (excluding thesis research, non-thesis research, and independent study credit hours, e.g., ASTR 599, ASTR 590)		16
Research/Project/Independent Study Hours (e.g. ASTR 590; min/max applied toward degree): ¹		4-8

Based on Placement Exam results, students may be required to complete ASTR 404, ASTR 405, ASTR 406, and/or ASTR 414 during their first year. A maximum of 8 hours of these courses may be applied to the degree (Max. 8)²

Total Hours 32

Other Requirements³

Other requirements may overlap

Of the additional formal coursework, the minimum number of hours in the unit (excluding thesis research, non-thesis research, and independent study credit hours)	8
---	---

Of the additional formal coursework, the minimum number of 500-level hours (excluding thesis research, non-thesis research, and independent study credit hours)	4
---	---

¹ Research Project (minimum 4 hours)

- The student will complete a research project with an Astronomy Department faculty member (i.e. ASTR 590). A paper reporting the results is required, which must be prepared in scientific journal style and approved by the faculty member.

² Demonstrated Proficiency in Astronomy

(ASTR 404, ASTR 405, ASTR 406 and ASTR 414)

Students must show proficiency in the four courses by one of the following options:

- Pass the appropriate section of the placement exam (four sections aligned to the four courses), which is offered at the start of every Fall semester. A student can petition to take the exam once more the following year. The decision on petition approval by the graduate advisor will depend on the student's background and proficiency plan.
- Pass the course with a B grade or better.
- Students who have had an equivalent course at another institution (B grade or better) may petition for those courses to count as proficiency.

³ For additional details and requirements refer to the department's Graduate Programs (<http://www.astro.illinois.edu/academics/graduate/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Astronomy

Entering with approved M.A./M.S. degree

Code	Title	Hours
ASTR 501 & ASTR 502	Radiative Processes and Astrophysical Dynamics ¹	8
Based on Placement Exam results, students may be required to complete ASTR 404, ASTR 405, ASTR 406, and/or ASTR 414 during their first year. A maximum of 8 hours of these courses may be applied to the degree. ²		8
Research/Project/Independent Study Hours (e.g. ASTR 590 min/max applied toward degree):		4-24
ASTR 599	Thesis Research (min/max applied toward degree)	32-52
Total Hours		64

Other Requirements³

Other requirements may overlap

Students may add a graduate concentration in Astrochemistry.

Qualifying Exam Required No

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

Doctor of Philosophy in Astronomy

Entering with approved B.A./B.S. degree

Code	Title	Hours
ASTR 501 & ASTR 502	Radiative Processes and Astrophysical Dynamics	8
Additional formal coursework (excluding thesis research, non-thesis research and independent study credit hours, e.g., ASTR 599, ASTR 590) ^{4,5}		24
Based on Placement Exam results, students may be required to complete ASTR 404, ASTR 405, ASTR 406, and/or ASTR 414 during their first year. A maximum of 8 hours of these courses may be applied to the degree. ²		8
Research/Project/Independent Study Hours (e.g. ASTR 590 min/max applied toward degree):		4-32
ASTR 599	Thesis Research (min/max applied toward degree)	32-60
Total Hours		96

Other Requirements³

Other requirements may overlap

Students may add a graduate concentration in Astrochemistry.

First Summer Research Project (4 hours) During the first summer in residence, each student will enroll in ASTR 590 (Independent Study) and will complete a research project with an Astronomy Department faculty member. A paper reporting the results is required, which must be prepared in scientific journal style and approved by the faculty member.

Master's Degree Required Before Admission to PhD? No

Qualifying Exam Required No

Preliminary Exam Required Ph.D. Preliminary Examination consists of a written preliminary paper on the Ph.D. research topic and an oral examination. It must be passed by the end of the third year of study.

Final Exam/Dissertation Defense Required Completion of an original research project culminating in a dissertation thesis publishable in whole or in part is required. The final examination is a defense of the doctoral dissertation.

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ *Students entering with an approved M.A. or M.S. degree may proficiency out of ASTR 501 and ASTR 502 with departmental approval. Other 500-level ASTR graduate courses must be taken in the unit for substitute credit hours*

² **Demonstrated Proficiency in Astronomy** (ASTR 404, ASTR 405, ASTR 406 and ASTR 414)

Students must show proficiency in the four courses by one of the following options:

- Pass the appropriate section of the placement exam (four sections aligned to the four courses), which is offered at the start of every Fall semester. A student can petition to take the exam once more the following year. The decision on petition approval by the graduate advisor will depend on the student's background and proficiency plan.
- Pass the course with a B grade or better.
- Students who have had an equivalent course at another institution (B grade or better) may petition for those courses to count as proficiency.

³ *For additional details and requirements refer to the department's Graduate Programs (<http://www.astro.illinois.edu/academics/graduate/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).*

⁴ Of the additional formal coursework, 8 is the minimum number of hours in the unit (excluding thesis research, non-thesis research, and independent study credit hours)

⁵ Of the additional formal coursework, 8 (with 4 in the unit) is the minimum number of 500-level hours (excluding thesis research, non-thesis research, and independent study credit hours)

Atmospheric Sciences

<http://atmos.illinois.edu>

Head of the Department: Robert M. Rauber
 Director of Graduate Studies: Nicole Riemer
 3072 Natural History Building
 1301 W. Green Street
 Urbana, IL 61801
 (217) 333-2046
 E-mail: <https://www.atmos.illinois.edu/>

Major: Atmospheric Sciences
 Degrees offered: M.S., Ph.D.

Graduate Degree Programs

Graduate programs leading to the Master of Science and Doctor of Philosophy degrees are offered. Opportunity also exists for specializing in computational science and engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<http://www.cse.illinois.edu>).

Admission

Applications for admission are encouraged from students with bachelor's degrees in atmospheric sciences, meteorology, physics, mathematics, computer science, geography, engineering, oceanography, and related fields. It is strongly recommended that students who intend to study for advanced degrees in atmospheric sciences know the fundamentals of classical physics and applied mathematics. Applicants whose native language is not English are required to take the English Placement Test if accepted. All applicants are required to take the Graduate Record Exam (GRE) and submit three letters of reference.

Faculty Research Interests

The atmospheric science degree programs are designed for students interested in research and applications on a wide variety of atmospheric topics. Faculty areas of research include the physics of aerosol, clouds and precipitation; atmospheric radiative processes, radar and satellite meteorology, remote sensing, convective phenomena including severe storms, synoptic and mesoscale meteorology, boundary layer meteorology, tropical meteorology, hydrometeorology, numerical weather prediction, atmospheric dynamics, climate variability and climate modeling including chemical, radiative, and transport effects; atmospheric chemistry, land-atmosphere interactions, oceanography, human and natural perturbations of global ozone and climate, biogeochemical cycles, and climate impacts, risks, and policy. This research is carried out in national field campaigns, in theoretical studies, and in numerical modeling efforts using a wide range of models.

Research Facilities

With more than 2.5 computers per person, the department maintains a capable and extensive computing infrastructure as this is a vital component of all of its educational, research and outreach endeavors. All graduate students, staff, and faculty members have a desktop or laptop computer, usually a Windows PC or Mac. There is a departmental computer lab for hands-on class exercises, computers and display projectors in classroom areas and wireless access throughout the buildings. The Department hosts a new synoptic/GIS laboratory, a data visualization laboratory, and an instruments lab all within the Natural History Building. An up-to-date high-capacity network connects these to various departmental computing resources including e-mail, file and web servers, resources provided by the campus as well as our linux-based research computing systems.

These research systems include the department's ever-expanding computing cluster, hundreds of terabytes worth of storage, other departmental systems and a number of systems specific to each faculty member's research group. These systems are used for numerical simulations, analysis and modeling of atmospheric processes ranging from the formation of individual ice crystals to century long climate simulations over the globe and are used for storing, analyzing and visualizing the results. Our faculty research groups regularly use supercomputers including Blue Waters, the NCAR Supercomputing facility, and other supercomputers nationwide.

We receive and process a large quantity of real-time meteorological data and numerical forecasts from a variety of sources including agencies like NOAA, UCAR, international sources and other peer institutions. These are available for visualization with a variety of tools to aid in the understanding of current weather events and case studies of recent major events.

Because computers are only good when they work and you understand how to use them, the department maintains a dedicated computer support staff which is responsible for maintaining everything and personally assisting users with problems, questions and accomplishing their research goals.

Financial Aid

Financial aid is available in the form of research and teaching assistantships, University fellowships, and waivers of tuition and service fees. More information is available at the Department Website (<https://www.atmos.illinois.edu/cms/One.aspx?portalId=127458&pageId=187177>).

Master of Science in Atmospheric Sciences

Thesis Option

Code	Title	Hours
ATMS 500	Dynamic Meteorology	4
ATMS 504	Physical Meteorology	4
ATMS 505	Weather Systems	4
ATMS 507	Climate Dynamics	4
Additional Graduate-level courses in ATMS or approved courses in another discipline		8
ATMS 599	Thesis Research (min/max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

The student is required to write a thesis and give a seminar on his/her thesis research.

Minimum GPA: 3.0

Non-Thesis Option

Code	Title	Hours
ATMS 500	Dynamic Meteorology	4
ATMS 504	Physical Meteorology	4
ATMS 505	Weather Systems	4
ATMS 507	Climate Dynamics	4
Additional Graduate-level courses in ATMS or approved courses in another discipline		12
ATMS 596	Non-Thesis Research (max applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

The student is required to develop a project in ATMS 596 that focuses on a topic proposed by the student and approved by the department head and present an informal (non-seminar series) talk to a committee.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<https://www.atmos.illinois.edu>) website and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Atmospheric Sciences

Entering with approved B.S. (Direct to Ph.D.)

Code	Title	Hours
ATMS 500	Dynamic Meteorology	4
ATMS 504	Physical Meteorology	4
ATMS 505	Weather Systems	4
ATMS 507	Climate Dynamics	4
ATMS 599	Thesis Research	16
Additional approved graduate level courses (excluding ATMS 599)		32
Additional approved graduate level courses (including ATMS 599)		32
Total Hours		96

Entering with an approved M.S. degree

Code	Title	Hours
Stage I Equivalent (32 Hours) Satisfied by previous Masters degree (from either within the ATMS department or an approved MS from outside the ATMS department)		
ATMS 599	Thesis Research	16
Additional approved graduate level courses* (excluding ATMS 599)		24
Additional approved graduate level courses (including ATMS 599)		24
*If the previous MS degree was earned outside of the Atmospheric Sciences department, these courses must include ATMS 500, 504, 505, and 507 if equivalent courses were not taken as part of the student's M.S. degree. Equivalency will be determined by the department after review of the course syllabi.		
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<https://www.atmos.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

ATMS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ATMS>)

Courses

ATMS 500 Dynamic Meteorology credit: 4 Hours.

Examines the observed behavior of the atmosphere through the application of physical and hydrodynamical principles to analyses of real meteorological data; develops concepts for studying atmospheric circulations, particularly extratropical cyclones and anticyclones. Laboratory work includes the development of diagnostic techniques suitable for a better understanding of the current weather.

ATMS 501 Mesoscale Meteorology credit: 4 Hours.

Basic concepts and ideas on atmospheric processes that occur on scales of motions from a few kilometers to a few hundred kilometers, a scale loosely classified by meteorologists as "mesoscale". After an introductory discussion of mesoscale classifications and attendant forecast problems, the course will introduce various mesoscale phenomena, internally generated circulations, externally forced circulations, and mesoscale instabilities. Covers all three fundamental aspects of mesoscale meteorology: observations, theory and modeling, with particular emphasis on the dynamics of precipitating mesoscale systems. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 502 Numerical Fluid Dynamics credit: 4 Hours.

Addresses numerical techniques for solving linear and nonlinear differential equations in initial value fluid flow problems. Students receive a thorough background in the principles used to evaluate numerical methods, the ability to critically interpret these methods as presented in the literature, and in particular, the practical application of these techniques in modeling multi-dimensional flow on high-performance computers. Temporal and directional splitting, finite differencing/volume methods, and adaptive nesting will be discussed. Same as CSE 566. 4 graduate hours. No professional credit. Prerequisite: MATH 285 or equivalent. Graduate Standing or Consent of Instructor.

ATMS 504 Physical Meteorology credit: 4 Hours.

Examines the physical processes that occur in the atmosphere. Topics include atmospheric thermodynamics, cloud physics and atmospheric radiation. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 505 Weather Systems credit: 4 Hours.

Examination of the structure and dynamics of mid-latitude weather systems, integrating weather observations, with the current state of dynamic theory, numerical weather prediction models, and the physical principles of atmospheric thermodynamics, cloud and precipitation physics, and radiation to the problems of weather analysis and forecasting. Students will be required to give weather forecast briefings to develop an understanding of the weather forecasting process, and gain experience in communicating weather forecasts. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 507 Climate Dynamics credit: 4 Hours.

Investigates the dynamical and physical processes that govern Earth's paleo, current, and future climates. Emphasizes principles of climate change, natural and anthropogenic, and regional, national, and global. Global climate models and their predictions are examined in the context of scenarios for future population growth and energy consumption. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 510 Precipitation Physics credit: 4 Hours.

Develops an understanding of precipitation processes through cloud observations, microphysics, dynamics, and comprehensive theoretical models; includes growth by condensation, coalescence, and riming; and studies ice crystals, hail, and weather modification. Prerequisite: ATMS 504 or consent of the instructor.

ATMS 511 Atmospheric Radiation credit: 4 Hours.

Physical concepts and various methods of analysis of radiation scattering by atmospheric molecules, particulates, and clouds; infrared radiative transfer in a stratified inhomogeneous atmosphere; radiation and ozone photochemistry in the stratosphere; and remote temperature and composition sensing techniques using satellite radiation data. Prerequisite: ATMS 504 or consent of the instructor.

ATMS 512 Clouds and Climate credit: 4 Hours.

The following topics are addressed to examine the role of clouds in the climate system: aerosols and aerosol cloud interactions, direct, semi-direct and indirect aerosol effects, in-situ measurements of clouds, properties of liquid and ice clouds, precipitation mechanisms and representation in models, scattering by cloud particles and model representations, remote sensing of cloud properties, and representation of clouds in climate models. Prerequisite: ATMS 504 or consent of instructor.

ATMS 535 Aerosol Sampling and Analysis credit: 4 Hours.

Same as CEE 545. See CEE 545.

ATMS 571 Professional Development credit: 1 Hour.

Aimed at professional development in the atmospheric sciences so that students recognize the importance of breath of knowledge, effective oral and written scientific communication, and other skills they will need as professionals. 1 graduate hour. No professional credit. Approved for S/U grading only. Prerequisite: Graduate student in Atmospheric Sciences or consent of instructor.

ATMS 590 Individual Study credit: 2 to 4 Hours.

Individual study or reading in a subject not covered in normal course offerings. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ATMS 591 Atmospheric Sciences Seminar credit: 0 Hours.

Seminar on topics of current interest. Approved for S/U grading only. Prerequisite: Consent of instructor.

ATMS 596 Non-Thesis Research credit: 0 to 12 Hours.

Non-thesis research in the Atmospheric Sciences. Approved for S/U grading only. May be repeated. No more than 4 hours may be counted toward a master's degree in ATMS. Prerequisite: Restricted to students in the non-thesis option.

ATMS 597 Special Topics in Atmospheric Sciences credit: 0 to 4 Hours.

Lecture course in topics of current interest; subjects such as tropical meteorology, aerosol physics, and geophysical fluid dynamics will be covered in term offerings on a regular basis. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Graduate standing or consent of instructor.

ATMS 599 Thesis Research credit: 0 to 16 Hours.

Check with the department to identify which CRN is needed for your advisor and any related registration questions. Approved for S/U grading only. Prerequisite: Consent of instructor.

Biochemistry

<http://mcb.illinois.edu/departments/biochemistry>

Head of the Department: Susan A. Martinis
Associate Head of Department: Robert B. Gennis
Director of Graduate Studies: David M. Kranz
419 Roger Adams Laboratory
600 South Mathews Avenue
Urbana, IL 61801
(217) 333-2013
E-mail: biochem@mcb.uiuc.edu

Major: Biochemistry
Degrees offered: M.S., Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Biochemistry and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Biochemistry offers graduate programs leading to the Master of Science and the Doctor of Philosophy degrees. For an application and departmental materials that provide greater detail on programs, offerings, admission, degree requirements, and financial aid, visit our website at www.mcb.illinois.edu/graduate/gradprospect.html (<http://www.mcb.illinois.edu/graduate/gradprospect.html>).

The Department of Biochemistry is a part of the School of Molecular and Cellular Biology (MCB), which also includes the Departments of Cell and Developmental Biology, Microbiology and Molecular and Integrative Physiology as well as Programs in Biophysics and Neurosciences. The Department is part of an umbrella program in MCB that encompasses over 70 different research laboratories. Students admitted into any of these departmental graduate programs can select faculty thesis advisors from these active research laboratories in the School. In addition, dual degrees via the Medical Scholars Program are offered. Close ties are also maintained with the School of Integrative Biology, the School of Chemical Sciences, the College of Medicine, and the College of Veterinary Medicine.

Admission

Interested students must apply directly to the School of Molecular and Cellular Biology (www.mcb.illinois.edu/graduate/gradprospect.html) (<http://www.mcb.illinois.edu/graduate/gradprospect.html>). During the first semester, students perform three laboratory rotations, choosing from any laboratory in the School. Students select a laboratory for their thesis research in December in mutual agreement with their desired advisor and formally join the appropriate graduate program/department at that time.

Students electing biochemistry as a major for an advanced degree should have a strong background in chemistry, biology, physics, and calculus and a grade point average of a 3.0 or higher (A = 4.0). Admission requirements include: a bachelor's degree; Graduate Record Examination (GRE) scores. In addition to the above requirements, international students must attain a minimum paper-based Test of English as a Foreign Language (TOEFL) score of 590 (243 on the computer-based test). A score of 96 on the internet-based test (iBT), with a score of 24 on the speaking section, is also accepted. The department does not normally admit students directly into the M.S. program.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Biochemistry. Students may apply to the

Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program.

Faculty Research Interests

Faculty research in the Department of Biochemistry covers a broad spectrum of the most dynamic areas of current research in biological chemistry and molecular biology: physical approaches to the structure and function of macromolecules and membranes; nucleic acid biochemistry and enzymology, enzyme mechanisms and evolution; membrane biochemistry and bioenergetics; protein-lipid interactions; protein-nucleic acid interactions and molecular recognition; molecular biological approaches to gene organization and expression; immunology; microbial physiology, and signal transduction.

Centers, Programs, and Institutes

Biochemistry faculty are appointed and active in several cross-campus academic and research units, including the Center for Biophysics & Computational Biology, the Beckman Institute for Advanced Science and Technology, the Institute for Genomic Biology, as well as the interdepartmental graduate programs in Biophysics & Computational Biology, and Neuroscience, and the joint M.D./Ph.D. Medical Scholars Program of the College of Medicine.

Facilities and Resources

Campus resources for science research are state-of-the-art and available to all faculty research programs. Notably among these is the Roy J. Carver Biotechnology Center, which comprises the W.M. Keck Center for Comparative and Functional Genomics (Custom Library Services, High-Throughput Sequencing and Genotyping, DNA Core Sequencing, Fragment Analysis, Oligonucleotide Synthesis, Functional Genomics and Bioinformatics), Proteomics Services (Protein Science Facility, Immunological Resource Center and Flow Cytometry Facility), a Metabolomics Center and a Transgenic Mouse Facility. It also provides career counseling through the Career Services Office. Many other cross-campus facilities are important for the faculty research programs in Biochemistry, including the Fred Seitz Materials Research Laboratory, the National Center for Supercomputing Applications (NCSA), the high-field VOICE NMR Laboratory, Mass Spectrometry Center, Microanalysis Laboratory, Cell Media Facility, and many electronics, machine and glass shop service facilities. The University of Illinois is also a full member of the LS-CAT beamline for macromolecular crystallography at the Advanced Photon Source, Argonne National Laboratory.

Financial Aid

Financial aid for Ph.D. graduate students in biochemistry is available in the form of fellowships, teaching and research assistantships, and tuition

and partial fee waivers. In addition, interdepartmental training grants from the National Institutes of Health support multidisciplinary training programs. Qualified candidates are considered for financial support upon application. Graduate students making satisfactory progress toward their degrees generally receive a stipend, as well as a full tuition waiver and a partial fee waiver.

Master of Science Biochemistry

A coursework master's degree requires a minimum of two full-time semesters. A thesis master's degree usually requires a minimum of three semesters.

Thesis Option

Code	Title	Hours
	Core curriculum	20
BIOC 599	Thesis Research (12 max applied toward degree)	0-12
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Program of Study (<http://www.mcb.illinois.edu/departments/biochemistry/gradpgmstudy.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Core curriculum	32
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Program of Study (<http://www.mcb.illinois.edu/departments/biochemistry/gradpgmstudy.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Biochemistry

Code	Title	Hours
	Biochemistry/MCB core courses and advanced elective courses	32
BIOC 599	Thesis Research (min/max applied toward degree)	64
Total Hours		96

Other Requirements ¹

Other requirements may overlap

A minimum of one semester at 50% FTE or two semesters of 25% FTE of teaching in lecture or laboratory courses is required.

A thesis based on original research must be presented to a review committee at least two weeks before the final oral examination.

Masters Degree Required Before Admission to PhD? No, but Masters level requirements must be met (32 hours)

Preliminary Exam Required Yes, administered by the end of the second year.

Final Exam/Dissertation Defense Required Yes, and the final examination is limited to a defense of the thesis research.

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Program of Study (<http://www.mcb.illinois.edu/departments/biochemistry/gradpgmstudy.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Bioprocessing and Bioenergy

<http://bioenergy.illinois.edu>

Director of Graduate Studies: Vijay Singh
Room 360G Agricultural Engineering Sciences Building
1304 W. Pennsylvania Avenue
Urbana, IL 61801
(217) 333-9510
E-mail: vsingh@illinois.edu (<http://catalog.illinois.edu/graduate/graduate-majors/bioenergy/vsingh@illinois.edu>)

Major: Bioprocessing and Bioenergy
Degrees Offered: M.S.
Graduate Concentration: Professional Science Master's (p. 874) (M.S. only)

Graduate Degree Programs

The Department of Agricultural and Biological Engineering in the College of ACES offers a Master of Science with a Major in Bioprocessing and Bioenergy and a Concentration in Professional Science Master's. In addition to receiving training in the general field of bioprocessing and bioenergy, students gain relevant professional experience in business and related topics through coursework and an internship. This program is designed for those who seek careers in a science-based setting with significant managerial and leadership responsibilities.

Admission

In addition to meeting the Graduate College admission requirements, applicants should have a baccalaureate degree in a recognized field of biological, physical, agricultural, socio-economic or engineering science. Graduate Record Examination (GRE) scores are required of all applicants. The minimum recommended Test of English as a Foreign Language (TOEFL) score is 590 on the paper-based test, 243 on the computer-based

test, and 79 on the internet-based test. Applications are only accepted for the fall semester. Transfer credit may not be applied to this program due to the cohort nature of this program.

Financial Aid

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted.

Master of Science in Bioprocessing and Bioenergy

The curriculum requires 42 graduate hours, consisting of a core and elective program, in addition to the required PSM concentration. The areas of specialty are Plants, Soils and Feedstocks; Production, Processing and Use; Environment, Economics and Policy & Law, and Tools and Methods.

Code	Title	Hours
ABE 594	Graduate Seminar (Required for 2 semesters)	0
TSM 486	Grain Bioprocessing Coproducts	3
	Courses (7 to 9) in the area of specialty from a designated list, and in consultation with the Director of Graduate Study	29
	Business courses prescribed by the Illinois PSM program	10
PSM 501	PSM Industry Seminar I	0
PSM 502	PSM Industry Seminar II	0
PSM 503	PSM Industry Seminar III	0
PSM 555	PSM Internship	0
Total Hours		42

Other Requirements ¹

Other requirements may overlap

A concentration is required.

Minimum 500-level Hours Required 12

Overall:

Minimum Hours Required Within the Unit: 8 at the 500 level

Students will not be eligible to transfer graduate credit into this major. See individual program pages for specific details of disciplinary requirements.

Minimum GPA: 2.75

¹ For additional details and requirements for all degrees, please refer to the program's Graduate Degree Requirements (<http://www.bioenergy.illinois.edu/education/major.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Bioengineering

<http://bioengineering.illinois.edu>

Head of Department: Rashid Bashir (rbashir@illinois.edu)
Associate Head for Graduate Programs: Joseph Irudayaraj (jirudaya@illinois.edu)
Graduate Programs Coordinator: Krista Smith (kristasm@illinois.edu)
1270 Digital Computer Laboratory

1304 West Springfield Avenue
Urbana, IL 61801
(217) 333-1867
E-mail: bioengineering@illinois.edu

Major: Bioengineering
Degrees Offered: M.Eng., M.S., Ph.D.

Graduate Concentrations: Bioengineering, Biomechanics, Cancer Nanotechnology

Graduate Degree Programs

The Department of Bioengineering offers studies leading to the Master of Engineering in Bioengineering (M.Eng.), the Master of Science in Bioengineering (M.S.), and the Doctor of Philosophy (Ph.D.) in Bioengineering. The Bioengineering Graduate Program provides students with educational and research experiences that integrate the sciences of biology and medicine with the practices and principles of engineering. For the M.S. and Ph.D. programs, areas of focus include Bio-imaging, Cell & Tissue Engineering, Micro and Molecular Technologies, and Computational Biology. Opportunity also exists for specializing in (1) computational science and engineering and (2) energy and sustainability engineering via the Computational Science and Engineering (CSE) t (<http://cse.illinois.edu/education-programs/graduate-program>) ranscriptable concentration and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>). The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Bioengineering.

Admission

For the M.S. and Ph.D. programs, applicants should have an undergraduate or graduate degree, respectively, in a natural science, computer science, or engineering. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. Applicants should show evidence of strong quantitative skills and of serious interest in the life sciences. All applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 97 (iBT), 243 (CBT), or 590 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores of 103 (TOEFL iBT) or greater, 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Please see the admission requirements for the M.Eng. in Bioengineering under the "Masters" tab.

Degree Requirements

For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://>

bioengineering.illinois.edu) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Faculty Research Interests

Bioengineering faculty perform research in the areas of Bio-Imaging at Multi-Scale, Molecular, Cellular and Tissue Engineering, Bio-Micro and Nanotechnology, Computational Bioengineering, and Synthetic Bioengineering. In addition to Bioengineering faculty (<http://bioengineering.illinois.edu/directory>), Department of Bioengineering has more than 50 affiliate faculty (<http://bioengineering.illinois.edu/directory>).

Financial Aid

For the M.S. and Ph.D. programs, qualified students may apply for financial aid in the form of fellowships, teaching and research assistantships, and waivers of tuition and service fees. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

Please see the financial aid eligibility for the M.Eng. in Bioengineering under the "Masters" tab.

- Master of Science in Bioengineering (p. 678)
- Master of Science in Bioinformatics, Bioengineering Concentration (p. 678)
- Master of Engineering in Bioengineering (p. 680)

Doctor of Philosophy

Entering with approved M.S. degree

Code	Title	Hours
BIOE 599	Thesis Research (min-max applied toward degree)	52
Elective courses		12
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum program GPA:	3.0
----------------------	-----

A Masters degree is required for admission to the Ph.D. program.

Qualifying exam ²

Preliminary exam

Final exam and dissertation defense

Dissertation deposit

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Examination information (<http://bioengineering.illinois.edu/graduate-programs/current-graduate-students/qualifying-exam>)

Entering with B.S. degree

Code	Title	Hours
BIOE 599	Thesis Research (min-max applied toward degree)	55
500-level BioE courses: See approved list		21
Elective courses: At least 12 hours must be engineering graduate-level courses. See website for more details.		20
Total hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum program GPA: 3.0

Qualifying exam ²

Preliminary exam

Final exam and dissertation defense

Dissertation deposit

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Examination information (<http://bioengineering.illinois.edu/graduate-programs/current-graduate-students/qualifying-exam>)

- Graduate Concentration in Biomechanics (p. 836)
- Master of Science in Bioinformatics, Bioengineering Concentration (p. 678)
- Graduate Concentration in Cancer Nanotechnology (p. 679)

Master of Science in Bioengineering Thesis Option

Code	Title	Hours
BIOE 599	Thesis Research (min-max applied toward degree)	4
BIOE 500	Graduate Seminar (BIOE 500 must be taken at least twice. A maximum of 2 hours may be applied toward the degree.)	2
BIOE 501	Seminar Discussion	1
BIOE 502	Bioengineering Professionalism	2
BIOE 504	Analytical Methods in Bioeng	4
BIOE 505	Computational Bioengineering	4
BIOE 506	Molecular Biotechniques	4
BIOE 507	Advanced Bioinstrumentation	4
Elective Courses		7
Total Hours		32

Other Requirements and Conditions ¹

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
BIOE 500	Graduate Seminar (BIOE 500 must be taken at least twice. A maximum of 2 hours may be applied toward the degree.)	2
BIOE 501	Seminar Discussion	1
BIOE 502	Bioengineering Professionalism	2
BIOE 504	Analytical Methods in Bioeng	4
BIOE 505	Computational Bioengineering	4
BIOE 506	Molecular Biotechniques	4
BIOE 507	Advanced Bioinstrumentation	4
Elective Courses		19
Total Hours		40

Other Requirements and Conditions ¹

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Bioinformatics, Bioengineering Concentration

Thesis Option

Code	Title	Hours
BIOE 599	Thesis Research (min applied toward degree)	4
BIOE 504 or BIOE 505	Analytical Methods in Bioeng Computational Bioengineering	4
One course from the approved Bioinformatics list of Computer Sciences core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course from the approved Bioinformatics list of Biology core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course from the approved Bioinformatics list of Bioinformatics core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course in systems biology from departmental list (http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives)		3

Elective Courses (<http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives>) 9

Total Hours 32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A concentration is required.
A minimum of 12 500-level credit hours overall applied toward the degree, with 8 hours being Bioengineering courses; a maximum of 2 hours of seminar courses can be counted towards these 12 hours.

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
BIOE 504 or BIOE 505	Analytical Methods in Bioeng Computational Bioengineering	4
One course from the approved Bioinformatics list of Computer Sciences core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course from the approved Bioinformatics list of Biology core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course from the approved Bioinformatics list of Bioinformatics core courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course in systems biology from departmental list (http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives)		3
Elective Courses (http://bioengineering.illinois.edu/graduate-programs/prospective-graduate-students/bioengineering-courses-illinois/#electives)		17
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A concentration is required.
A minimum of 12 500-level credit hours overall applied toward the degree, with 8 hours being Bioengineering courses; a maximum of 2 hours of seminar courses can be counted towards these 12 hours.

The non-thesis option is only available with permission of the advisor. Requirements include an additional 8 hours of elective courses which, with the approval of an advisor, may include supervised research experiences including internships and projects.

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioengineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Graduate Concentration in Cancer Nanotechnology

The Cancer Nanotechnology Concentration requires students to earn a B or better in each concentration course. Students must complete 12 credit hours, including at least one core Cancer course and one core Nanotechnology course. Participants may take a second core Cancer course and/or a second core Nanotechnology course as an elective. Fulfillment of these requirements will be monitored by the graduate coordinator in Bioengineering.

Code	Title	Hours
Core Cancer Classes		
BIOE 498	Special Topics (Section RB, Cancer Science and Technology)	
MCB 400	Cancer Cell Biology	
Core Nanotechnology Classes		
ABE 446	Biological Nanoengineering	
BIOE 416	Biosensors	
ECE/ME 485	MEMS Devices & Systems	
Elective Courses		
FSHN 480	Basic Toxicology	
ME 483	Mechanobiology	
ME 487	MEMS-NEMS Theory & Fabrication	
ME 586	Mechanics of MEMS	
Total hours required for the concentration:		12

Courses taken toward this concentration will count toward the student's graduate degree.

Students must notify their department of their plan to pursue this concentration.

When choosing courses, students must work directly with their department to ensure that all degree requirements will be met.

Note that students who intend to complete both a Biomechanics Concentration and a Cancer Nanotechnology Concentration may only overlap one course between the two concentrations.

Master of Engineering in Bioengineering

<http://www.bioemeng.illinois.edu>

Head of Department: Rashid Bashir
 Director of Graduate Studies: Hyun Joon Kong
 Academic Program Contacts: Liezl Bowman (Program Coordinator)
 1270 Digital Computer Laboratory
 1304 West Springfield Avenue
 Urbana, IL 61801
 (217) 333-1867
 E-mail: liezlb@illinois.edu (liezlb@illinois.edu)

Major: Bioengineering

Degrees Offered: M.Eng.

Graduate Concentrations: General Bioengineering, Bioinstrumentation, and Computational Genomics

Graduate Degree Programs

The M.Eng. in Bioengineering is designed to bridge the skills gap by developing students with advanced technical know-how, a better understanding of the medical healthcare industry and more business acumen through coursework and project work, which provides students exposure to real world industry issues. For more information, visit <http://www.bioemeng.illinois.edu>.

Admission

Students must select one of the concentrations under the M.Eng. in Bioengineering program to apply to and will not be able to complete multiple concentrations. Students should have an undergraduate degree in a science related field or must have taken engineering or science related coursework. Applicants should have a minimum grade point average of 3.00 (A = 4.00) or equivalent for the last two years of undergraduate study and show evidence of strong quantitative skills and of serious interest in the life sciences through their personal statement and GRE scores. In addition, applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test. Students in the program are not expected to continue in and do not have automatic admission to the Ph.D. program in any engineering department.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Applicants with lesser scores may still apply. Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Financial Aid

The tuition and fees for the M.Eng. in Bioengineering are the standard Graduate and Professional Programs rates for the College of Engineering, plus a \$2000 program fee. For tuition information and external funding resources, please visit www.bioemeng.illinois.edu. Students in the M.Eng. in Bioengineering program are not eligible for tuition-waiver generating assistantships.

General Bioengineering Concentration (p. 680)

Bioinstrumentation Concentration (p. 681)

Computational Genomics Concentration (p. 682)

Master of Engineering in Bioengineering with a General Bioengineering Concentration

www.bioemeng.illinois.edu

Head of Department: Rashid Bashir
 Director of Graduate Studies: Hyun Joon Kong
 Academic Program Contacts: Liezl Bowman (Program Coordinator)
 1270 Digital Computer Laboratory
 1304 West Springfield Avenue
 Urbana, IL 61801
 (217) 333-1867
 E-mail: liezlb@illinois.edu (liezlb@illinois.edu)

Major: Bioengineering

Degrees Offered: M.Eng.

Graduate Degree Programs

The M.Eng. in Bioengineering is designed to bridge the skills gap by developing students with advanced technical know-how, a better understanding of the medical healthcare industry and more business acumen through coursework and project work, which provides students exposure to real world industry issues. For more information, visit www.bioemeng.illinois.edu.

Admission

Students must select one of the concentrations under the M.Eng. in Bioengineering program to apply to and will not be able to complete multiple concentrations. Students should have an undergraduate degree in a science related field or must have taken engineering or science related coursework. Applicants should have a minimum grade point average of 3.00 (A = 4.00) or equivalent for the last two years of undergraduate study and show evidence of strong quantitative skills and of serious interest in the life sciences through their personal statement and GRE scores. In addition, applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test. Students in the program are not expected to continue in and do not have automatic admission to the Ph.D. program in any engineering department.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met.

admissions/instructions/04c) are met. Applicants with lesser scores may still apply. Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Degree Requirements

Code	Title	Hours
	Core Concentration	18
	Technical Coursework from approved list	
	Business Coursework from approved list	
	Elective Courses chosen in consultation with advisor	8
	Professional Development from approved list	6
	Total Hours	32

A minimum of 20 credit hours must be taken from the University of Illinois at Urbana-Champaign campus

A minimum of 12 500-level credit hours overall

The minimum program GPA is 3.0

At most, 12 credit hours of previous University of Illinois Urbana-Champaign graduate-level coursework not applied to any other degree may be transferred and applied to the major pending department and Graduate College approval

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioen.illinois.edu/graduate-msphd-programs>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Financial Aid

The tuition and fees for the M.Eng. in Bioengineering are the standard Graduate and Professional Programs rates for the College of Engineering, plus a \$2000 program fee. For tuition information and external funding resources, please visit www.bioemeng.illinois.edu. Students in the M.Eng. in Bioengineering program are not eligible for tuition-waiver generated assistantships.

Master of Engineering in Bioengineering with a Bioinstrumentation Concentration

www.bioemeng.illinois.edu

Head of Department: Rashid Bashir
 Director of Graduate Studies: Hyun Joon Kong
 Academic Program Contacts: Liezl Bowman (Program Coordinator)
 1270 Digital Computer Laboratory
 1304 West Springfield Avenue
 Urbana, IL 61801
 (217) 333-1867
 E-mail: liezlb@illinois.edu

Major: Bioengineering
Degrees Offered: M.Eng.

Graduate Degree Programs

The M.Eng. in Bioengineering is designed to bridge the skills gap by developing students with advanced technical know-how, a better

understanding of the medical healthcare industry and more business acumen through coursework and project work, which provides students exposure to real world industry issues. For more information, visit www.bioemeng.illinois.edu.

Admission

Students must select one of the concentrations under the M.Eng. in Bioengineering program to apply to and will not be able to complete multiple concentrations. Students should have an undergraduate degree in science related field or must have taken engineering or science related coursework. Applicants should have a minimum grade point average of 3.00 (A = 4.00) or equivalent for the last two years of undergraduate study and show evidence of strong quantitative skills and of serious interest in the life sciences. In addition, applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test. Students in the program are not expected to continue in and do not have automatic admission to the Ph.D. program in any engineering department.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Applicants with lesser scores may still apply. Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Code	Title	Hours
	Course Work	
	Core Courses	18
	Technical courses from approved list	
	Business courses from approved list	
	Elective courses chosen in consultation with advisor	8
	Professional development courses from approved list	6
	Total Credits for the Degree	32

Other Requirements and Conditions (may overlap) ¹

A minimum of 20 credit hours must be taken from the University of Illinois Urbana Champaign campus

A minimum of 12 500-level credit hours overall.

The minimum program GPA is 3.0

At most, 12 credit hours of previous University of Illinois Urbana-Champaign graduate-level coursework not applied to any other degree may be transferred and applied to the major pending department and Graduate College approval.

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioen.illinois.edu/graduate-msphd-programs>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Financial Aid

The tuition and fees for the M.Eng. in Bioengineering are the standard Graduate and Professional Programs rates for the College of Engineering, plus a \$2000 program fee. For tuition information and external funding

resources, please visit www.bioemeng.illinois.edu. Students in the M.Eng. in Bioengineering program are not eligible for tuition-waiver generated assistantships.

Master of Engineering in Bioengineering with a Computational Genomics Concentration

<http://www.bioemeng.illinois.edu>

Head of Department: Rashid Bashir
 Director of Graduate Studies: Hyun Joon Kong
 Academic Program Contacts: Liezl Bowman (Program Coordinator)
 1270 Digital Computer Laboratory
 1304 West Springfield Avenue
 Urbana, IL 61801
 (217) 333-1867
 E-mail: liezlb@illinois.edu

Major: Bioengineering
Degrees Offered: M.Eng.

Graduate Degree Programs

The M.Eng. in Bioengineering is designed to bridge the skills gap by developing students with advanced technical know-how, a better understanding of the medical healthcare industry and more business acumen through coursework and project work, which provides students exposure to real world industry issues. For more information, visit www.bioemeng.illinois.edu.

Admission

Students must select one of the concentrations under the M.Eng. in Bioengineering program to apply to and will not be able to complete multiple concentrations. Students should have an undergraduate degree in science related field or must have taken engineering or science related coursework. Applicants should have a minimum grade point average of 3.00 (A = 4.00) or equivalent for the last two years of undergraduate study and show evidence of strong quantitative skills and of serious interest in the life sciences. In addition, applicants must submit results from the Graduate Record Examination (GRE) (<http://www.ets.org>) general test. Students in the program are not expected to continue in and do not have automatic admission to the Ph.D. program in any engineering department.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Applicants with lesser scores may still apply. Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Code	Title	Hours
Course Work		
Core Courses		18

Technical courses from approved list

Business courses from approved list

Elective courses chosen in consultation with advisor	8
Professional development courses from approved list	6
Total Credits for the Degree	32

Other Requirements and Conditions (may overlap) ¹

A minimum of 20 credit hours must be taken from the University of Illinois Urbana Champaign campus

A minimum of 12 500-level credit hours overall.

The minimum program GPA is 3.0

At most, 12 credit hours of previous University of Illinois Urbana-Champaign graduate-level coursework not applied to any other degree may be transferred and applied to the major pending department and Graduate College approval.

¹ For additional details and requirements for all degrees, please refer to the department's Graduate Studies Web site (<http://bioen.illinois.edu/graduate-msphd-programs>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Financial Aid

The tuition and fees for the M.Eng. in Bioengineering are the standard Graduate and Professional Programs rates for the College of Engineering, plus a \$2000 program fee. For tuition information and external funding resources, please visit www.bioemeng.illinois.edu. Students in the M.Eng. in Bioengineering program are not eligible for tuition-waiver generated assistantships.

Biology

<http://life.illinois.edu>

See also Animal Biology; Biochemistry; Cell and Developmental Biology; Entomology; Microbiology; Molecular and Integrative Physiology; and Plant Biology

<http://mcb.illinois.edu/graduate/>

Director of Master of Science in Biology Program: Dr. James Imlay
 Coordinator of MS in Biology Program: Shawna Smith
 School of Molecular and Cellular Biology
 B103 Chemical & Life Sciences Lab
 601 South Goodwin Avenue
 Urbana, IL 61801

Contact Information:

Phone: (217) 333-1737

Fax: (217) 244-6697

E-mail: gradinfo@mcb.illinois.edu

Major: Biology

Degrees Offered: M.S., Ph.D.

Graduate Degree Programs

The M.S. in Biology allows students to increase their knowledge of biology and become involved with graduate-level research in biology without the long-term commitment of a Ph.D. program. The work is personally designed by each student in consultation with an adviser. Breadth of training is encouraged.

Admission

The Master of Science in Biology Program is being phased out and is no longer accepting applications or transfer students.

Financial Aid

Financial assistance is not available to M.S. students through the program.

Master of Science in Biology

To maintain active status in the program students must register for 12 credit hours in 400- or 500-level biology courses per semester. If a student has a teaching or research appointment he or she may register for 8 credit hours. A research report or thesis is required of all candidates for the degree. To maintain active status in the program students must register for 12 credit hours in 400- or 500-level biology courses per semester. If a student has a teaching or research appointment he or she may register for 8 credit hours. A research report or thesis is required of all candidates for the degree.

Thesis Option

Code	Title	Hours
Thesis Hours Required – 599 (min/max applied toward degree):		4-8
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12
Overall:

Courses taken "credit/no credit" may not be used toward degree requirements

Courses taken outside of the Schools must be approved in advance by the Program Director

Approval of research topic is required

Minimum GPA: 3.0

¹ For additional details and requirements refer to the program requirements (<http://www.life.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Research/Project/Independent Study Hours (min/max applied toward degree)		4-8
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12
Overall:

Courses taken "credit/no credit" may not be used toward degree requirements

Courses taken outside of the Schools must be approved in advance by the Program Director

Approval of research topic is required

Minimum GPA: 3.0

¹ For additional details and requirements refer to the program requirements (<http://www.life.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Biophysics and Quantitative Biology

<http://www.biophysics.illinois.edu>

Center Director: Satish Nair
179 Loomis
1110 West Green Street
Urbana, IL 61801
Contact: Cindy Dodds
(217) 333-1630
E-mail: biophysics@life.illinois.edu

Major: Biophysics and Quantitative Biology
Degrees offered: M.S. and Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Biophysics and Quantitative Biology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>).

Graduate Degree Programs

Biophysics and Quantitative Biology offers a doctor of philosophy degree program. In rare circumstances and with special permission of the director and advisor, a current student may obtain a terminal master's degree after meeting the requirements of the degree. Biophysics students are not admitted initially into the program for a master's degree. Opportunity also exists for specializing in computational science and engineering within the department's graduate program via the Computational Science and Engineering (CSE) Concentration (<http://www.cse.illinois.edu/education/minor-and-concentration/graduate-concentration>).

Admission

The objective of the program in biophysics is to give students sufficient training in physics, chemistry, and biology to enable them to apply the conceptual, instrumental, and mathematical approaches of the physical sciences for solving biological problems. The curriculum is broadly based and provides sufficient flexibility for students entering with either previous training in the physical sciences or for students with a background in biology and some experience in the physical sciences.

Admission requirements are usually one year of college biology, one year of college physics, chemistry through organic chemistry, and mathematics through calculus; however deficiencies in one of these areas can be corrected during the first two years of study. Most applicants who are accepted into the program have general Graduate Record Examination (GRE) scores in the 70%-90% range. The Biophysics and Quantitative Biology Program does not require the subject GRE for admission. The Test of English as a Foreign Language (TOEFL iBT) or IELTS is required for international applicants.

Please refer to the Biophysics and Quantitative Biology Admissions web page (<http://www.life.illinois.edu/biophysics/program/admissions.html>) for additional information and application deadlines.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Biophysics and Quantitative Biology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>). Please note that applications to the Medical Scholars Program are not being accepted at this time.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program. Every biophysics student is required to serve as a teaching assistant for one semester at the quarter time level or higher.

Faculty Research Interests

Over 40 faculty members from the Schools of Molecular and Cellular Biology, Chemical Sciences, and Medicine, and the Colleges of Engineering and Veterinary Medicine, are affiliated with the Center for Biophysics and Quantitative Biology. Faculty interests range from experimental biophysics (single molecule spectroscopy, protein and RNA folding, molecular dynamics, cellular biophysics, imaging, etc.) to computational and theoretical biophysics (utilizing a wide range of computer platforms to simulate diverse biological phenomena at many levels as well as bioinformatics). Individual faculty interests can be found on the Biophysics web site (<http://biophysics.illinois.edu/people/faculty>).

Facilities and Resources

Center faculty and students have access to world-class research facilities at the University of Illinois, including the Beckman Institute, the Carl R Woese Institute for Genomic Biology, Blue Waters Sustained Petascale Computing, the National Center for Supercomputing Applications, the Biomedical Imaging Center, the Roy J Carver Biotechnology Center, and the School of Chemical Sciences' Mass Spectroscopy Center and Electron Paramagnetic Resonance (EPR) Research Center.

Financial Aid

All incoming graduate students in biophysics will be supported by the Center for the first semester in the program. Continuing support for subsequent years will be granted as long as students remain in good standing and continue to make satisfactory academic progress, contingent upon the availability of funds. This support can be in the form of research assistantships, teaching assistantships, traineeships, or fellowships. After the first semester of study, most students are supported directly by their research advisor in the form of a research assistantship.

Master of Science in Biophysics and Quantitative Biology

Thesis Option

Code	Title	Hours
	10 hours of 500-level biophysics courses with a minimum GPA of 3.25 (does not include seminar courses and/or research units and can include no more than 2 hours of tutorials). 500-level courses in other departments count towards this 500-level formal course requirement if they are on the approved Biophysics course list.	10
BIOP 401	Introduction to Biophysics (or equivalent)	3
	Elective hours approved by Center Director to bring total hours to	32
BIOP 599	Thesis Research (4 min applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Student Handbook* (<http://biophysics.illinois.edu/program/courses>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	10 hours of 500-level biophysics courses with a minimum GPA of 3.25 (does not include seminar courses and/or research units and can include no more than 2 hours of tutorials). 500-level courses in other departments count towards this 500-level formal course requirement if they are on the approved Biophysics course list.	10
BIOP 401	Introduction to Biophysics (or equivalent)	3
	Research/Project Hours (4 min applied toward degree)	4
	Elective hours approved by Center Director to bring total course work hours to	32
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Student Handbook* (<http://biophysics.illinois.edu/program/courses>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Biophysics and Quantitative Biology

The Ph.D. degree is a research degree, and the program is designed with a major emphasis on individual research.

A qualifying examination is offered each spring. This qualifier must be passed by the end of the second year. By the end of the third year, after formulating a definite research problem, the student takes a preliminary examination where the chosen research topic is presented to the student's faculty committee. The committee also examines the candidate on their chosen general research area. The Ph.D. thesis is based on original work of the student and is defended at a final public examination. The thesis and the exam must demonstrate a thorough knowledge of theory and techniques in one of the areas of biophysics.

Code	Title	Hours
BIOP 401	Introduction to Biophysics (or equivalent)	3
BIOP 581	Lab Rotation I	2
BIOP 582	Lab Rotation II	2
BIOP 583	Lab Rotation III	2
BIOP 586 & BIOP 590	Special Topics in Biophysics and Individual Topics	10
BIOP 595	Biophysics Seminars (Sections A & B)	3
BIOP 599	Thesis Research (32 max applied toward degree)	32

Two 500-level courses from the pre-approved Biophysics course list

One computational or experimental lab course – based on the student's research focus

MCB 580	Res Ethics & Responsibilities	1
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Students are required to teach for a minimum of one semester during their graduate career

Masters Degree Required in Biophysics and Quantitative Biology for Admission to PhD?	No, but Masters level requirements must be met (32 additional hours min)
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Student Handbook (<http://biophysics.illinois.edu/program/courses>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Business Administration

<http://www.business.illinois.edu/ba>

Interim Head of the Department: Cele Otnes
 Director of Graduate Studies: Deepak Somaya
 350 Wohlers Hall
 1206 South Sixth Street
 Champaign, IL 61820
 (217) 333-4240
 E-mail: ba@business.illinois.edu

Major: Business Administration
 Degrees Offered: M.S., Ph.D.
 Graduate Concentration: Accountancy (p. 639) (M.S. only), Business and Public Policy (p. 764) (M.S. only), Business Data Analytics (p. 687) (M.S. only), Corporate Governance and International Business (p. 687) (M.S. only), Supply Chain Management (p. 688) (M.S. only), Information Technology and Control (p. 688) (M.S. only)
 For Masters: <https://business.illinois.edu/ba/masters/>
 For PhD: <https://business.illinois.edu/ba/doctoral/>
 E-mail: ba@business.illinois.edu

Major: Management
 Degrees Offered: M.S.

Major: Technology Management
 Degrees Offered: M.S.
 Graduate Concentration: Accountancy (p. 639), Business and Public Policy (p. 764), Business Data Analytics (p. 687), Information Technology and Control (p. 688), Supply Chain Management (p. 688)
 Web: www.ms-techmgmt.illinois.edu/ (<http://www.ms-techmgmt.illinois.edu/>)
 E-mail: ms-techmgmt@illinois.edu

Graduate Minors: Information Technology and Control; Corporate Governance and International Business

Graduate Concentrations: Business Data Analytics, Information Technology and Control, Corporate Governance and International Business, Supply Chain Management

Graduate Degree Programs

The Department of Business Administration offers graduate programs leading to the Master of Science in Management, Master of Science in Technology Management, and the Master of Science and the Doctor of Philosophy (Ph.D.) in Business Administration degrees.

Admission

Admission to the Ph.D. program requires an undergraduate degree with a scholastic average of at least B for the last 60 hours, acceptable scores on the Graduate Management Admission Test (GMAT) or Graduate Records Examination (GRE), three letters of recommendation, and a statement of career goals including research interests.

Applicants whose native language is not English are also required to submit scores from the Test of English as a Foreign Language (TOEFL), CBT, iBT or IELTS. Ph.D. candidates must achieve the University minimum scores on these examinations.

www.grad.illinois.edu/admissions/apply (<http://www.grad.illinois.edu/admissions/apply>)

The Ph.D. program allows fall admission only. Please check the Departmental listing for current requirements and program information:

<https://business.illinois.edu/ba/doctoral/>

Admission to the MS in Management program requires an undergraduate degree with a scholastic average of at least B for the last 60 hours and for any previous graduate work completed along with completion of at least one college-level quantitative methods class. For additional details, please refer to the program's website. All applicants whose native language is not English must submit a minimum Test of English as a Foreign Language (TOFEL) score of at least 102 (iBT), 253 (CBT), or 610 (PBT); or minimum International English Language Testing System (IELTS) academic exam scores of 6.5 overall and 6.0 in all subsections.

Admission to the MS in Technology Management program requires an undergraduate degree with a scholastic average of at least B for the last 60 hours, three letters of recommendation, and a statement of career goals. Applicants whose native language is not English are also required to submit scores from the Test of English as a Foreign Language (TOEFL), CBT, iBT or IELTS. Candidates must achieve the University minimum scores on these examinations (currently 550 on the paper-based TOEFL or 213 on the computer-based TOEFL or 79 on the iBT).

Admission to the MS in Business Administration requires an undergraduate degree with a scholastic average of at least B for the last 60 hours, three letters of recommendation, and a statement of career goals. Applicants whose native language is not English are also required to submit scores from the Test of English as a Foreign Language (TOEFL), CBT, iBT or IELTS. Candidates must achieve the University minimum scores on these examinations (currently 550 on the paper-based TOEFL or 213 on the computer-based TOEFL or 79 on the iBT).

Faculty Research Interests

Faculty research interests are in the areas of marketing, organizational behavior, organization theory, decision sciences, information systems, strategic management, risk analysis, judgment under uncertainty, international business, production and operations management, accounting, economics, entrepreneurship, and finance. The College of Business houses computer facilities, a behavioral science laboratory, and a separate library. The college maintains contacts with industry and government through its Survey Research Laboratory, Illinois Business Consulting, the Academy for Entrepreneurial Leadership and several professional and scholarly journals edited by its faculty.

<https://business.illinois.edu/people/>

Financial Aid

Most Ph.D. students receive some form of financial assistance. This assistance is likely to be in the form of a teaching or research assistantship, which includes a waiver of tuition and some fees, and/or the award of a merit-based fellowship. The M.S. in Business Administration, the M.S. in Management, the M.S. in Strategic Brand Communication, and the M.S. in Technology Management do not provide assistantships.

- Master of Science in Business Administration (p. 690)
- Master of Science in Management (p. 692)
- Master of Science in Technology Management (p. 692)

Doctor of Philosophy in Business Administration

This program offers an in-depth education in teaching and research in selected areas of business and administration. Doctoral students can

specialize in marketing, organizational behavior/theory, management science/process management, information systems, and strategic management. The program is intensive, flexible, and adapted to individual needs.

Each student's program entails sufficient study and preparation to achieve the following:

1. competence in a common core covering substantive and research methods courses, which are formulated by the faculty in each area;
2. in-depth expertise in a major area;
3. expertise in at least one area in addition to the chosen major area, with this minor area selected from within or outside the department;
4. teaching experience; and
5. research or problem-solving competence.

Competency is determined by comprehensive written and/or oral examinations. Following successful completion of all coursework and comprehensive examinations in major and minor areas, students must propose and gain approval of a thesis topic at a public colloquium. The final program requirement is the successful oral defense of the thesis. Applicants should contact the department for current requirements and program design.

The program usually is completed in four years. Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Entering with approved M.S./M.A. degree

Code	Title	Hours
	Business Administration core requirement	4
	Concentration area courses (12 min)	12
	Minor area courses (12 min)	12
	3 courses in research methodology (12 min)	12
	Students are required to attend pro-seminars in their respective areas	0-4
BADM 599	Dissertation Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements¹

Other requirements may overlap

Ph.D. candidates must maintain continuous registration through the approval of a dissertation proposal, unless a leave has been approved by the department.

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Programs of Study (<https://business.illinois.edu/ba/doctoral/>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
	Business Administration core requirement	4
	Concentration area courses (12 min)	12
	Minor area courses (12 min)	12
	3 courses in research methodology (12 min)	12
	Students are required to attend pro-seminars in their respective areas	0-4
BADM 599	Dissertation Research (min/max applied toward degree)	32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Ph.D. candidates must maintain continuous registration through the approval of a dissertation proposal, unless a leave has been approved by the department.

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Programs of Study (<https://business.illinois.edu/ba/doctoral>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

- Graduate Minor in Information Technology and Control (p. 689)
- Graduate Minor in Corporate Governance and International Business (p. 689)
- Graduate Minor in Supply Chain Management (p. 690)
- Graduate Concentration in Business Data Analytics (p. 687)
- Graduate Concentration in Corporate Governance and International Business (p. 687)
- Graduate Concentration in Information Technology and Control (p. 688)
- Graduate Concentration in Supply Chain Management (p. 688)

Graduate Concentration in Business Data Analytics

The concentration in Business Data Analytics is designed to develop leaders in various business fields who understand (1) how to leverage data to identify new customer segments and market; (2) how to optimize the supply chain and logistics; and (3) how to collect, manipulate, and visualize data for business decisions. The concentration will develop skills using data as a foundation for sound decision making in business.

The concentration is open to students enrolled in the Master of Business Administration, Master of Science in Business Administration, and Master of Science in Technology Management programs in the College of Business but required of none.

This concentration requires twelve graduate hours of Business Data Analytics related coursework and completion of an analytics-related project in their Practicum or an equivalent course. Successful completion of the concentration assumes certain knowledge of business and prior coursework.

Admission to the concentration requires a Graduate Student Request Form submitted to the Department and Graduate College and admission to one of the programs approved for the concentration. Admission is limited, and acceptance is considered based on a student's academic standing and space availability.

Code	Title	Hours
Select four hours of course work from each of the three areas below:		12

1. Customer

BADM 590 Consumer Analytics

BADM 590 Social Media Analytics

2. Operation and Supply Chain

BADM 590 Predictive Data Analytics

BADM 590 Business Process Improvement

3. Information Systems

BADM 554 Enterprise Database Management

BADM 557 Dec Support and Knowledge Mgt

BADM 590 Data and Visual Analytics

In addition, students pursuing this concentration will be required to select an analytics-related project in their Practicum or an equivalent course.

Course substitutions may be approved by the Department of Business Administration.

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Graduate Concentration in Corporate Governance and International Business

The concentration in Corporate Governance and International Business is designed to develop leaders in various business fields who understand international business and corporate governance issues within the global economy. It specifically covers topics such as (1) how to create value for multinational partners, employees with diverse cultural backgrounds, and shareholders by designing better organizations and corporate governance structures; and (2) how managerial practices differ in various national/cultural contexts and why managers must be able to understand the strategic, financial, and economic implications of these differences in managing multinational corporations. The concentration will provide a strong foundation in the International Business and Governance area and can be tailored to fit the specific career needs of students.

This concentration requires submission of twelve graduate hours of Corporate Governance and International Business related coursework. Successful completion of the concentration assumes certain knowledge of business and prior coursework.

Admission to the concentration requires a Graduate Student Request Form submitted to the Department and Graduate College and admission to one of these programs:

- Master of Science in Business Administration
- Master of Business Administration
- Master of Science in Accountancy
- Master of Science in Finance
- Master of Accounting Science

Admission is limited, and acceptance is on a competitive basis.

Code	Title	Hours
Select three of the following:		12
BADM 532	Sustainable Product Design & Enterprise Plan Development - I: Bottom-Up Immersion & Design	
BADM 582	Multinational Management	
BADM 583	Current Topics in Intl Bus	
BADM 584	Global Marketing	
BADM 586	Intl Comparative Management	
BADM 590	Seminar in Business Admin (US Corporate Governance)	
BADM 590	Seminar in Business Admin (Technology and Globalization)	
BADM 590	Seminar in Business Admin (Global Strategy)	
Total Hours		12

Other Requirements

Course substitutions may be approved by the Department after consultation with the IB & Business Law Area faculty.

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Graduate Concentration in Information Technology and Control

The concentration in Information Technology and Control is designed to develop leaders in various business fields who understand (1) how to leverage information technology to create value for customers, external partners, and shareholders by designing better information systems to improve business processes and controls; and (2) how managers can assess the strategic, financial, and economic benefits and risks of investing in advanced information systems. The concentration will provide a strong foundation in the IS/IT area and can be tailored to fit the specific career needs of students.

This concentration requires submission of twelve graduate hours of Information Technology and Control related coursework. Successful completion of the concentration assumes certain knowledge of business and prior coursework.

Admission to the concentration requires a Graduate Student Request Form submitted to the Department and Graduate College and admission to one of these programs:

- Master of Science in Technology Management
- Master of Business Administration
- Master of Science in Accountancy
- Master of Science in Finance
- Master of Accounting Science

Admission is limited, and acceptance is on a competitive basis.

Code	Title	Hours
Select three of the following:		12
Total Hours		12
BADM 554	Enterprise Database Management	
BADM 555	Info Sys Development and Mgt	
BADM 556	Electronic Commerce	
BADM 557	Dec Support and Knowledge Mgt	
BADM 559	Enterprise IT Governance	

Other Requirements

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Course substitutions may be approved by the Department after consultation with the IT Area faculty.

Graduate Concentration in Supply Chain Management

The concentration in Supply Chain Management is designed to develop leaders who understand (1) how to assess the trade-offs and make the decisions necessary to sustain high quality products and services at lower costs while maintaining the flexibility necessary to adapt and to respond to evolving market trends; and (2) how to coordinate and integrate supply chain solutions across various intra -organizational and inter -organizational interfaces in any business or organization. The minor or concentration not only will provide a strong foundation in supply chain management principles and practices, but also can be tailored to fit the specific needs of students interested in careers across a wide variety of industries. This minor or concentration requires submission of twelve graduate hours of Supply Chain Management coursework. Successful completion of the minor or concentration assumes certain knowledge of business and prior coursework.

Admission to the minor or concentration requires submitting a Curriculum Change Form to the Department and Graduate College and admission to one of these programs:

- Master of Science in Technology Management
- Master of Science in Business Administration
- Master of Business Administration
- Master of Science in Accountancy
- Master of Accounting Science

Admission is limited, and acceptance is on a competitive basis.

Code	Title	Hours
BADM 566	Supply Chain Management	2-4
BADM 567	Process Management	2-4
Select from the following:		
BADM 568	Planning and Control Systems	
BADM 589	Project Management	
BADM 590	Seminar in Business Admin (Section OM)	
BADM 590	Seminar in Business Admin (Section SS)	
Total Hours		12

Other Requirements

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Graduate Minor in Corporate Governance and International Business

The minor in Corporate Governance and International Business is designed to develop leaders in various business fields who understand international business and corporate governance issues within the global economy. It specifically covers topics such as

1. how to create value for multinational partners, employees with diverse cultural backgrounds, and shareholders by designing better organizations and corporate governance; and
2. how managerial practices differ in various national/cultural contexts and why managers must be able to understand the strategic, financial, and economic implications of these differences in managing multinational corporations.

The minor will provide not only a strong foundation in the International Business and Governance area but could be tailored to fit the specific career needs of our students.

This minor requires twelve graduate hours of related coursework. Admission to the minor requires an application to the Department and admission to one of the M.S. programs in the College of Business or a graduate program in a related discipline approved by the Department. Admission is limited and acceptance is on a competitive basis.

Code	Title	Hours
Select three of the following:		
BADM 582	Multinational Management	
BADM 583	Current Topics in Intl Bus	
BADM 584	Global Marketing	
BADM 586	Intl Comparative Management	
BADM 590	Seminar in Business Admin (Corporate Governance in International Context)	
BADM 590	Seminar in Business Admin (Management Challenges in Emerging Economies)	
		12

or substitutions approved by the Department of Business Administration	
Total Hours	12

Other Requirements ¹

In addition to the minor requirements, students must also complete the requirements of their major degree.

Please contact your department for more information regarding the addition of a minor to your program of study.

¹ For additional details and requirements refer to the department's *Programs of Study* (<http://www.business.illinois.edu/ba/programs/phd>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Information Technology and Control

The minor in Information Technology and Control is designed to develop leaders in various business fields who understand

1. how to leverage information technology to create value for customers, external partners, and shareholders by designing better information systems to improve business processes and controls; and
2. how managers can assess the strategic, financial, and economic benefits of investing in advanced information systems.

The minor will provide not only a strong foundation in IS/IT area but could be tailored to fit the specific career needs of our students.

Admission to the minor requires an application to the Department of Business Administration and admission to one of the MS programs in the College of Business or a graduate program in a related discipline approved by the Department. Admission is limited and acceptance is on a competitive basis.

Code	Title	Hours
Select three of the following:		
BADM 554	Enterprise Database Management	
BADM 555	Info Sys Development and Mgt	
BADM 556	Electronic Commerce	
BADM 557	Dec Support and Knowledge Mgt	
BADM 559	Enterprise IT Governance	
or substitutions approved by the Department of Business Administration		
Total Hours		12

Other Requirements ¹

In addition to the minor requirements, students must also complete the requirements of their major degree.

Please contact your department for more information regarding the addition of a minor to your program of study.

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Supply Chain Management

The minor in Supply Chain Management is designed to develop leaders who understand (1) how to assess the trade-offs and make the decisions necessary to sustain high quality products and services at lower costs while maintaining the flexibility necessary to adapt and to respond to evolving market trends; and (2) how to coordinate and integrate supply chain solutions across various intra -organizational and inter -organizational interfaces in any business or organization. The minor or concentration not only will provide a strong foundation in supply chain management principles and practices, but also can be tailored to fit the specific needs of students interested in careers across a wide variety of industries. This minor or concentration requires submission of twelve graduate hours of Supply Chain Management coursework. Successful completion of the minor or concentration assumes certain knowledge of business and prior coursework.

Admission to the minor or concentration requires submitting a Curriculum Change Form to the Department and Graduate College and admission to one of these programs:

- Master of Science in Technology Management
- Master of Science in Business Administration
- Master of Business Administration
- Master of Science in Accountancy
- Master of Accounting Science

Admission is limited, and acceptance is on a competitive basis.

Code	Title	Hours
BADM 566	Supply Chain Management	2-4
BADM 567	Process Management	2-4
Select from the following:		
BADM 568	Planning and Control Systems	
BADM 569	Res Topics in Operations Mgt	
BADM 590	Seminar in Business Admin (Section OM)	
BADM 590	Seminar in Business Admin (Section SS)	
Total Hours:		12

Other Requirements

In addition to the minor requirements, students must also complete the requirements of their major degree.

Please contact your department for more information regarding the addition of a minor to your program of study.

Master of Science in Business Administration

The Master of Science in Business Administration is a 40 graduate hours master's program best suited for those with a strong technical expertise in one of the concentrations offered within the Ph.D. program. The focus is on preparation for advanced study in the doctoral program or for a research-oriented position. The coursework can usually be completed in four semesters. A major must be specified from one of six areas offered within the Department of Business Administration: organizational behavior/theory, strategic management, marketing, decision sciences and information systems, and process management/management science. At least two courses should be chosen from another area within the Department of Business Administration or a related area outside the department or college.

Code	Title	Hours
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12
Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Program Curriculum (<http://business.illinois.edu/msba/academics>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Strategic Brand Communication

Jacque Hitchon, Head, Department of Advertising
B. Joseph White, Interim Head, Department of Business Administration
Department of Business Administration
4027 BIF, 515 E. Gregory Drive, Champaign, IL 61820

Charles H. Sandage Department of Advertising
119 Gregory Hall
810 South Wright Street
Urbana, IL 61801
PH: Advertising: (217) 333-1602; Business Administration: (217) 333-4240

This Master of Science in Strategic Brand Communication (MS SBC) degree is an online program jointly sponsored by the Charles H. Sandage Department of Advertising in the College of Media and the Department of Business Administration in the College of Business. The degree program launched in December 2016 and graduates from this program receive the MS SBC degree awarded by the Graduate College. Strategic Brand Communication (SBC) is a data-driven, purposeful conversation with a brand's stakeholders. SBC combines traditional advertising practices with contemporary business thinking that pertains to delivering consistent, meaningful messages to consumers. In so doing, SBC seeks

to integrate multiple consumer contact points that occur through the purchase of commercial messages in paid, earned, and owned media to deliver persuasive and impactful statements about brands and companies.

This management process integrates all aspects of strategic brand marketing communications such as advertising, public relations, digital media, social media, promotion, and revenue development marketing. Such integration impacts a firm's business-to-business, marketing channel, customer-focused, and strategic integrated communications.

The MS SBC degree program is designed for working professionals. The proposed online program is designed to be completed in 15 months. The curriculum will prepare students to: be strategic leaders in an ever-changing global media environment; be analytic and integrative thinkers; be effective brand communicators and managers; respond agilely to new technologies, emerging media, new demographics, and market trends; be team-oriented in their approach to management and communications; and be prepared to continue to learn as the media environment evolves.

To be admitted into this program, applicants are expected to have a minimum grade point average of at least 3.0 (A = 4.00) for the last two years of undergraduate study and a 3.0 for any previous graduate work completed. All applicants whose native language is not English must submit a minimum Test of English as a Foreign Language (TOEFL) score of at least 102 (iBT), 253 (CBT), or 610 (PBT); or minimum International English Language Testing System (IELTS) academic exam scores of 6.5 overall and 6.0 in all subsections. Prerequisite: course in Statistics or Calculus from an accredited institution. The admissions criteria will be based upon an evaluation of each applicant's academic and professional experience, GPA, English aptitude, and letters of recommendation.

A minimum GPA of 2.75 is required for continued enrollment.

Code	Title	Hours
Course List		
Core Courses		30
Project		2
32 Minimum 500-level Hours Required Overall		
Total Hours		32
Other Requirements ¹		
Minimum 500-level Hours Required Overall		20
Minimum GPA		2.75

¹ For additional details and requirements refer to the department's program information online and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

SBC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SBC>)

Courses

SBC 500 Strategic Brand Communication Essentials credit: 2 Hours. This course provides an overview of marketing and brand management: consumer analysis; brand positioning, integration, metrics and value. 2 graduate hours. No professional credit. Prerequisite: Restricted to MS: SBC students.

SBC 501 Strategic Branding: Global Perspectives credit: 2 Hours.

Within the context of globalization, the course underscores the importance of understanding consumers' values, attitudes, and behaviors for effective product positioning, brand value and effective marketing communications across borders. Focus on consumer behavior and brand positioning across local, regional, and global contexts. This course is designed to provide students with an advanced understanding of consumer behavior in a global context. 2 graduate hours. No professional credit. Prerequisite: Restricted to MS SBC students.

SBC 502 Essentials of Business Management credit: 3 Hours.

This course provides an understanding of theoretical and historical perspectives on business and capitalism. Covers basic principles of business strategy; understanding of financial accounting and budgeting; the importance of ethics; principles of leadership; and the importance of the global business environment. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC Students.

SBC 503 Consumer Insights I credit: 3 Hours.

The course explores how cultural, sociological and psychological factors shape consumer behavior. It will provide an overview of the key concepts of the discipline of consumer behavior and enable students to put into practice the new found understanding of consumer behavior to shape branding strategies. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 504 Managing Projects & Teams credit: 3 Hours.

Successful Strategic Brand Communication requires working on a series of projects. This course provides a socio-technical perspective to the management of projects. The technical dimensions deal with needs analysis, work breakdown, scheduling, resource allocation, risk management, and performance tracking and evaluation - within the allocated time frame and cost. The sociocultural dimensions include attributes of sound leadership, formation and management of teams, and managing customer expectations in order to formulate consistent, integrated campaigns across channels. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 505 Consumer Insights II credit: 3 Hours.

The course will provide an overview of the key qualitative methods used to gain strategic insights into consumer behavior and to provide practice in planning research projects, data collection, and analysis. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 506 Measurement and Evaluation credit: 3 Hours.

This course will focus on the method and analysis for consumer insights but also for measuring effectiveness of various promotional strategies and campaign effectiveness. This includes an overview of quantitative research methods with emphasis on analysis and interpretation of data, and application to evaluating effectiveness of promotional strategies. 3 graduate hours. No professional credit.

SBC 507 Promotional Strategy credit: 3 Hours.

This course will familiarize students with the topic of marketing communications and promotion management, and will teach students the steps for strategically planning a strategic brand communications campaign. The culmination of this course will be a campaign for a real-world client. 3 graduate hours. No professional credit.

SBC 508 Messaging Strategy credit: 3 Hours.

Creating and executing successful messages across communication channels. Explores the development of persuasive messaging through theories of persuasion, consumer-information processing and theories of creativity. The course examines the relationship between creative strategy and creative executions while allowing students to practice creating content for traditional and non-traditional media. Strategic brand communication manages every message and contact point within an organization. Audiences include not only consumers, but employees, stockholders, the media, and others. 3 graduate hours. No professional credit. Prerequisite: SBC 507.

SBC 509 Strategic Media Management credit: 3 Hours.

Analyzes the markets served by various advertising media and factors to consider in the selection and evaluation of media. Markets include investors, employees, and consumer segments. This course will also cover managing media in a global context. This course is designed to provide students with an advanced understanding of media analysis, planning, buying and optimization. 3 graduate hours. No professional credit. Prerequisite: SBC 502, SBC 507. Restricted to MS: SBC students.

SBC 511 Strategic Analytics & Data Visual credit: 2 Hours.

This course will prepare students to utilize data for targeting and building customer and brand relationships, with an emphasis on new and emerging media. The students will get exposure to principles of working with structured data using relational databases and data warehouses. They will understand how to work with unstructured data from the web. They will also get exposure to select data mining methods relevant to data commonly worked on by marketing and communication executives and apply these concepts with cases/exercises during each of these modules. 2 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC student.

SBC 512 Professional SBC Capstone Project credit: 2 Hours.

This course serves as a capstone, requiring the student to demonstrate a mastery of knowledge in the primary areas of Strategic Brand Communication. The project is designed to allow the student to demonstrate his/her mastery of strategic brand communication, focused on Creating and Executing a Research Plan; Repositioning Analysis and Strategy; Strategic Brand Communication Strategy & Tactics; Media Strategy & Tactics; Campaign Monitoring and Evaluation. 2 graduate hours. No professional credit. Prerequisite: SBC 511. Restricted to MS: SBC students.

Master of Science in Technology Management

The Master of Science in Technology Management is focused on understanding how to manage the dynamic environment found in a technology-based enterprise. The curriculum covers core business topics tailored to address the issues and challenges inherent in companies that depend on technology. The course work of this intensive 12-month long program includes product development, marketing, simulation and risk analysis, finance, and strategy, as well as managing processes, intellectual property, innovation, human resources, and an option of an internship or curricular practical training - all focusing on technology. This is an intensive program for those who use, deploy, shape, or create technology.

In addition to formal coursework, students participate in a series of management development seminars, which provide an overview of American business concepts and practices. Business and industry field

trips, seminars with American executives, and other special activities provide another dimension to the program.

Currently, the MSTM program is offering two tracks, Graduate and Advancement. The Graduate Track is designed for students recently graduated from undergraduate programs in the sciences, mathematics, engineering, and business. The Advancement track is designed for career professionals. To reflect the experiential knowledge possessed by members of the Advancement track, coursework requirements are slightly different in each track.

Code	Title	Hours
Required Core		32-36
Practicum		4
Electives		0-4
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 28

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Program Curriculum (<http://www.ms-tech.uiuc.edu/current/curriculum.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Management

The Master of Science in Management is a 34 graduate hour master's program best suited for those with non-STEM backgrounds. Usually the program will take three semesters (one academic year plus the prior summer) to complete.

The Master of Science in Management (MSM) is for students who are interested in pursuing a graduate degree in Management as the means to enhance their undergraduate experience that is non-business related. The program is targeted to students who have completed an undergraduate degree in a non-STEM major.

The program is specifically designed as a graduate degree to help students develop the knowledge, skills, and capabilities to prepare students for a career in management. The educational objective of the program is to provide talented undergraduate students without prior training in business an opportunity to enhance their understanding of management principles.

Tuition and fee waivers are not available for this program.

Required Hours

Code	Title	Hours
Core Courses ¹		30
Project		4
Total Hours		34

Other requirements

Required Courses:	Required Hours
Minimum 500-level Hours Required Overall	30
Minimum GPA	2.75

¹ Select from approved list.

Business Administration - MBA

Executive MBA (EMBA)

Illini Center
200 S. Wacker Drive, 4th Floor
Chicago, IL 60606
Director EMBA: Rich Frey
(312) 575-7905
Assistant Dean and Academic Director: Professor Raj Echambadi
E-mail: emba@illinois.edu

Major: Business Administration
Degrees offered: M.B.A.

Online MBA (iMBA)

218 Wohlers Hall, MC-706
1206 S. Sixth St.
Champaign, IL 61820
(217) 300-2481

Director: Arshad Saiyed
E-mail: onlineMBA@illinois.edu

Major: Business Administration
Degrees offered: M.B.A.

Graduate Degree Programs

The College of Business offers a degree program leading to the Master of Business Administration (M.B.A.) in four delivery modes. The traditional full-time MBA and the part-time, evening MBA are offered on the Urbana campus. The Executive MBA is offered weekends in downtown Chicago, and the online edition is offered for students who need more flexibility in their MBA program.

The Executive MBA (EMBA) program is offered in a lockstep, face-to-face cohort program comprised of eighteen courses covering all major disciplines of business study. The courses are organized into ten modules with only two courses running at any moment in time, each lasting about four weekends. This focused format, using four days per month (Friday and Saturday) maximizes learning while minimizing disruption to professional and personal commitments.

The online MBA (iMBA) uses a flexible program format. As with the EMBA program, the iMBA consists of eighteen four-credit courses for a total of 72 credit hours. During each course, virtual study teams are created that are designed to draw upon the diverse academic and professional backgrounds of the class. The online MBA caters to a segment of the population that values mobility, convenience, and believes that the online programs better fit their learning styles and life circumstances.

Admission

The Executive MBA begins a new class cohort each October in Chicago. Admissions decisions are made on a rolling basis beginning in January. Candidates must have a minimum of seven years of full-

time, professional work experience to be considered for the program. All applicants are expected to be employed full-time while pursuing the degree. The Executive MBA application does not require the GMAT or GRE.

Applicants to the Illinois iMBA program must have completed an earned undergraduate degree. Applicants must submit scores on the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) if available, two letters of recommendation, and essays. Applicants whose native language is not English are also required to submit scores from the Test of English as a Foreign Language (TOEFL) or the IELTS.

Scholarships/Financial Aid

The Illinois Executive MBA offers a limited number of scholarships to outstanding applicants. Scholarships are awarded at the time of admission. U.S. citizens and permanent residents may be eligible for federal and private student loans. The program also offers a month-to-month payment plan which can extend payments beyond your final semester thus lowering your average monthly payment.

Scholarships are generally not available for the iMBA.

Executive MBA (EMBA)

The program culminates with an international study experience in which students consult on real business issues with international organizations and travel overseas to present their recommendations to these companies.

This program caters to senior executives. Each course in the EMBA program is conducted over four weekends. Since the class schedule is compressed over a short period of time, exams / final projects / final assignments are due two weeks after the last class meeting.

Required Courses:	Required Hours
Modules 1-10 (19 courses)	72
Total Hours	72

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	72
Minimum 500-level Hours Required Overall:	72
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's curriculum overview (<http://www.mbachicago.illinois.edu/curriculum/overview.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

iMBA (online)

The goal for the iMBA program at Illinois is to deliver a high-quality program that is accessible to global audiences. A mirror of the EMBA curriculum, the online MBA (iMBA) uses a flexible program format. During each iMBA course, virtual study teams are created that are designed to draw upon the diverse academic and professional backgrounds of the class. The program caters to a segment of the population that values

mobility, convenience, and believes that the online programs better fit their learning styles and life circumstances.

Code	Title	Hours
BADM 508	Leadership and Teams	4
BADM 509	Managing Organizations	4
BADM 520	Marketing Management	4
BADM 544	Strategic Management	4
BADM 567	Process Management	4
BADM 572	Stat for Mgt Decision Making	4
ACCY 500	Accounting Measurement, Reporting, and Control	4
ACCY 503	Managerial Accounting	4
FIN 511	Investments	4
FIN 520	Financial Management	4
ECON 528	Microeconomics for Business	4
ECON 529	Macroeconomics for Business	4
BADM 590	Seminar in Business Admin	24
Total hours		72

Other Requirements ¹

Other requirements may overlap

Complete any two specialization capstones plus an integrated capstone final project

Minimum Hours Required Within the Unit: 72

Minimum 500-level Hours Required Overall: 72

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's curriculum overview (<https://onlinemba.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Business Administration - Illinois MBA

<http://www.mba.illinois.edu>

www.mba.illinois.edu (<http://www.mba.illinois.edu>) - Full-time MBA
www.ptmba.illinois.edu (<http://www.ptmba.illinois.edu>) - Professional MBA

Senior Associate Dean: Rajagopal Echambadi

Business Instructional Facility
 515 E. Gregory Drive, MC-520
 Champaign, IL 61820
 (217) 244-8019

Full and Professional MBA Admissions: (217) 244-7602
 E-mail: mba@illinois.edu - Full-time MBA; illinoisptmba@illinois.edu - Professional MBA

Major: Business Administration
 Degrees offered: M.B.A.

Graduate Concentration: Accountancy (p. 687), Business Data Analytics (p. 687), Corporate Governance and International Business (p. 687), Information Technology and Control (p. 688), Supply Chain Management (p. 688)

Joint Degree Program: the M.B.A. can be earned jointly with any master's or Ph.D. program offered on campus as well as:
 J.D. in Law (p. 809),
 M.D. in Medicine (Medical Scholars Program (<http://www.med.illinois.edu/mdphd>))

Graduate Degree Programs

The College of Business offers a degree program leading to the Master of Business Administration (M.B.A.) in four delivery modes. The traditional full-time MBA and the Professional (part-time) MBA are offered on the Urbana campus. The Executive MBA is offered on weekends in downtown Chicago, and the online edition is offered for students who need more flexibility in their MBA programs.

All Illinois MBA programs require 72 hours of credit. Students graduate with a Masters of Business Administration from the University of Illinois at Urbana-Champaign. Student transcripts do not vary based upon program format.

The **Full-time MBA** is offered in a lockstep, face-to-face cohort format for the first-year core curriculum. The core consists of 40 hours of classwork that provide the foundation. During the second year, students have the flexibility to customize their area of concentration by taking 32 hours of business and non-business courses.

The Illinois **Professional MBA** uses a lockstep face-to-face cohort format. The program consists of eighteen four-credit courses for a total of 72 credit hours. Modules (semesters) are ten or five weeks long, unless otherwise noted. The cohort class structure allows members of each class to begin the program at the same time and advance through the curriculum together. During each module, study teams are created that are designed to draw upon the diverse academic and professional backgrounds of the class.

The **Executive MBA** program is offered in a lockstep, face-to-face cohort program comprised of eighteen courses covering all major disciplines of business study. The courses are organized into ten modules with only two courses running at any moment in time, each lasting about four weekends. This focused format, using four days per month (Friday and Saturday) maximizes learning while minimizing disruption to professional and personal commitments.

The **online MBA (iMBA)** uses a flexible program format. As with the EMBA program, the iMBA consists of eighteen four-credit courses for a total of 72 credit hours. During each course, virtual study teams are created that are designed to draw upon the diverse academic and professional backgrounds of the class. The online MBA caters to a segment of the population that values mobility, convenience, and believes that the online programs better fit their learning styles and life circumstances.

Admission

Admission to the Illinois MBA is dependent upon an earned undergraduate degree, acceptable scores on the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE), two letters of recommendation, professional resume and essays. Applicants whose native language is not English are also required to submit scores from the Test of English as a Foreign Language (TOEFL) or the IELTS.

For additional requirements the applicant should refer to the MBA application.

The **full-time MBA** program begins in August only. Admissions decisions are made by rounds with the first deadline of October 5 and subsequent deadlines of January 18 and March 15. May 24 is the late application deadline for domestic students only. Decisions will be made in early January for the first round of applications and within six weeks for each of the following rounds. For admission to a joint program, students must apply to both programs separately.

The **Professional MBA** program begins in January only. Applicants must submit the same materials and information as the full-time MBA program. The Professional MBA application does not require the GMAT or GRE. All applicants are expected to be employed full-time while pursuing the degree. The application deadline for the Professional MBA is October 1 with admission decisions made on a rolling basis beginning in September.

Applicants to the **online MBA (iMBA)** program must have completed an earned undergraduate degree and submit scores on the Graduate Management Admission Test (GMAT) or Graduate Record Examination (GRE) if available. Two letters of recommendation and essays are also required. Applicants whose native language is not English are required to submit scores from the Test of English as a Foreign Language (TOEFL) or the IELTS.

Financial Aid

The Illinois MBA offers a limited number of merit scholarships to outstanding domestic and international applicants. The merit scholarships are awarded at the time of admission. U.S. citizens and permanent residents may be eligible for federal and private student loans.

- Master of Business Administration (MBA), Full-time option (p. 696)
- Master of Business Administration (MBA), Professional option (p. 696)
- Master of Business Administration (MBA), EMBA option and iMBA option (p. 693)

M.B.A. and Master's or Ph.D.

The M.B.A. can be earned jointly with any masters or Ph.D. program offered on campus. All joint degree programs require the completion of 60 credit hours of MBA coursework, as well as the requirements of the other program, as described here (p. 695). For admission to a joint program, students must receive approval from both programs.

M.B.A. and Master of Architecture in Architecture

For entry into this program, applicants must satisfy the admission and performance requirements of each academic unit. Application for admission may be made simultaneously to both units or admission to one unit may be sought after gaining entry to the other.

Candidates entering the Master of Architecture/Master of Business Administration joint degree program with a four-year baccalaureate in architectural studies must complete 110 hours of graduate work, 50 hours in Architecture and 60 hours for the M.B.A.

M.B.A and Master of Human Resources and Industrial Relations

This joint program with the Master of Human Resources and Industrial Relations (p. 803) program is usually completed in two-and-one-half years. Independent admission decisions are made by each unit, and the student must be accepted by both. The degrees are awarded simultaneously upon completion of all joint degree requirements.

M.B.A. and J.D. in Law

Contact the M.B.A. program for more information about the joint program with Law.

M.B.A. and M.D. in Medicine

Contact the M.B.A. program for more information about the joint program with Medicine.

M.B.A. and Masters or Ph.D.

Joint M.B.A. Program

The M.B.A. can be earned jointly with any masters or Ph.D. program offered on campus. All joint degree programs require the completion of 60 credit hours of MBA coursework, described below, as well as the requirements of the other program. For admission to a joint program, students must receive approval from both programs.

Code	Title	Hours
MBA 501 & MBA 502	Foundations of Business I and Foundations of Business II	20
MBA 503 & MBA 504 & MBA 505	Prin & Proc of Management I and Prin & Proc of Management II and Topics in Management	20
Area of concentration		16
Free electives		4
M.B.A. Total Hours:		60

Joint degree students must complete all the requirements of the other degree.

Other Requirements ¹

Other requirements may overlap

Joint degree students must complete all the requirements of the other degree.

Minimum Hours Required Within 56
the College of Business:

Minimum 500-level Hours Required 60
Overall in Business:

Students in joint degree programs must be registered as full-time MBA students for a minimum of three semesters

Joint degrees are only awarded simultaneously.

Students enrolled in joint degree programs must meet the higher of the two minimum GPA requirements of the joint degree programs in order to maintain satisfactory academic progress and to graduate.

¹ For additional details and requirements refer to the department's graduate curriculum (<http://www.mba.uiuc.edu/m>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Business Administration, Full-Time Option

The Illinois MBA emphasizes co-curricular activities designed to complement classroom experiences while further developing leadership skills, including communications, teamwork, and self-awareness technical training in current computer software, and career services with a focus on internships and permanent placements.

Code	Title	Hours
MBA 501 & MBA 502	Foundations of Business I and Foundations of Business II	20
MBA 503 & MBA 504 & MBA 505	Prin & Proc of Management I and Prin & Proc of Management II and Topics in Management	20
Area of concentration		16
Free electives		16
Total Hours		72

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the College: 56

Minimum 500-level Hours Required 72

Overall:

It is the expectation that all MBA students will have an internship during the summer

MBA students must enroll on a full-time basis during the fall and spring semesters for the two years of the MBA

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate curriculum (<https://mba.illinois.edu/academics>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Business Administration, Professional Option

The Professional MBA program provides a general management curriculum and focus. The curriculum includes 72 credit hours that are completed over a two and a half year period. This program is designed

especially for employed professionals who want to continue working while they pursue the MBA degree.

Code	Title	Hours
BADM 508	Leadership and Teams	4
ECON 528	Microeconomics for Business	4
BADM 520	Marketing Management	4
ACCY 500	Accounting Measurement, Reporting, and Control	4
BADM 572	Stat for Mgt Decision Making	4
BADM 567	Process Management	4
BADM 590	Seminar in Business Admin (Section PMB)	4
BADM 521	Marketing Strategy	4
BADM 573	Decision Analytics	4
BADM 593	Research in Special Fields	4
ECON 529	Macroeconomics for Business	4
FIN 520	Financial Management	4
BADM 509	Managing Organizations	4
FIN 511	Investments	4
BADM 544	Strategic Management	4
ACCY 503	Managerial Accounting	4
BADM 552	Legal Aspects of Mgt Decisions	4
Free electives		4
Total Hours		72

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the College: 68

Minimum 500-level Hours Required 72

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate curriculum (<https://mba.illinois.edu/academics>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Cell and Developmental Biology

<http://mcb.illinois.edu/departments/cdb/>

Head of the Department: Jie Chen

B107 Chemical and Life Sciences Laboratory

601 South Goodwin Avenue

Urbana, IL 61801

(217) 333-6118

E-mail: mcbinfo@life.uiuc.edu (biochadm@scs.uiuc.edu)

Major: Cell and Developmental Biology

Degrees Offered: M.S., Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Cell and Developmental Biology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Program

The graduate curriculum in Cell and Developmental Biology is designed to educate students for careers in research and teaching in the biological sciences. Departmental faculty are concerned with the structural and functional relationships of cells and organisms, with research emphases upon eukaryotic cell and molecular biology, neurobiology, developmental biology, and molecular genetics. The department has embarked on a major program to develop research strengths in molecular aspects of developmental, neural, structural, and eukaryotic cell biology to complement existing faculty interests. Students are not admitted to the M.S. program; M.S. requirements are completed as part of the Ph.D. program.

Admission

Students interested in this program must apply directly to the School of Molecular and Cellular Biology (www.mcb.illinois.edu/graduate/gradprospect.html (<http://www.mcb.illinois.edu/graduate/gradprospect.html>)). During the first semester, students perform three laboratory rotations, choosing from any laboratory in the School. Students select a laboratory for their thesis research in December and formally join the appropriate graduate program/department at that time.

Important factors in the evaluation of applications are general academic performance, background in the biological and chemical sciences and mathematics, Graduate Record Examination (GRE) scores, and letters of recommendation from college professors. The department does not admit students to the M.S. program.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Cell and Developmental Biology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program.

Facilities and Resources

Facilities include modern, well-equipped laboratories for cellular, developmental, genetic, molecular, and structural studies. The University offers exceptional and broadly based research support services. These include the Center for Electron Microscopy, with state-of-the-art instrumentation; the Center for Biotechnology, which includes facilities for molecular cloning, DNA and protein synthesis and sequencing, and transgenic animals; the Cell Science Center, which houses and staffs a hybridoma facility and flow cytometry unit; School of Molecular and Cellular Biology-subsidized shops; and a superb university library system, the third largest in the nation. The University offers outstanding computer

services and is home to the National Center for Supercomputing Applications. The Beckman Institute for Advanced Science and Technology combines research in the physical and biological sciences. Opportunities for interaction in the cellular and molecular sciences are also available in many other units within the Schools of Molecular and Cellular Biology, Integrative Biology, and Chemical Sciences and the Colleges of Medicine, Agricultural, Consumer and Environmental Sciences, and Engineering.

Financial Aid

Financial aid is available to qualified applicants in the form of university fellowships (awarded on a competitive basis), teaching assistantships (awarded by the department), research assistantships, and tuition and fee waivers. Outstanding applicants are nominated for support from the Cell and Molecular Biology, Molecular Biophysics.

Master of Science in Cell and Developmental Biology

Code	Title	Hours
MCB 501	Advanced Biochemistry	4
MCB 502	Advanced Molecular Genetics	4
MCB 529	Special Topics Cell Devel Biol (Section WRI)	2
MCB 580	Res Ethics & Responsibilities	1
MCB 581 & MCB 582 & MCB 583	Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III	9
CDB 595	Graduate Sem Cell Devel Biol (Sections A and C) <small>CDB 595 Section A and CDB 595 Section C must each be taken once for 1 credit hour each.</small>	2
Approved elective coursework hours to bring total course work hours to 32		10
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Completion of one of the following:
Pass the Preliminary Exam, or approval of the graduate program committee (chaired by a tenured CDB faculty member and comprised of at least 5 CDB faculty members), or by approval of the research advisor and department head.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *Graduate Student Handbook* (<http://mcb.illinois.edu/departments/cdb/gradcurrent.html>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Cell and Developmental Biology

Code	Title	Hours
MCB 501	Advanced Biochemistry	4
MCB 502	Advanced Molecular Genetics	4
MCB 529	Special Topics Cell Devel Biol (Section WRI)	2
MCB 580	Res Ethics & Responsibilities	1
MCB 581 & MCB 582 & MCB 583	Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III	9
CDB 595	Graduate Sem Cell Devel Biol (Sections A and C) <small>CDB 595 Section A and CDB 595 Section C must each be taken once for 1 credit hour each.</small>	2
Approved elective coursework hours to bring total course work hours to 32		10
CDB 599	Thesis Research (min/max applied toward degree)	64
Total Hours		96

Other Requirements¹

Other requirements may overlap

The department requires each graduate student to teach the equivalent of 50% for one semester.

Masters Degree Required for Admission to PhD? No

Preliminary Exam Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Student Handbook* (<http://mcb.illinois.edu/departments/cdb/gradcurrent.html>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Chemical Physics

<http://www.chemistry.illinois.edu>

Head of the Department of Chemistry: Martin Gruebele
Head of the Department of Physics: Dale Van Harlingen

Students with undergraduate degrees in chemistry should direct inquiries and applications to the Department of Chemistry
106 Noyes Laboratory
505 South Mathews Avenue, Urbana, IL 61801.

Students with undergraduate degrees in physics should direct inquiries and applications to the Graduate Advising Office, Department of Physics
227 Loomis Laboratory of Physics
1110 West Green Street, Urbana, IL 61801-3080

Major: Chemical Physics
Degree Offered: Ph.D.

Graduate Degree Programs

A chemical physics program leading to the Doctor of Philosophy makes it possible for students to gain the necessary background and perform original research in this interdisciplinary field of science. Fundamental research on many properties of molecular and solid-state systems is based on an understanding of chemistry, physics, and mathematics that can best be obtained by training in more than one department. Students may use the facilities in both the School of Chemical Sciences and the Department of Physics.

Admission

Applicants who have fulfilled the usual undergraduate course requirements, including at least 25 semester hours in chemistry (properly distributed) and a grade point average of 3.0 (A = 4.0), may be considered for admission to the graduate programs. Applications from students with less than the usual preparation in chemistry or with grade point averages below 3.0 may be considered on an individual basis. In addition, applicants must submit results from the Graduate Record Examination general test and the Graduate Record Examination chemistry subject test.

International students whose native language is not English are required to have a minimum paper-based TOEFL score of 580 (237 on the computer-based test). In addition, teaching is a requirement in the Chemistry graduate program and there are special requirements for applicants whose native language is not English. The University requires a minimum TOEFL iBT speaking score of 24 for a contact teaching assistant appointment. Any applicant whose native language is not English is expected to provide TOEFL scores in order to receive full consideration for admission and financial aid.

Please contact chemistry graduate admissions for further information.

Financial Aid

Students may apply for fellowships and assistantships from either the Department of Chemistry or the Department of Physics.

Doctor of Philosophy in Chemical Physics

Students entering through the Department of Chemistry must satisfy the registration examination, literature seminar, preliminary examination, and original research proposal requirements of Physical Chemistry. The guidelines for these requirements are in the Department of Chemistry Graduate Manual. Students entering through the Department of Physics must satisfy the PhD requirements of the Department of Physics. Research for the thesis is performed under the direction of faculty members who are currently active in chemical physics. Many of these staff members are affiliated with the Materials Research Laboratory (MRL). MRL is a multidisciplinary facility shared by staff and students from the Departments of Physics, Chemistry, Materials Science and Engineering, Electrical and Computer Engineering, and other related departments that have common interests in materials science.

Entering with approved M.S./M.A. degree

Code	Title	Hours
Required courses		20
CHEM 599	Thesis Research (min 0 applied toward degree)	0
Total Hours		64

Other Requirements¹

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Original Research Proposal	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.chemistry.illinois.edu/research/chemphys>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
Required courses		20
CHEM 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

Other Requirements¹

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Original Research Proposal	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.chemistry.illinois.edu/research/chemphys>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Chemical and Biomolecular Engineering<http://chbe.illinois.edu>

Head of the Department: Paul J.A. Kenis
 114 Roger Adams Laboratory
 600 South Mathews Avenue
 Urbana, IL 61801
 (217) 244-9214
 E-mail: ChBE-GradRecruiting@Illinois.edu

Major: Chemical Engineering
 Degrees Offered: M.S., Ph.D.

Major: Bioinformatics
 Degree Offered: M.S.
 Graduate Concentration: Chemical and Biomolecular Engineering

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Chemical Engineering and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Department of Chemical and Biomolecular Engineering offers graduate programs leading to the Master of Science and the Doctor of Philosophy degrees. Those interested should write to the address above for application materials and a departmental brochure, which gives greater detail on programs, offerings, admission, degree requirements, and financial aid. Opportunity also exists for specializing in computational science and engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<http://cse.illinois.edu/students/why-cse>).

Admission

Candidates for advanced degrees in chemical engineering should have a background in chemistry and chemical engineering comparable to the training offered in the undergraduate chemical engineering curriculum at the University of Illinois at Urbana-Champaign. Students whose prior training is deficient in one or more basic areas of chemistry or chemical engineering will be admitted with the understanding that their deficiencies will be removed to the extent prescribed by their advisers. Graduate College admission requirements also apply. In addition, applicants must submit results from the Graduate Record Examination (GRE) general test.

International students whose native language is not English are required to have a minimum paper-based Test of English as a Foreign Language (TOEFL) score of 610 (257 on the computer-based test). In addition, teaching is a requirement in the chemical engineering graduate program and there are special requirements for applicants whose native language is not English. The University requires a minimum Test of Spoken English (TSE) score of 50 for a contact teaching assistant appointment. It is desirable for applicants whose native language is not English to provide TSE scores in order to receive full consideration for admission and financial aid.

Multi-institutional Ph.D. Degree with National University of Singapore

Students in this program will spend approximately equal proportions of their study at the Urban-Champaign campus and at the National University of Singapore (NUS), taking courses and/or working on their research. The project comprising the research component of the Ph.D. will be cooperatively overseen by faculty at Illinois and NUS. Students pursuing the multi-institutional degree must meet all of the requirements of the existing Ph.D. programs at each of the two institutions. Courses taken at each university must be approved by the other university before they are taken in order to be credited toward degree requirements.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Chemical Engineering. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight

years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program.

Faculty Research Interests

Please see chbe.illinois.edu/research (<http://chbe.illinois.edu/research>).

- Master of Science in Bioinformatics, Chemical and Biomolecular Engineering Concentration (p. 700)
- Master of Science in Chemical Engineering (p. 701)

Doctor of Philosophy in Chemical Engineering

Code	Title	Hours
Minimum four of graduate-level courses in chemical engineering		16
A coherent program of four additional graduate level courses		16
CHBE 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 16

Within the Unit:

Minimum 500-level Hours Required 20

Overall:

Teaching experience is required

Requirements include satisfactory performance on qualifying and certification examinations, and a thesis.

Masters Degree Required for Admission to PhD? No

Qualifying Exam Required Yes, the qualifying examination is a written test usually taken during the first year of study.

Preliminary Exam Required Yes, the preliminary examination is an individual oral examination taken after the student has satisfied the course requirements.

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's degree programs information (<http://chbe.illinois.edu/graduate-program>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Bioinformatics, Chemical and Biomolecular Engineering Concentration

Thesis Option

Code	Title	Hours
One course in Bioinformatics from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course in Biology from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
CS 411 or CS 473	Database Systems Algorithms	4
CHBE 572 & CHBE 580	Metabolic Systems Engineering and Lab Techs in Bioinformatics	6
CHBE 599	Thesis Research (min/max applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's degree programs information (<http://chbe.illinois.edu/graduate-program>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
One course in Bioinformatics from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
One course in Biology from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
CS 411 or CS 473	Database Systems Algorithms	4
CHBE 572 & CHBE 580	Metabolic Systems Engineering and Lab Techs in Bioinformatics	6
Total Hours		36

Other Requirements ¹

Other requirements may overlap

A concentration is required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's degree programs information (<http://chbe.illinois.edu/graduate-program>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Chemical Engineering

Thesis Option

Code	Title	Hours
Coursework		20
CHBE 599	Thesis Research (min 12 applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Credit for CHBE 565 may not be applied to the degree requirements.

Minimum Hours Overall Required 8

Within the Unit:

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's degree programs information (<http://chbe.illinois.edu/graduate-program>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Coursework		30-32
CHBE 565	CHBE Seminar (Must be taken every semester that the student is in residence. Max 2 hours may be applied.)	0-2
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Maximum hours of CHBE 565 applied to the degree 2

Minimum Hours Overall Required 12

Within the Unit:

Minimum 500-level Hours Required 16

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's degree programs information (<http://chbe.illinois.edu/graduate-program>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Chemistry

<http://chemistry.illinois.edu/>

Head of the Department: Martin Gruebele

107 Noyes Laboratory
505 South Mathews Avenue
Urbana, IL 61801
(217) 333-0711
E-mail: chemadm@scs.uiuc.edu

Major: Chemistry

Degrees Offered: M.A., M.S., Ph.D.

Graduate Concentration: Astrochemistry (p. 668) (Ph.D. only)

Major: Teaching of Chemistry

Degree Offered: M.S.

Joint Degree Program: the Master of Science in Chemistry can be earned jointly with the following

Degrees Offered:

J.D. in Law

M.B.A. in Business Administration

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Chemistry and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The degrees offered in chemistry are the Master of Science in Chemistry, Master of Science in the Teaching of Chemistry, and Doctor of Philosophy in Chemistry. This catalog also provides information on a joint program leading to the Doctor of Philosophy in Chemical Physics (see Chemical Physics (p. 698)). Opportunity also exists for specializing in computational science and engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<http://www.cse.illinois.edu>).

Admission

Graduate College requirements apply. Further, applicants should have at least 25 semester hours in chemistry (properly distributed) and a grade point average of 3.0 (A = 4.0), to be considered for admission to the graduate programs. Applications from students with less than the usual preparation in chemistry or with grade point averages below 3.0 may be considered on an individual basis. In addition, we ask applicants to submit results from the Graduate Record Examination (GRE) General Test and the GRE Chemistry Subject Test.

International students whose native language is not English are required to have a minimum paper-based Test of English as a Foreign Language (TOEFL) score of 580 (237 on the computer-based test). In addition, teaching is a requirement in the chemistry graduate program, and there are special requirements for applicants whose native language is not English. The University requires a minimum Test of Spoken English (TSE) score of 50. Any applicant whose native language is not English is expected to provide TSE scores in order to receive full consideration for admission and financial aid.

Students who are currently enrolled in graduate programs at other institutions are advised that they should first complete degree work at their current institution before they will be considered for admission to the chemistry PhD program at the University of Illinois. In addition, we

require a statement from the applicant and a letter from the applicant's research adviser or department head detailing the situation. Students might be admitted without a degree from their current institution under exceptional circumstances that will need to be described in detail via a letter from the applicant and a separate statement from the department head of the student's current graduate program.

Contact chemistry graduate admissions for further information. The department does not currently accept applications for the MA program.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Chemistry. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program.

Financial Aid

Support for graduate students is available through fellowships and assistantships. All candidates are considered for these upon application. Graduate students making normal progress toward their degrees generally receive a tuition waiver as well as a stipend.

- Master of Science in Chemistry (p. 703)
- Master of Science in Teaching of Chemistry (p. 703)

Doctor of Philosophy in Chemistry

Doctoral programs are offered in a wide range of specialties, including the traditional areas of analytical, inorganic, organic, and physical chemistry as well as materials chemistry and chemical biology. The formal course requirements involve 12 or more hours of 500-level courses, plus 8 or fewer hours of 400-level courses, for a total of 20 hours in chemistry and allied relevant fields. Besides completing formal coursework, students will present a literature seminar, have a formal review of progress following the completion of coursework, pass an oral preliminary examination on research preparation, present and defend an original research proposal not related to their thesis research, and submit a thesis on original research, which is defended at a final oral examination.

Entering with M.S./M.A. degree

Code	Title	Hours
400- 500-level courses in Chemistry or allied fields (max 8 at 400-level)		20
Seminar (CHEM 5X5)		1

CHEM 599	Thesis Research (0 min applied toward degree)	0
Total Hours		64

Other Requirements¹

Other requirements may overlap

Teaching experience	1 year
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Original Research Proposal	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
400- or 500-level courses in the Chemistry or allied fields (max 8 at 400-level)		20
Seminar		1
CHEM 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

Other Requirements¹

Other requirements may overlap

Teaching experience	1 year
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Original Research Proposal	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

In order to enter the joint degree program, students must be admitted separately to each program. Each program's application requirements and deadlines for admission must be met.

- J.D. in Law and M.S. in Chemistry (p. 702)
- M.B.A. Joint Degree Program (p. 703)

J.D. in Law and M.S. in Chemistry

This joint degree program is intended principally for law students who desire to specialize in an area of law in which expertise in chemistry would be a clear asset. Students electing the joint degree option will select a major area of emphasis within chemistry that complements their

chosen area of legal emphasis. Each student must develop and gain approval of a coherent, focused plan of study that draws upon related coursework in both law and chemistry.

The JD/MS program involves interdisciplinary work and a flexible plan of study. Students will consult with a faculty adviser in selecting courses. While enrolled in the Department of Chemistry, students have the opportunity to hold an assistantship with a tuition and service fee waiver. It is possible that joint degree students may accelerate their programs by attending summer sessions over one or more summers and thus complete the requirements for both the MS and the JD degrees in three years.

In order to enter the joint program, students must be admitted separately to both departments. Each program's application requirements and deadlines for admission must be met.

Code	Title	Hours
Chemistry (may include up to 12 hours of thesis credit)		32
Law		78
Total Hours		122

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12 (8 in CHEM)
Overall

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the [joint program requirements](#) and contact the M.B.A. program and their major department office for more information.

Master of Science in Chemistry

The program leading to the degree of Master Science in Chemistry is designed to be completed in one year of full-time study by students entering without deficiencies. A research thesis is optional.

Thesis Option

Code	Title	Hours
CHEM 599	Thesis Research (12 max applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12
Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 20 (16 in CHEM)
Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Teaching of Chemistry

The Master of Science in the Teaching of Chemistry (MSTC) at the University of Illinois provides advanced studies for those interested in teaching chemistry at the secondary or community college level. The program serves two different audiences:

- Those who already have a teaching certificate or will teach in situations which do not require a certificate;
- Those who wish to obtain a master's degree and a teaching certificate simultaneously.

The MSTC degree (without certification) can be completed in one year. The MSTC degree (with certification) requires two years.

Code	Title	Hours
Graduate hours in education		8
Graduate hours in chemistry		16
Graduate electives in either education or physical science		8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

The courses in chemistry and the electives must be selected with the approval of the adviser.

Minimum 500-level Hours Required 12 (8 in CHEM)
Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://chemistry.illinois.edu/graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Civil and Environmental Engineering

cee.illinois.edu (<http://cee.illinois.edu>) or cee.illinois.edu/environmental (<http://cee.illinois.edu/environmental>)

Head of the Department: Benito Marinas
 Director of Graduate Studies: Jeffery Roesler
 1110 Newmark Civil Engineering Laboratory
 205 North Mathews Avenue
 Urbana, IL 61801
 (217) 333-8038
 Fax (217) 333-9464
 Email: civil@illinois.edu

Major: Civil Engineering
 Degrees Offered: M.S., Ph.D.

Major: Environmental Engineering in Civil Engineering
 Degrees Offered: M.S., Ph.D.

Major: Engineering
 Degrees offered: M.Eng.

Online Program: Civil Engineering
 Degrees offered: M.S.

Joint Degree Program: the M.S. in Civil Engineering can be earned jointly with the following
 Degrees Offered:
 M.Arch. in Architecture (p. 661) (Construction Management or Structures),
 M.B.A. in Business Administration (p. 695)

Concentration: Railway Engineering

Graduate Degree Programs

The Department of Civil and Environmental Engineering, consistently ranked as having one of the best graduate programs in the country, offers graduate work leading to master's and doctoral degrees. These are in a variety of specialized areas through departmental and joint programs which are described on this page. Opportunity also exists for earning certificates and/or concentrations in

1. computational science and engineering and
2. energy and sustainability engineering within the department's graduate programs via the Computational Science and Engineering (CSE) (<http://www.cse.illinois.edu>) transcriptable Concentration and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>).

The College of Engineering offers a professional master's degree program for students whose primary intent is a career in industry or government. This degree differs from the Master of Science degree in that it is a terminal degree and not a pathway to a doctoral program. The major in Engineering for the M.Eng. degree requires the selection of an interdisciplinary concentration.

Admission

M.S./Ph.D./Joint Degree Programs

Admission to the Graduate College with full status in civil engineering or in environmental engineering in civil engineering is granted to graduates of accredited institutions whose requirements for the bachelor's degree are substantially equivalent to those of the University of Illinois, provided the applicant's preparation is appropriate for advanced study in his or her chosen major field and his or her scholastic average is at least 3.00 (A = 4.00). The Graduate Record Examination (GRE) (<http://www.ets.org/portal/site/ets/menuitem.fab2360b1645a1de9b3a0779f1751509/?vgnnextoid=b195e3b5f64f4010VgnVCM10000022f95190RCRD>) is required. Applications are considered for both spring and fall admissions. In general, a 3.00 grade point average for the last two years of the undergraduate program and for any previous graduate work is a minimum requirement for admission to the M.S. program. Requirements for admission to the Ph.D. program are variable, but are usually substantially higher. For additional information, see the departmental Web site (<http://cee.illinois.edu/programs/Grad/GradApps>).

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 79 (iBT), 213 (CBT), or 550 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Applicants to the joint M.Arch or M.B.A degree programs must meet the admissions standards for both programs and be accepted by both programs.

M.Eng.

Students with bachelor's or master's degrees in engineering or related fields will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. Admission is possible for the spring term, but most admissions are for the fall term. Full details of admission requirements are on the Railway Engineering Concentration website (<http://railwaymeng.engineering.illinois.edu>).

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for those meeting the minimum requirements and having taken the TOEFL or IELTS since the scores required for admission to the M.Eng. are above the minimum scores demonstrating an acceptable level of English language proficiency.

Faculty Research Interests

Areas of study and research pursued by our world-renowned faculty are focused in the following specializations:

- construction management
- environmental engineering and science
- environmental hydrology and hydraulic engineering
- geotechnical engineering
- materials
- structural engineering
- transportation engineering
- sustainable and resilient infrastructure systems
- energy-water-environment sustainability
- societal risk management

Within these specializations, current research programs include:

- air quality
- aquatic biology and ecology;
- computer-aided engineering systems (artificial intelligence, expert systems, and neural networks)
- construction engineering and management
- construction materials (concrete composition, microstructure, and engineering properties)
- earthquake engineering
- environmental chemistry
- environmental fluid mechanics
- geotechnical engineering (rock mechanics, soil mechanics, and foundation engineering)
- hazardous-waste management
- hydrology and hydraulic engineering
- information technology including distributed sensors and monitoring
- nondestructive diagnostics
- railway engineering
- river mechanics and morphology, stochastic structural dynamics and random vibrations
- structures (analysis, design, and behavior)
- structural and computational mechanics
- traffic engineering
- transportation (facilities, planning, systems design, and operations)
- water quality process engineering
- water resources and environmental systems analysis

Centers, Programs, and Institutes

Multi-hazard Approach to Engineering (MAE) Center (<http://mae.cee.illinois.edu>) – originally established by the National Science Foundation, works to develop an integrated framework and application tools for loss assessment due to earthquake and other disruptive events, disaster planning, response and mitigation strategies, and decision-making engines that enable policy makers to effectively manage risk.

Illinois Center for Transportation (ICT) (<http://ict.uiuc.edu>) – funded by the Illinois Department of Transportation and the State of Illinois, promotes innovation and progress in transportation through interdisciplinary research.

Center of Excellence for Airport Technology (CEAT) (<http://www.ceat.illinois.edu>) – founded in 1995 as a Federal Aviation Administration (FAA) Center of Excellence, aims to develop new scientific knowledge and technology for the development, maintenance, and operation of airports.

Fabricated Geomembrane Institute (<http://www.fabricatedgeomembrane.com>) – conducts research and disseminates technical information about geomembranes that can be factory fabricated, transported to a project, and deployed, e.g., polypropylene, PVC, LDPE, and EPDM geomembranes, and answers technical questions regarding testing, design, fabrication, installation, and performance of these geomembranes.

Safe Global Water Institute (<http://publish.illinois.edu/safeglobalwater>) – founded in 2012 with the goal of seeking sustainable solutions to the world's safe water and sanitation challenges.

Rail Transportation and Engineering Center (<http://railtec.illinois.edu>) – founded in 2010 in recognition of the expanding importance of rail transportation to the economy, to society, and to a safe and sustainable environment. It is the first and only US national center in railroad engineering.

Facilities and Resources

The Newmark Structural Engineering Laboratory (NSEL) features a nearly 6,000 square foot structural testing floor (strong floor), a three-story clear height, and a multiplicity of testing equipment (including a shake table, stand-alone universal testing machines, reaction frames, actuators, controllers, transducers, and a data acquisition) that can be used for conducting large-scale experimental structural, materials, and earthquake engineering research. It provides a new experimental environment for conducting integrated distributed hybrid tests on compounds of large bridge and building structures. The Environmental Engineering and Science Laboratories contain over 11,000 square feet with state-of-the-art analytical equipment. Two additional laboratories occupying approximately 2,500 ft² were built and opened in early 2016 for faculty and students doing research in the area of materials science and engineering for environmental, energy, and built environment applications. The Hydrosystems Laboratory covers an area of more than 11,000 square feet and includes several flumes, a rainfall generator, a stratified flow tank, and a water tunnel. The Advanced Transportation Research and Engineering Laboratory (ATREL) is a unique and comprehensive transportation research, educational, and testing laboratory. It is located on 47 acres, 15 miles north of the main campus, and it contains 60,000 square feet of laboratories, continuing education classrooms, office space, and a technical library. It is home to the Illinois Center for Transportation (ICT). The Smart Structures Technology Laboratory seeks to implement advanced sensing and control technologies to more effectively monitor and protect our nation's civil infrastructure. The Laboratory houses a new medium-scale 6 Degree-of-Freedom seismic simulator, as well as extensive instrumentation and telepresence capabilities. The Research & Innovation Laboratory (RAIL), located on the Construction Engineering Research Laboratory campus, supports the Rail Transportation and Engineering Center. This laboratory is dedicated to improving performance and design of railway infrastructure. To achieve these objectives, the 3,500 square foot Research and Innovation Laboratory (RAIL) was conceived and is located in the Harry Schnabel Jr. building on the CERL campus.

Financial Aid

Financial aid is available in the form of fellowships and research and teaching assistantships. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://www.grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 50 or 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

Students in the M.Eng. degree are not eligible for tuition waivers through research assistantships or teaching assistantships.

For information on the Master of Engineering, Railway Engineering Concentration, see the Concentration tab (p. 707).

Master of Science, all majors

Thesis Option

Code	Title	Hours
CEE 599	Thesis Research (min-max applied toward degree)	4-12
Elective courses, subject to Other Requirements and Conditions below		20-28
Total hours		32

Other requirements ¹

Other Requirements and Conditions may overlap.

Individual programs are developed by the students in consultation with their academic advisors.

A minimum of 16 hours of credit within the major field with 8 graded and at the 500 level.

A minimum of 12 hours at the 500-level overall.

A maximum of 8 hours of CEE 597 (or other independent study) may be applied toward the elective course work requirement.

At least half of the minimum hours required for the degree must be in Illinois courses meeting on the Urbana-Champaign campus or in courses meeting in other locations approved by the Graduate College for residency credit for the degree.

Minimum program GPA 2.75

¹ For additional details and requirements refer to the department's Graduate Handbook and the Graduate College Handbook.

Non-Thesis Option

Code	Title	Hours
Elective courses, subject to Other Requirements and Conditions below		36
Total Hours		36

Other requirements ¹

Other Requirements and Conditions may overlap.

Individual programs are developed by the students in consultation with their academic advisors.

A minimum of 16 hours of credit within the major field with 8 graded and at the 500 level.

A minimum of 12 hours at the 500-level overall.

A maximum of 8 hours of CEE 597 (or other independent study) may be applied toward the elective course work requirement.

At least half of the minimum hours required for the degree must be in Illinois courses meeting on the Urbana-Champaign campus or in courses meeting in other locations approved by the Graduate College for residency credit for the degree.

Minimum program GPA 2.75

Doctor of Philosophy, all majors

The degree of Doctor of Philosophy, primarily a research degree, requires from three to four years of graduate study beyond the master's degree.

The major area of specialization encompasses courses and research that are closely related, but the courses need not be offered by a single major department. Candidates must demonstrate a capacity for independent research by preparing an original thesis on a topic within the major field of study, must meet the qualifying requirements or examination in the area of specialization, and must pass both preliminary and final examinations.

Code	Title	Hours
CEE 599	Thesis Research (min-max applied toward degree)	32
Elective courses (subject to Other Requirements and Conditions below)		32
Total Hours		64

Other Requirements ¹

Other Requirements and Conditions may overlap

A maximum of 8 hours of CEE 597 (or other independent study) may be applied toward the elective course work requirement; approval required.

There is no department-wide foreign language requirement. However, the faculties of some areas of specialization may require foreign language proficiency if essential to the conduct of research in that area.

64 graduate hours must be completed in residence.

A Masters degree is required for admission to the Ph.D. program.

Ph.D. exam and dissertation requirements:

Qualifying exam²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

The minimum program GPA is 2.75.

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://cee.illinois.edu/online-graduate-handbook>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

² *Qualifying Exam Information* (<http://cee.illinois.edu/academics/graduate-programs/phd-degree-and-curriculum>)

Joint Degree Programs

Master of Science in Civil Engineering and Master of Architecture

The M.Arch.-M.S.C.E. joint degree program with the School of Architecture requires a total of 78 graduate hours (Architecture Track II), 70 graduate hours (Architecture Track III), or 64 graduate hours (Architecture Track I). Full details of requirements are presented at the School of Architecture's Web site (<http://arch.illinois.edu>); the thesis option is not available.

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 696) and contact the M.B.A. program and their major department office for more information.

Online Program

The degree requirements are the same as for the on-campus non-thesis M.S. program—36 hours of course work—and the degree awarded to online students is the same degree awarded to resident students. Online students have five years to complete the program.

The M.S. degree in Civil Engineering offered online is currently available for specialization in Construction Management, Infrastructure, Structural Engineering, and Transportation Engineering. Students can also develop cross-disciplinary programs in consultation with their advisers. Additional courses are available online in the following areas of concentration to complement the student's area of specialty above: Construction

Materials, Environmental Engineering and Science, Environmental Hydrology and Hydraulic Engineering, and Geotechnical Engineering.

Concentration in Railway Engineering for the Master of Engineering, major in Engineering

Code	Title	Hours
Core Courses from Illinois		6
CEE 409	Railroad Track Engineering	
CEE 412	High-Speed Rail Engineering	
Alternate Illinois course from approved list for students who have completed one or both of the required courses in previous degree		
Core Courses from KTH		12
CEE 498	Special Topics (RTV, KTH SD2307, Rail Vehicle Technology)	
CEE 498	Special Topics (TMS, KTH AK2036, Theory and Methodology of Science with Applications)	
CEE 598	Special Topics (ET, KTH EJ2400, Electric Traction)	
CEE 598	Special Topics (RVD, KTH SD2313, Rail Vehicle Dynamics)	
Elective Courses from Illinois		14
Railway Elective Courses from Approved List A, minimum 6 hours		
Engineering Elective Courses from Approved List B, minimum 6 hours		
Professional Development courses from approved list		4
Total Hours		36

Other Requirements and Conditions (may overlap)¹

Minimum of 20 credit hours must be taken at the University of Illinois at Urbana-Champaign campus

Minimum of 12 500-level credit hours in the concentration with at least 8 credit hours in the core concentration

No courses used to fulfill any degree requirement may be taken using the Credit/No Credit option.

Minimum program GPA 3.0

¹ For additional details and requirements, please refer to the concentration's website (<http://railwaymeng.engineering.illinois.edu>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Note: Students in the M.Eng. degree are not eligible for tuition waivers through research assistantships or teaching assistantships

Classics

<http://www.classics.illinois.edu>

Head of the Department: Antonios Augoustakis
Director of Graduate Studies: Craig Williams
4080 Foreign Languages Building

707 South Mathews Avenue
 Urbana, IL 61801
 (217) 333-1008
 E-mail: classics@illinois.edu

Major: Classics
 Degrees offered: M.A.
 Graduate Concentrations: Greek (p. 710), Latin (p. 710), Medieval Studies (p. 837)

Major: Teaching of Latin
 Degrees offered: M.A.

Major: Classical Philology
 Degrees offered: Ph.D.
 Graduate Concentration: Medieval Studies

Graduate Degree Programs

The Department of the Classics offers programs of study leading to the Master of Arts in Classics. Within the master's degree program, students may choose from three options: both Greek and Latin (= Classics), Greek, or Latin. In addition, the department offers the Master of Arts in the Teaching of Latin and the Doctor of Philosophy in Classical Philology. A further concentration in Medieval Studies is available to students pursuing graduate degrees in the Classics.

Graduate students in Classics at Illinois may concentrate at different stages of their study on various aspects of the Greek and Latin languages, literatures, and cultures; classical archaeology; ancient philosophy; or, in conjunction with the appropriate department, comparative literature, ancient history, or linguistics. Additional information is available on our website www.classics.illinois.edu (<http://www.classics.illinois.edu>).

Admission

Applicants for admission to the MA in Classics (Greek and Latin) must ordinarily present a minimum of 20 semester hours in one of the two languages (Greek or Latin) and 15 semester hours in the other language; candidates for admission to the MA with specialization in either Greek or Latin, or the MAT in Latin, must ordinarily present at least 20 semester hours in the relevant language. Previous work in ancient history, ancient art and archaeology, philosophy, literary criticism, or linguistics is desirable.

Applicants should apply online (www.grad.illinois.edu/admissions/apply) and submit a personal statement of 2-3 pages, a resume or CV, transcripts showing all undergraduate and graduate work completed, and a writing sample of approximately 20 pages (one or two papers) that showcases the applicant's ability to work in the original classical languages and incorporates relevant scholarship as appropriate. Three letters of recommendation are also required.

Graduate Record Examination (GRE) scores are required and should be submitted to institution code 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 79 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)). Applications are accepted for fall admission only.

Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu.

Certifications

Students wishing to add teacher certification in Latin to an MAT, M.A. in Latin, or Ph.D. must apply to the Foreign Language Teacher Education Program (<http://www.flte.illinois.edu>).

In order to receive certification, students must complete an M.A. in Classics with a concentration in Latin, an M.A. in Classics with a concentration in Greek and Latin, or an M.A. in the Teaching of Latin.

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Classical Philology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program, and almost all students teach. Non-native English speakers must first pass a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Faculty Research Interests

Greek and Latin literature of all periods; gender and sexuality; Latin poetry of the imperial period; Greek historiography and ethnography; Greek and Roman drama; reception of Classics, especially in film; animal studies; pedagogy. For further details see www.classics.illinois.edu/people/ (<http://www.classics.illinois.edu/people/>).

Facilities and Resources

We have a renowned university library which boasts the second largest number of volumes among US university libraries after Harvard. Housed within the main library building is our first-rate Classics collection (see www.library.illinois.edu/clx/ (<http://www.library.illinois.edu/clx/>)) with over 60,000 volumes on open shelves. The University of Illinois Library's Rare Book Room houses the Turyn Archive of Greek manuscript photographs and the American Center of the International Photographic Archive of Papyri. The Department of the Classics also publishes the widely circulating peer-reviewed journal *Illinois Classical Studies* and its Supplements. The Krannert Art Museum and the Spurlock Museum of World Cultures have outstanding collections of ancient vases and other artifacts.

Financial Aid

University fellowships are available for the academic year. Teaching assistantships are available for both the academic year and Summer Session II.

The Master of Arts may be taken in Classics requiring advanced work in both Greek and Latin (Master of Arts in Classics), or with a concentration in either Greek, or a concentration in Latin. Only the Master of Arts in Classics leads to Ph.D. level work in Classical Philology. The master's degrees with concentrations in Latin or Greek and likewise the Master of Arts in the Teaching of Latin are all terminal degrees.

- Master of Arts in Classics (p. 709)
- Master of Arts in Classics, Greek Concentration (p. 710)
- Master of Arts in Classics, Latin Concentration (p. 710)
- Master of Arts in Teaching of Latin (p. 710)

Doctor of Philosophy in Classical Philology

The Doctor of Philosophy is offered only in classical philology, which requires advanced work in both Greek and Latin. Candidates for the Ph.D. program are eligible for acceptance upon completion of the master's degree in classics or its equivalent. Once admitted, they must complete at least 64 additional graduate hours of coursework. Admission to Stage III requires passing examinations in the translation of Greek and Latin into English, the history of Greek and Latin literature, and a special author, as well as a preliminary oral examination (dissertation prospectus).

Code	Title	Hours
CLCV 550	Intro to Teaching of Classics (if not taken previously)	0 or 4
24 hours of Greek and Latin, with at least eight hours in each language and at least twenty at the 500 level, including:		24
GRK 595	Intro to Classical Studies (if not taken previously)	
or LAT 595	Intro to Classical Studies	
LAT 511	Advanced Prose Composition (if not taken previously)	
GRK 511	Advanced Composition (if not taken previously)	
LAT 580	Latin Seminar	
GRK 580	Greek Seminar	
Elective		4-8
Language Requirement: Reading knowledge of two ancillary languages: German, and either French or Italian. Knowledge of one of these languages must be demonstrated at the time of admission to Stage II and the second before the start of the second year at Stage II.		
GRK/LAT 599	Thesis Research	12-32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?:	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes

Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Classics

Thesis Option

Code	Title	Hours
Greek and Latin in regular courses, with at least eight hours in each language, including GRK 411 and LAT 411, with at least 12 hours at the 500 level		24
GRK/LAT 599	Thesis Research (min/max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.	
Satisfactory examinations in Greek and Latin	
Minimum 500-level Hours Required	12 (excluding 500-501)
Overall:	
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Greek and Latin in regular courses, with at least eight hours in each language, including GRK 411 and LAT 411, with at least 12 hours at the 500 level		24
CLCV 550	Intro to Teaching of Classics	4
Elective		4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.	
Satisfactory examinations in Greek and Latin	
Minimum 500-level Hours Required	12 (excluding 500-501)
Overall:	
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Classics, Greek Concentration

Thesis Option

Code	Title	Hours
24 hours in Greek in regular courses, including GRK 411, with at least 12 hours at the 500 level		24
GRK 599	Thesis Research (min/max applied toward the degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Satisfactory examination in Greek

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
24 hours in Greek in regular courses, including 411, with at least 12 hours at the 500 level		24
CLCV 550	Intro to Teaching of Classics	4
Elective		4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Satisfactory examination in Greek

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Classics, Latin Concentration

Thesis Option

Code	Title	Hours
24 hours in Latin in regular courses, including LAT 411, with at least 12 hours at the 500 level		24

LAT 599	Thesis Research	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Satisfactory examination in Latin

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
24 hours in Latin in regular courses, including LAT 411, with at least 12 hours at the 500 level		24
CLCV 550	Intro to Teaching of Classics	4
Elective		4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Satisfactory examination in Latin

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Teaching of Latin

Code	Title	Hours
16 hours in Latin in regular courses, including 411, with at least 12 hours at the 500 level		20
CLCV 550	Intro to Teaching of Classics	4
Education courses		4
Electives		4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Certification requirements if needed²

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate program requirements (<http://www.classics.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

² Certification Requirements (<http://www.classics.illinois.edu/programs/graduate/latincertification.pdf>)

College of Engineering

<http://engineering.illinois.edu/academics/graduate/>

Rhonda McElroy
 Director Graduate Programs
 400 Engineering Hall
 1308 West Green Street
 Urbana, Illinois 61801
 (217) 244-2745
 Fax: (217) 333-0015
 E-mail: enr-gpp@illinois.edu (gpp@illinois.edu)

Major: Engineering
 Degrees Offered: M.Eng. with concentrations available in Energy Systems (p. 860) and in Computational Engineering (p. 833)

A graduate concentration in Computational Science and Engineering, which is not a part of the M.Eng. in Engineering degree, is administered at the college level through CSE and is available for several programs within the College of Engineering and the College of Liberal Arts and Sciences.

Graduate Degree Programs

The College of Engineering offers a Master of Engineering (M.Eng.) degree program for students whose primary intent is a professional career in industry or government. This degree differs from the Master of Science (M.S.) degree in that it is a terminal degree and not a pathway to a doctoral program. The Major in Engineering for the M.Eng. degree requires the selection of an interdisciplinary concentration.

Admission

Students with bachelor's or master's degrees in engineering or related sciences will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. Admission is possible for the both the fall and spring semesters. Full details of admission requirements are on the Web page of the department offering the concentration.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for those meeting the minimum requirements and having taken the TOEFL or IELTS since the scores required for admission to M.Eng. are above the minimum scores demonstrating an acceptable level of English language proficiency.

Master of Engineering in Engineering, must include a Concentration

Code	Title	Hours
	Professional Development (an internship with a company, laboratory, or agency with a subsequent archiveable report; a design project; or business-oriented or leadership courses)	4
Concentration hours		28
Technical course work in primary area and one course from outside the primary area (12-20 hours)		
Elective courses 0-8 hours chosen in consultation with advisor.		
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A concentration is required.

A minimum of 12 500-level credit hours with a minimum of 8 500-level credit hours applied toward the concentration.

A minimum of 8 hours must be in ENG or the home unit of the concentration.

Minimum program GPA: 3.0

¹ For additional details and requirements, please refer to the Web page of the concentration's home unit and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Available Concentrations:

- Computational Engineering (p. 833)
- Energy Systems (p. 860)
- Railway Engineering (p. 707)

Computational Science and Engineering

Note: This concentration is not part of the M.Eng. in Engineering degree program.

The heart of Computational Science and Engineering (CSE) is to develop innovative ways of solving engineering and scientific problems using computation as a tool. This new form of science compresses the development process in engineering and engenders knowledge discovery with a new paradigm in many areas because it enables "virtual experiments" and helps focus physical experiments to reduce or eliminate trial-and-error laboratory-based approaches. Further, it teaches students to solve complex problems with prevailing computer technology.

The CSE graduate concentration is designed to provide graduate students with a solid base in problem-solving using computation as a major tool for modeling complicated problems in science and engineering. This concentration requires students to complete 16 graduate credit hours, which are outlined below. Courses taken toward this concentration will count towards the student's graduate degree.

For more information regarding the CSE Graduate Concentration, visit the Computational Science and Engineering website (<http://cse.illinois.edu>), or contact the CSE Office at 217-333-3247 or cse@cse.illinois.edu.

Code	Title	Hours
Core Course Work: Complete two courses (4 hours each) from the list below.		8
CSE 401	Numerical Analysis	
CSE 402	Parallel Progrmg: Sci & Engrg	
CSE 408	Applied Parallel Programming	
CSE 510	Numerical Methods for PDEs	
CSE 527	Scientific Visualization	
Computing Elective		8
Complete two courses (4 hours each) from the approved list. The application coursework must be distinct from the core courses (no double-counting is allowed). ¹		
Total Hours		16
Additional Requirement		
M.S. and Ph.D. Thesis Requirement: The graduate thesis must have a significant computational component, and the thesis committee must include at least one CSE-affiliated faculty.		
M.S., Non-thesis Requirement: Must complete a 4- hour independent study/Capstone Project course, where the project is supervised by a CSE-affiliated faculty. The independent study project must comprise sufficient computational work, to be designed in consultation with the faculty supervisor overseeing the independent study.		

¹ Computing elective course to be selected from the list of CSE Application Courses, available on the approved list (<http://cse.illinois.edu/education-programs/certificate-programs/graduate-certificate-option/grad-certificate-and-concentrati>).

Communication

<http://communication.illinois.edu>

Acting Head of the Department: John Caughlin
 Director of Graduate Study: Leanne Knobloch
 3001 Lincoln Hall, 702 S. Wright Street
 (217) 333-2683
communication@illinois.edu

Major: Communication
 Degrees Offered: M.A., Ph.D.
 Graduate Concentrations: Medieval Studies (available to all degrees),
 Second Language Acquisition and Teacher Education (Ph.D. only),
 Writing Studies (Ph.D. only)

Online Program: Health Communication
 Degrees offered: M.S.

Online Program: Communication (not currently offered; apply to M.S. in Health Communication)
 Degrees offered: M.A.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Communication and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Communication offers a broad curriculum in communication research. In consultation with an advisor, students assemble individualized programs, concentrating in organizational and group communication, interpersonal and family communication, health communication, communication technology, political communication, rhetoric and public discourse, communication in cultural contexts, or mass communication. Interdisciplinary programs are also encouraged.

Admission

An application must include official transcripts from every post-secondary institution the applicant has attended; scores on the general aptitude parts of the Graduate Record Examination (GRE); at least three letters of recommendation, preferably from academic recommenders; a major paper or essay as a sample of academic writing; and a statement of purpose. Students whose native language is not English must present their official scores on the Test of English as a Foreign Language (TOEFL) examination as part of their applications. The department follows the Graduate College's recommendations for English proficiency. Detailed information about admissions and financial aid can be found on the department's Web site (<http://www.communication.illinois.edu/prospective/grad/apply>). Ordinarily, students are admitted to begin graduate study in the fall semester.

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Communication. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Financial aid is usually offered in the form of part-time teaching assistantships; some fellowships and research assistantships are available.

- Master of Arts in Communication (p. 713)
- Master of Science in Health Communication (p. 713)

Doctor of Philosophy in Communication

To be accepted as a candidate for the Ph.D. degree, a student must either present a well-rounded undergraduate education with an emphasis in

communication and a master's in a cognate discipline, or hold a master's degree in communication from an accredited institution.

In addition to meeting general requirements of the Graduate College, the student must satisfactorily complete written and oral preliminary examinations, an oral defense of the thesis prospectus, and an oral defense of the thesis. Students must demonstrate competency in research procedures and tools that may include proficiency in one or more foreign languages, various research methods, or cognate academic work. Students must enroll in CMN 595 in the semester of the preliminary examination and in CMN 599 (thesis hours) in semesters spent working on the dissertation.

Code	Title	Hours
	Minimum in appropriate research method; these are in addition to the 40 hours of additional coursework. (8 min)	8
	Courses from outside the department	12
	Elective hours (not in method or thesis hours)	40
	Independent Study Hours (8 max applied toward degree)	8
	Language Requirement: based on major	
CMN 599	Thesis Research (0 min applied toward degree)	0
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Non-Method/Thesis Hours Required Within the Unit:	20
Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's *Graduate Programs* (<http://www.communication.illinois.edu/prospective/grad/degrees>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Online Program in Health Communication

The Department of Communication also offers an online Master of Science degree (M.S.) in Health Communication. The required hours are listed in Master of Science in Health Communication (p. 713). Apply to the Master of Science program only; applications to the online Master of Arts in Communication are not being accepted. More information about the online program is available at www.hcom.illinois.edu (<http://www.hcom.illinois.edu>).

Master of Arts in Communication

The entering student should present the equivalent of 16 semester hours of undergraduate work in communication or a related area. In some cases an oral examination is also stipulated. A thesis is optional.

Thesis Option

Code	Title	Hours
	Elective hours	24
	Independent Study Hours (4 max applied toward degree)	0-4
CMN 599	Thesis Research (8 max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	24
Minimum 500-level Hours Required Overall:	12 (8 in CMN)
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's *Graduate Programs* (<http://www.communication.illinois.edu/prospective/grad/degrees>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Elective hours (32 min)	32
	Independent Study Hours (4 max applied toward degree)	0-4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	24
Minimum 500-level Hours Required Overall:	12 (8 in CMN)
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's *Graduate Programs* (<http://www.communication.illinois.edu/prospective/grad/degrees>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Health Communication

Code	Title	Hours
	Health Communication Research Methods I and II; Capstone Individual Study	8
	Elective hours (24 min)	24
	Independent Study Hours (4 max applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	28
---	----

Minimum 500-level Hours Required 12 (8 in CMN)

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.communication.illinois.edu/prospective/grad/degrees>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Community Health

Department of Kinesiology & Community Health (<http://kch.illinois.edu>)

Department Head: Amy Woods

Director of Graduate Studies: Steven Petruzzello

Graduate Office: Julie Jenkins

906 South Goodwin Ave

112 Freer Hall MC-052

Urbana, IL 61801

(217) 333-1083

Email: jjenkns@illinois.edu

Major: Community Health

Degrees offered: M.S., Ph.D.

Major: Public Health

Degrees offered: M.P.H.

Major: Rehabilitation

Degrees offered: M.S.

Joint Degree Program: the M.P.H. can be earned jointly with the following:

Community Health, Ph.D. (p. 715)

Food Science and Human Nutrition, Ph.D. (p. 767)

Human & Community Development, Ph.D. (p. 786)

Kinesiology, Ph.D. (p. 799)

Nutritional Science, Ph.D. (p. 863)

Social Work, Ph.D. (p. 891)

Urban Planning, M.U.P. (p. 914)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Community Health and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Community Health Program in the Department of Kinesiology & Community Health offers programs of study leading to the Master of Science in Community Health, Master of Science in Rehabilitation, Master of Public Health (M.P.H.), and Doctor of Philosophy in Community Health degrees.

The Chronic Disease, Disability, and Society specialization prepares graduates for advanced research or as health specialists who are well versed in social determinants of health. Graduates from this specialization will have a strong foundation related to health disparities, chronic disease and disability. The specialization in Epidemiology prepares students for the analysis of disease occurrences and problems in populations and instruction in the various methodologies, statistical techniques and designs for obtaining such understanding. The Global Health specialization focuses on international health from an interdisciplinary perspective. Students in this concentration may take courses that provide a broad view of global health contexts from various departments across campus. Finally, the specialization in

Health Policy and Administration prepares students for the examination of management principles related to health care institutions and in procedures and methods for the analysis of health policy development, implementation and evaluation.

The M.S. in Community Health has specializations in Chronic Disease, Disability, and Society; Epidemiology; Global Health; and Health Policy and Administration. The M.S.P.H. program is not currently accepting applications, and individuals interested in pursuing a Master's degree in public health are encouraged to apply to the M.P.H. degree program. The M.P.H. degree is a professionally focused degree designed to prepare students for a career in public health practice. The M.P.H. degree offers a specialization in health policy and management and an area of concentration in health behavior and promotion. The Ph.D. program is designed to prepare graduates for positions of leadership in teaching, research, and service in universities, industries, and private and government agencies in the United States and in other countries.

Admission

Applications for all degrees except the Master of Public Health (MPH) are due on **January 15** for fall admission. Applications for spring semester are due **October 1**. Applications for the Master of Public Health (MPH) degree are only accepted for Fall admission until **April 1**.

The Graduate College admission requirements apply for all applicants. Candidates for admission to master's degree programs should have a grade point average of at least 3.0 (A = 4.0) for the last 60 semester hours of their undergraduate degree work (excluding fieldwork, student teaching, and physical activity courses). In addition, satisfactory scores on the Graduate Record Examination (GRE) are required. Applicants should have a bachelor's degree in a health or disability-related discipline and/or a strong background in social and biological sciences and quantitative methods. A statement of education and career goals, and three letters of recommendation are required. All degree programs with the exception of the Master of Public Health (MPH) require one example of professional writing with the date of its completion.

Admission requirements for the Ph.D. program include the following: a grade point average of at least 3.0 (A = 4.0) for the last 60 hours of undergraduate degree work (excluding fieldwork, student teaching, and physical activity courses), a GPA of 3.6 for master's degree work with thesis, and acceptable scores on the Graduate Record Examination. Candidates are encouraged to have a personal interview with the coordinator of graduate studies or other representative of the department. Preference is given to students who have had at least two years of professional experience.

Applicants for all degrees whose native language is not English, or who have not obtained a university degree from an institution in a country where the native language is English, are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Applicants submitting TOEFL scores must obtain a minimum score of 600 on the paper-based, 250 on the computer-based, or 100 on the internet based (iBT) Test of English as a Foreign Language (TOEFL). Applicants submitting IELTS scores must obtain a 6.5 on all sub-sections. Applicants whose native language is not English and who are seeking a teaching assistantship must provide evidence of spoken English language proficiency by meeting minimum score requirements specified by the University (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Community Health. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Faculty Research Interests

Faculty research interests cover a wide range of subjects, including global health, health education, community health development, health behavior, health policy, health planning and management, rehabilitation and disability studies, chronic disease, epidemiology, biostatistical and epidemiologic research methodology, health economics, evaluation research, and aging studies.

Financial Aid

Financial aid is available on a competitive basis to qualified students in the form of teaching and research assistantships, as well as tuition and service fee waivers.

- Master of Science in Community Health (p. 718)
- Master of Science in Rehabilitation (p. 719)
- Master of Science in Public Health (p. 719)
- Master of Public Health (p. 718)

Graduate course experience in public health and statistics with grades of B or better is expected prior to admission. Before admission to the Ph.D. program, students may be required to take up to 12 hours of additional coursework to remedy deficiencies. The candidate is required to pass written preliminary examinations covering disciplinary and professional aspects of community health, the literature and theoretical perspectives in the major area of study and methodological perspectives and research techniques. Students must also pass an oral preliminary examination on the area of specialization and dissertation proposal; and to pass an oral defense of dissertation research.

Doctor of Philosophy in Community Health

Code	Title	Hours
	Advanced research methods/statistics	4
CHLH/KIN/SHS 565/ RST 560	Teaching in the Professoriate	4
CHLH 591	Seminar	8
	Two courses in an area of specialization	8

	Additional research methods/statistics	8
CHLH 599	Thesis Research	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Approved Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Public Health and Ph.D. in Community Health

The M.P.H. can be earned jointly with the Ph.D. in Community Health. In the joint program up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH/ENVS 469	Environmental Health	4
CHLH/KIN 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)		
Electives and seminars, min 3 (may be met by Ph.D. core courses)		
	Advanced research methods/statistics for Ph.D.	4
	Additional research methods/statistics for Ph.D.	8
CHLH 591	Seminar	8
Two courses in an area of Ph.D. specialization (may be met by M.P.H. core courses)		
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
CHLH 599	Thesis Research (min/max applied toward degree)	32
Total Hours		100

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12 (8 within the M.P.H.)
Overall:

Approved Masters Degree Required No
for Admission?

Qualifying Exam Required: No

Preliminary Exam Required: Yes

Final Exam/dissertation Defense
Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Public Health and Master of Urban Planning

The M.P.H. can be earned jointly with the Master of Urban Planning, M.U.P. Joint degree programs provide the opportunity to complete two degrees in a compressed time frame. For the joint program, at least 40 hours must be in Urban Planning, including all core courses and capstone requirements. The two programs must total a minimum of 88 hours, however the M.U.P. program may at its discretion count up to 8 hours of Urban Planning courses as electives in meeting its degree requirements as long as students are required to take no fewer than 40 additional hours in the M.P.H. program. Students must be in residence in Urban Planning for at least two semesters. Consult the department's M.U.P. joint degree (http://www.urban.illinois.edu/academic-programs/mup/mup_joint.html) web page for more information about the admissions process and joint degree requirements. For additional guidance, please contact the Director of the M.U.P. Program.

CHLH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHLH>)

Community Health Courses

CHLH 501 Issues in Health Education credit: 4 Hours.

Analyzes current developments, trends, and controversies in health education with emphasis on developing student competencies for intervention planning, implementation and analyses; and examines issues affecting the health educator in various work settings, including patient care, public health, school health, and higher.

CHLH 510 Public Health Dev credit: 4 Hours.

Advanced study of the principles, practice and current issues of public health at the local, state, national and international levels, including the relationships between public health departments, voluntary health agencies, and other community organizations.

CHLH 517 Principle/Method Epidemiology credit: 4 Hours.

Same as PATH 517. See PATH 517.

CHLH 527 Statistics in Epidemiology credit: 4 Hours.

Description and application of quantitative issues and statistical techniques prominent in the analysis of classification data arising from epidemiologic cohort or case-control etiologic studies; studies of preventive public health; and therapeutic clinical interventions. Practice using available computing software for implementation is stressed. Same as ENVS 527 and PATH 525. Prerequisite: CHLH 474 and minimum of two statistics courses covering multiple regression and correlation.

CHLH 530 Childhood Obesity I credit: 3 Hours.

Same as FSHN 530, HDFS 551, KIN 530, NUTR 530, SOCW 570. See NUTR 530.

CHLH 531 Childhood Obesity II credit: 4 Hours.

Same as FSHN 531, HDFS 552, KIN 531, NUTR 531, SOCW 571. See NUTR 531.

CHLH 540 Health Behavior: Theory credit: 4 Hours.

Analysis of social science theories and perspectives that comprise the foundation of health education theory and practice. Includes development of a conceptual frame of reference for understanding, predicting, and facilitating change in health behaviors. Same as KIN 540. Prerequisite: Graduate standing.

CHLH 550 Health Policy: United States credit: 4 Hours.

Comprehensive analysis of the policy process in health care in the United States; systematic and critical review of health policy development, implementation, and evaluation; impact of government at all levels and the role of providers, industry, labor, and consumer in health policy. Prerequisite: Admission to graduate program in community health or the MBA Administration Program; CHLH 429; or consent of instructor.

CHLH 565 Teaching in the Professoriate credit: 4 Hours.

Same as KIN 565, RST 560, and SHS 565. See KIN 565.

CHLH 569 Systematic Review and Meta-analysis credit: 4 Hours.

The goals of this course are to: (1) Deepen understanding on the key concepts and essential methods in systematic review and meta-analysis through lectures and reading assignments; (2) Master basic skills on conducting systematic review and meta-analysis through hands-on exercises and projects; and (3) complete a publication-quality systematic review and/or meta-analysis of a student's own choice as the final project of this course. 4 graduate hours. 4 professional hours.

CHLH 570 Intro Public Hlth Practice credit: 1 Hour.

An introduction to principles of public health practice, covering a range of topics including history of public health, determinants of health, structure and function of the public health system, ethics, and public health approaches to prevention and to improving population health. Approved for S/U grading only. Prerequisite: MPH student or consent of the instructor.

CHLH 572 Principles of Epidemiology credit: 4 Hours.

Advanced course designed to provide an introduction to the fundamental concepts and principles of epidemiology and demonstrate their applicability in the field of public health. Emphasizes the use of epidemiologic data and research to a) describe the pattern of diseases in communities, and b) identify risk factors for diseases and for health disparities. Prerequisite: Completion or concurrent enrollment of basic statistics course is encouraged.

CHLH 573 Biostatistics in Public Health credit: 4 Hours.

Introduction to fundamental topics in biostatistics in public health, covering univariate and bivariate statistics as well as basic topics in multivariate analysis. Including practice in analyzing health data through computer laboratory sessions.

CHLH 575 Chronic Disease Prevention credit: 4 Hours.

Advanced course in population-based approaches to chronic disease prevention, with emphasis on policy and environmental strategies affecting lifestyle risk factors. Provides an understanding of common diseases, screen tests, community assessment, systematic evidence reviews, and evidence-based community interventions. Prerequisite: MPH students or consent of instructor.

CHLH 577 Health Program Evaluation credit: 4 Hours.

Use of research methods and theory for evaluation of initiatives and programs in public health and medical care. Emphasis on acquiring skills in evaluation and conducting evaluations whose results have impact on public health practice. Covers different theories and perspectives on health evaluation. Review of published evaluations used to illustrate research methods and practical issues in program evaluation. Prerequisite: MPH student or consent of instructor.

CHLH 578 Applied Epidemiology credit: 4 Hours.

Advanced epidemiologic analysis of disease problems. Covers research designs including cohort, case-control, and intervention trials; methods of analysis including multivariate adjustment for confounding and description of effect modification; and application of statistical computer software with emphasis on chronic diseases. Same as PATH 520. Prerequisite: CHLH 474, PATH 517, or equivalent and advanced course work in statistics through multivariate analysis.

CHLH 579 Cultural Competence in Public Health credit: 4 Hours.

Cultural competence education increases public health professionals' cultural awareness, knowledge of self and others, communication skills, attitudes, and behaviors. This course will examine theoretical models in public health and explore community-based programs as they relate to cultural competence and health promotion. 4 graduate hours. No professional credit. Prerequisite: Restricted to MPH Graduate Students.

CHLH 580 Landscapes and Human Health credit: 3 Hours.

Same as GEOG 561 and LA 570. See LA 570.

CHLH 585 Community Health Internship credit: 4 Hours.

Observation, study, and practical work in student's area of specialization under supervision in professional field situations; student works for a minimum of 12 weeks in a University-approved agency or site. Prerequisite: CHLH 429, CHLH 474 and CHLH 510; or graduate standing in community health; or consent of the department.

CHLH 587 MPH Applied Practice Experience credit: 1 to 4 Hours.

Provides MPH students with planned, supervised and evaluated field experience in a public health practice setting where students will synthesize knowledge and skills acquired through the course of MPH study. Approved for letter and S/U grading. May be repeated up to 4 hours in separate terms. Prerequisite: Completion of all Core MPH Courses.

CHLH 589 MPH Integrative Learning Experience credit: 2 Hours.

Provides MPH students an opportunity to synthesize, integrate, and apply knowledge and skills acquired in MPH coursework, through work on a project relevant to public health practice. Generally offered for MPH students in their last semester of study in the MPH program. Prerequisite: MPH student.

CHLH 591 Seminar credit: 1 Hour.

Lecture, discussions, and critiques on kinesiology and community health related subjects by faculty members and visiting professional leaders; presentation and criticism of student research. Approved for S/U grading only. May be repeated in subsequent terms as topics vary.

CHLH 593 Special Projects credit: 2 to 4 Hours.

Independent research on special projects. May be repeated to a maximum of 8 hours. Prerequisite: EPSY 480, KIN 501, and CHLH 540 or equivalent.

CHLH 594 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Class Schedule. May be repeated.

CHLH 599 Thesis Research credit: 0 to 16 Hours.

Preparation of theses in community health. Approved for S/U grading only. May be repeated to a maximum of 16 hours.

REHB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/REHB>)

Rehabilitation Counseling Courses

REHB 501 Rehabilitation Research credit: 4 Hours.

This course has been designed for students who are interested in pursuing a career in rehabilitation and disability research. The course will cover major topics of research methods and techniques used in rehabilitation and disability research. A review of experimental designs and methods, human subject research, and disability related funding agencies will also be covered. 4 graduate hours. No professional credit.

REHB 520 Psycho-Social Aspects credit: 4 Hours.

Study of the social and emotional adjustment of individuals with disabilities; evaluation of effects imposed by societal attitudes; analysis of the implications for rehabilitation professionals in dealing with individuals who have a disability; review of relevant research. Same as SPED 520.

REHB 536 Assessment in Rehabilitation credit: 4 Hours.

Theory and practice of vocational evaluation techniques for persons with disabilities. Reviews basic psychometric instruments and adds practical experience with work samples and computer-based testing. Includes hands-on experience in the evaluation of disabled clients. Prerequisite: REHB 401 or one basic course in testing.

REHB 545 Transition and Voc Planning credit: 3 Hours.

Same as SPED 545. See SPED 545.

REHB 583 Counseling Internship credit: 4 Hours.

Development of individual counseling skills in a rehabilitation setting; emphasis on vocational evaluation and placement skills as developed in case management and planning experiences as well as adjustment to disability, vocational choice, and job placement techniques. May be repeated to a maximum of 8 hours. Prerequisite: REHB 401, REHB 520, REHB 536, and consent of instructor.

REHB 585 Rehabilitation Practicum credit: 4 Hours.

Practical experience in a major area of rehabilitation; discussion/laboratory sections cover such practicum topics related to administration, counseling, or supported employment and other rehabilitation services. Prerequisite: REHB 301 and consent of instructor.

REHB 593 Special Problems credit: 2 to 4 Hours.

Independent research on special projects. Open only to majors. May be repeated to a maximum of 8 hours. Prerequisite: REHB 401; consent of instructor.

REHB 594 Special Topics credit: 1 to 4 Hours.

Lecture course on topics of current interest; specific subject matter announced in Schedule. May be repeated to a maximum of 8 hours. Prerequisite: Will be determined for each topic and will be indicated in Schedule; REHB 401; consent of instructor.

REHB 599 Thesis Research credit: 0 to 8 Hours.

Preparation of thesis in rehabilitation. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Satisfactory standing in the master's program.

Master of Public Health

<http://mph.illinois.edu/>

The MPH degree program requires a minimum of 48 hours. The program includes:

1. six required core courses in basic content areas of public health;
2. three required courses in the Health Behavior and Promotion concentration, as well as one additional concentration course from an approved list;
3. a practicum;
4. a capstone project; and
5. seminars and electives.

MPH students must complete all core coursework before enrolling in the MPH practicum. It is highly preferable for the practicum to occur during summer term. The capstone project must be completed in the last term of study. There is no thesis requirement. A pre-requisite for applying to the MPH program is a college level course in mathematics, statistics, biostatistics, or epidemiology. Applications for the Master of Public Health (MPH) are only accepted for Fall admission, and are accepted until **April 1**. The program generally takes 1.5 to 2 years to complete. University of Illinois undergraduate students who major in Kinesiology, Community Health, or I-Health are eligible to apply for a 5 year joint BS MPH degree program after their 3rd (junior) year of undergraduate study.

Students in the BS MPH program begin some MPH coursework in their 4th (senior) year of undergraduate study, and take MPH coursework in a 5th year of study in fall, spring, and summer terms.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH/ENVS 469	Environmental Health	4
CHLH/KIN 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
Area of concentration coursework from approved list (min 3)		3
Electives and seminars (min 3)		3
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
Total Hours		48

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12 (8 within the unit)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Community Health

<http://kch.illinois.edu/>

The specializations in Epidemiology and Health Policy & Administration require completion of 12 hours of core courses, which are intended to provide overall knowledge of the public health field and the tools necessary for successful functioning as a health specialist.

Students entering the Epidemiology specialization will be expected to have completed undergraduate coursework in data collection and processing, including issues of measurement and questionnaire design, computerization, descriptive health measures, and statistical analysis through regression. Courses must have been completed with grades of B or better. Deficiencies in these areas will require additional coursework, as necessary, for successful completion of the Master of Science degree.

The specialization in Health Policy and Administration generally takes two years, depending upon prior education and experience. Students entering the program are expected to have completed undergraduate coursework in economics, social sciences, and data collection and processing, which includes issues of measurement, questionnaire design, computerization, descriptive health measures, and statistical analysis through regression. Courses must have been completed with grades of B or better. Deficiencies in these areas will require additional coursework, as necessary, for successful completion of the degree.

Epidemiology Specialization

Code	Title	Hours
CHLH 429	Research Techniques	4
CHLH/ENVS/PATH 474	Principles of Epidemiology	4
CHLH 510	Public Health Dev	4
CHLH/ENVS 469	Environmental Health	4
CHLH/ENVS 527/ PATH 525	Statistics in Epidemiology	4
CHLH 578/PATH 520	Applied Epidemiology	4
CHLH 591	Seminar (min/max applied toward degree)	4
CHLH 599	Thesis Research (min/max applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 28

Minimum 500-level Hours Required 12 (8 within the unit)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Health Policy and Administration Specialization

Code	Title	Hours
CHLH 429	Research Techniques	4
CHLH/ENVS/PATH 474	Principles of Epidemiology	4
CHLH 510	Public Health Dev	4
CHLH 591	Seminar	4
CHLH 456	Organization of Health Care	4
CHLH 550	Health Policy: United States	4
Specialized coursework from approved list		12
CHLH 599	Thesis Research (min/max applied toward degree)	4
Total Hours		48

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required 24 (12 within the unit)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Public Health

WE ARE NOT CURRENTLY ADMITTING STUDENTS INTO THIS PROGRAM. Individuals interested in pursuing a Master's degree in Public Health are encouraged to apply to the M.P.H. degree program.

Department of Kinesiology & Community Health (<http://kch.illinois.edu>)

Department Head: Amy Woods

Director of Graduate Studies: Steven Petruzzello

Graduate Office: Julie Jenkins

906 South Goodwin Ave

112 Freer Hall MC-052

Urbana, IL 61801

(217) 333-1083

Email: jjenkns@illinois.edu

The program generally takes two years, depending upon prior education and experience. The program includes 26 hours of required courses that are intended to provide an overall knowledge of the public health field and the tools necessary for successful functioning as a community health education specialist; hours of fieldwork experience in the summer; and a thesis. Students entering the program are expected to have completed undergraduate course work in data collection and processing, including issues of measurement and questionnaire design, computerization, descriptive health measures, and statistical analysis

through regression. Courses must have been completed with grades of B or better. Deficiencies in these areas will require additional course work, as necessary, for successful completion of the degree. A non-thesis option is available with permission from the department.

Code	Title	Hours
CHLH 429	Research Techniques	4
CHLH/ENVS 469	Environmental Health	4
CHLH/ENVS/PATH 474	Principles of Epidemiology	4
CHLH 510	Public Health Dev	4
CHLH/KIN 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 585	Community Health Internship	4
Electives, at least 4 hours from another dept		16
CHLH 599	Thesis Research (min/max applied toward degree)	4
Total Hours		48

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 28

Minimum 500-level Hours Required 12 (8 within the unit)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Rehabilitation

Department of Kinesiology & Community Health (<http://kch.illinois.edu>)

Department Head: Amy Woods

Director of Graduate Studies: Steven Petruzzello

Graduate Office: Julie Jenkins

906 South Goodwin Ave

112 Freer Hall MC-052

Urbana, IL 61801

(217) 333-1083

Email: jjenkns@illinois.edu

Candidates for the M.S. in Rehabilitation will be expected to have completed an undergraduate degree in a rehabilitation-related discipline and/or have a strong background in the social and biological sciences, and a course in introductory statistics. A full-time student can complete the program in three or four semesters. As with all programs, the Graduate College allows students to petition to transfer up to 12 hours of coursework completed prior to admittance to the department. Any approved graduate courses taken on campus in the summer immediately prior to admission count toward the degree and do not have to be transferred.

Thesis Option

Code	Title	Hours
REHB 401	Introduction to Rehabilitation	4
REHB 402	Medical Aspects of Disability	4
REHB 501	Rehabilitation Research	4
REHB 585	Rehabilitation Practicum	4
Specialization coursework from approved list		20-23
Seminar		4
REHB 599	Thesis Research (min/max applied toward degree)	8
or CHLH 599	Thesis Research	
Total Hours		48

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	30
Minimum 500-level Hours Required Overall:	12 (8 within the unit)
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
REHB 401	Introduction to Rehabilitation	4
REHB 402	Medical Aspects of Disability	4
REHB 501	Rehabilitation Research	4
REHB 585	Rehabilitation Practicum	4
Specialization coursework from approved list		20-23
Seminar		4
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	30
Minimum 500-level Hours Required Overall:	12 (8 within the unit)
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://kch.illinois.edu/kch-grad-handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Comparative Literature

<http://www.complit.illinois.edu/Welcome.html>

Director of the Program: Nancy Blake
 Director of Graduate Studies: Brett Kaplan
 3080 Foreign Languages Building

Information listed in this catalog is current as of 04/2018

707 South Mathews Avenue
 Urbana, IL 61801
 (217) 333-4987
 Email: complit@illinois.edu

Major: Comparative Literature
 Degrees Offered: M.A., Ph.D.

Graduate Minors, Certificates, and Concentrations: Medieval Studies (p. 837) (available to all degrees); Criticism and Interpretive Theory (<http://criticism.english.illinois.edu/affiliation.htm#Cert>) (available to all degrees); Gender and Women's Studies (p. 924) (available to all degrees); Cinema Studies (p. 924) (available to all degrees). For a full list, please see the Director of Graduate Study.

Graduate Degree Programs

The Program in Comparative & World Literature offers graduate programs leading to the degrees of Master of Arts and Doctor of Philosophy and is designed to provide a systematic study of subjects and problems common to several literatures. Its purpose is to enable students who have varied linguistic competence and preparation to explore the theory of literature and criticism; the interrelations of several literatures; the main currents, periods, and movements in literary history; the development of literary themes and types; and the relations between literature and the other arts.

Admission

A student entering the program should have an undergraduate major in Comparative Literature, English, the classics, or a foreign language. Majors in history and philosophy or other humanistic areas that present suitable linguistic and literary competence may also be granted admission by the Admissions Committee. All students are admitted at the MA level. Students entering with a recognized Masters degree from another university or from another department of this University have the option of taking the comparative literature and critical theory component and a literary component of this program's regular Master of Arts examination at the end of the first year as a qualifying test. For internal applicants to the Ph.D. curriculum, the Master of Arts will function as the qualifying test.

Applicants should apply online (www.grad.illinois.edu/admissions/apply/ (<http://www.grad.illinois.edu/admissions/apply/>)), submit a statement of purpose, three letters of recommendation and a writing sample.

Original transcripts showing all undergraduate and graduate work completed should be sent to SLCL Graduate Student Services, 3070 Foreign Languages Bldg., 707 S. Mathews Ave., Urbana, IL 61801. Graduate Record Examination (GRE) scores are required and should be submitted to institution code 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 105 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)). Applications are accepted for fall admission only. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program. Non-native English speakers must first pass

a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Financial Aid

A limited number of University fellowships and teaching assistantships, in cooperation with other departments, are available.

The Program aims to support as many graduate students as possible through teaching and other means, but support is always contingent on the student making timely progress to the degree. Such progress is measured by course load, taking exams on time, grades, and other factors.

Master of Arts in Comparative Literature

The candidate must demonstrate a competency in at least two foreign languages as well as in English. Latin is required for students specializing in European and/or American literatures before 1800. Competence in the languages offered is measured either by the successful completion of one advanced course in the literature of each of the languages chosen or by passing an examination administered by the program in comparative literature with the assistance of an expert in the language concerned. This choice is intended to provide for languages that may not be taught in regular departments.

The candidate must complete a minimum of 32 gh of credit, including two courses in the theory of literature (CWL 501 and CWL 502), and two seminars in comparative literature selected from CWL 551, CWL 561, CWL 571, and CWL 581. At least 12 of the other 16 gh should be taken in two or three national literatures in a distribution approved by the adviser. The candidate must pass a written examination based on a reading list, which is designed to test knowledge of literary history as well as ability to interpret a literary or critical text.

Code	Title	Hours
CWL 501 & CWL 502	Theory of Literature and Methods of Comparative Lit	8
Select two of the following:		8
CWL 551	Seminar Lit Movements	
CWL 561	Seminar Genres - Forms	
CWL 571	Seminar in Literary Relations	
CWL 581	Seminar Lit Themes	
One or two courses in the major literature		4-8
At least one course in the minor literature		4
One or two courses from the above categories. (A student may take one course in a non-literary field that will provide cultural and historical contexts for the study of the student's literatures.)		4-8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

The candidate must pass a written examination based on a reading list, which is designed to test knowledge of literary history as well as ability to interpret a literary or critical text.

Minimum 500-level Hours Required 20

Overall:

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's graduate handbook (http://www.complit.illinois.edu/Graduate_files/Grad%20Handbook.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Comparative Literature

A candidate for the Doctor of Philosophy degree must fulfill the general requirements of the Graduate College in addition to those specified for the master's degree. At least 12 additional gh of work, normally at the 500 level, should be taken in courses regularly offered by the literature departments; among these, courses cross listed with the program in comparative literature are especially recommended. The candidate is responsible for a knowledge of the history of the literature in one modern language. The student also selects a period of major interest and is responsible for a knowledge of two other literatures in this period, which are considered as minors. The periods may be the Middle Ages, Renaissance, Neoclassicism and the Enlightenment, or the modern (nineteenth and twentieth centuries). Some chronological variations in coordinating the minors will be allowed for students studying non-Western literatures. A preliminary examination, i.e. a four-part written examination based on the individual program, and an oral examination with emphasis on the thesis project must be passed. The candidate must present an acceptable thesis embracing several national literatures and pass a final oral examination on the thesis.

Code	Title	Hours
CWL 582	Proseminar	4
Select three of the following: ¹		12
CWL 551	Seminar Lit Movements	
CWL 561	Seminar Genres - Forms	
CWL 571	Seminar in Literary Relations	
CWL 581	Seminar Lit Themes	
Two courses in the major literature		8
One course in each of the minor literatures of specialization		8
Language Requirement: Command of at least three languages besides English. Three of these four languages must coincide with the student's areas of specialization and with the dissertation field.		
CWL 599	Thesis Research (min/max applied toward degree)	24-32
Total Hours		64

Other Requirements ²

Other requirements may overlap

Students must be enrolled in graduate seminars until the preliminary examinations are taken and passed.

Masters Degree Required for Admission to PhD? Yes

Qualifying Exam Required: No

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.25

¹ One of these courses must be cross-cultural.

² For additional details and requirements refer to the department's graduate handbook (http://www.complit.illinois.edu/Graduate_files/Grad%20Handbook.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Computer Science

<http://cs.illinois.edu>

Head of the Department: Rob A. Rutenbar
Director of Graduate Studies: Chandra Chekuri (chekuri@illinois.edu)

1210 Siebel Center
201 N. Goodwin
Urbana, IL 61801
(217) 333-4428
Email: academic@cs.illinois.edu

Major: Computer Science
Degrees Offered: M.S., M.C.S., Ph.D.

Major: Bioinformatics
Degrees Offered: M.S.
Graduate Concentration: Computer Science

Online Program: Illinois Internet Computer Science (I2CS)
Degrees Offered: M.C.S. in Computer Science

Joint Degree Programs: the M.C.S. in Computer Science can be earned jointly with the following
Degrees Offered:
M.Arch. in Architecture
J.D. in Law

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Computer Science and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Computer Science is one of the longest established computer science departments in the world and is consistently ranked as a top-5 graduate program. The department offers graduate work leading to a master's or doctoral degree, with an interdisciplinary master's degree program in bioinformatics. In addition, the department offers an online professional master's degree to reach students who are working full-time and unable to come to campus.

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Computer Science. Computer Science is not currently admitting to any joint master's programs at this time.

Admission

Applicants must hold a bachelor's degree equivalent to that granted by the University of Illinois at Urbana-Champaign. The recommended

background for students entering a Computer Science graduate degree program is a bachelor's or a master's degree (only if applying to the PhD program) in computer science or computer engineering. The Graduate Record Examination (GRE) (<http://www.ets.org>) general aptitude tests (Verbal, Quantitative, and Analytical) are no longer required. However, in some cases, GRE general scores may provide helpful supporting information.

Applicants to the computer science Ph.D. program must have a minimum grade point average (GPA) of 3.40 (A = 4.00) in their undergraduate studies (international GPAs are systematically converted) to be considered. The department reserves the right to admit applicants with lower GPAs under rare and exceptional circumstances. MS and MCS applicants must have a minimum GPA of 3.20. If an applicant also holds a graduate degree, the minimum GPA for that degree must be 3.00. Full details of the programs offered by Computer Science, admissibility, application procedures, and deadlines can be found at the department's Prospective Graduate Student Information Web site (<http://cs.illinois.edu/admissions/graduate>). To apply, click here (<http://www.grad.uiuc.edu/admissions/apply>).

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 79 (IBT), 213 (CBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT) or 6.5 (IELTS). Limited status (<http://www.grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus. Applicants for the online Master of Computer Science program will be considered for full admission status only.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Computer Science and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Computer Science graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, 217-333-8146, mspo@illinois.edu).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent working on requirements of the Computer Science graduate degree.

Faculty Research Interests

Illinois has been an international leader in computing research for almost five decades. Broadly organized around 9 research areas (<http://cs.illinois.edu/research>), 70 faculty members (<http://cs.illinois.edu/people/faculty>) conduct research with over 450 graduate students, and about 30 research staff members. They regularly collaborate with researchers across campus, in other departments or research units.

Facilities and Resources

The home of the Department of Computer Science at Illinois is the Thomas M. Siebel Center for Computer Science (<http://cs.illinois.edu/about-us>), a state-of-the-art building that opened its doors in 2004. On the north side of campus, home to the College of Engineering (<http://engineering.illinois.edu>), Siebel Center is an interactive computing habitat, made possible by a gift from alumnus Tom Siebel. The vision for the building was not only to create a magnificent space to work in, but to offer opportunities to investigate and apply computing tools on the building itself. Advanced wireless and wired communication networks, sensors, actuators, video capture and display equipment, video walls and information panels and storage and computing capabilities within the building allow researchers to examine communication and computation issues related to pervasive computing, multimedia infrastructure, building intelligence, security and privacy, and art.

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are awarded on a competitive basis. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships (one of the most common forms of financial aid for new graduate students in the department) must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. Students who are unable to take the iBT or IELTS are required to receive a minimum score of 5 on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Science in Computer Science (p. 725)
- Master of Science in Bioinformatics, Computer Science Concentration (p. 724)
- Master of Computer Science in Computer Science (p. 724)

Doctor of Philosophy in Computer Science

Entering with approved M.S. degree

Code	Title	Hours
CS 599	Thesis Research (minimum applied toward degree)	32
500-level course work (12 hours must be CS courses)		16
Additional graduate-level course work or thesis research credit (subject to Other Requirements and Conditions below)		16
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum hours of CS course work: 12

CS 597 and CS 591 may not be applied to the 500-level course work requirement.

CS 591 section PHD must be taken in the first semester. A maximum of 4 credit hours of CS 591 can be applied toward the Ph.D. degree.

A teaching assistantship for an entire term, with a satisfactory performance evaluation by the department, is required by the end of the 5th year.

Ph.D. exam and dissertation requirements:

International Students must show demonstration of English proficiency (equivalent to that necessary to be a TA-see Financial Aid) before taking the Qualifying Exam.

Qualifying exam²

Preliminary exam³

Final exam or dissertation defense⁴

Dissertation deposit⁵

Minimum GPA: 3.0

Entering with B.S. degree

Code	Title	Hours
CS 599	Thesis Research (minimum applied toward degree)	32
500-level course work (12 hours must be CS courses)		24
400- or 500-level course work		24
Additional graduate-level course work or thesis research credit (subject to Other Requirements and Conditions below)		16
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum hours of CS course work: 12

CS 597 and CS 591 may not be applied to the 500-level course work requirement.

CS 591 section PHD must be taken in the first semester. A maximum of 4 credit hours of CS 591 can be applied toward the Ph.D. degree.

A teaching assistantship for an entire term, with a satisfactory performance evaluation by the department, is required by the end of the 5th year.

Ph.D. exam and dissertation requirements:

International Students must show demonstration of English proficiency (equivalent to that necessary to be a TA-see Financial Aid) before taking the Qualifying Exam.

Qualifying exam²

Preliminary exam³Final exam or dissertation defense⁴Dissertation deposit⁵

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Degree Requirements (<http://cs.illinois.edu/academics/graduate/phd-program>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam information (<http://cs.illinois.edu/academics/graduate/phd-program/qualifying-exam>)

³ Preliminary Exam information (<http://cs.illinois.edu/academics/graduate/phd-program/preliminary-exam>)

⁴ Final exam or dissertation defense information (<http://cs.illinois.edu/academics/graduate/phd-program/final-exam-thesis-defense>)

⁵ Dissertation deposit information (<http://cs.illinois.edu/academics/graduate/phd-program/phd-thesis-format-review-guidelines>)

Master of Computer Science and Master of Architecture

A total of 70 graduate hours of credit are required: 32 for the M.C.S. degree as prescribed above and 38 for the Master of Architecture (p. 661) degree. Course credit required for the individual degrees is mutually exclusive.

Master of Computer Science and Juris Doctor in Law

Specific graduate hours of credit for each degree are required: 32 hours for the M.C.S. as prescribed above and 90 for the Juris Doctor (p. 808). However, some credits used in each program may apply to the other, allowing students to earn both degrees in a shorter time. For the M.C.S. degree

- at least 12 credit hours must be law course work relating to legal protections for intellectual property or in related business law fields and
- at least 6 credit hours must be from approved law courses as determined by the College of Law.

For the J.D. degree, 12 credit hours may be computer science or other scientific course work leading to the M.C.S. degree.

Online Program

Master of Computer Science (I2CS M.C.S.)

The Illinois Internet Computer Science option allows individuals to earn a Master of Computer Science (p. 724) degree from a leader in information technology entirely online with no required campus visits. Online students have the option to complete the comprehensive MCS track or the MCS program with a data science track. All online classes are taught by our world-recognized faculty. Online students also receive additional instructional support from Computer Science Graduate Teaching Assistants and program staff. Off-campus students have 5 years in which to complete the program. The degree awarded is the same as the on-campus M.C.S. degree. Admissions procedures and forms can be found at Graduate Admissions (<http://cs.illinois.edu/admissions/graduate>).

Master of Computer Science

This degree (<http://cs.illinois.edu/academics/graduate/professional-mcs-program>) is offered as an on-campus program or online via the Internet through the I2CS program.

Code	Title	Hours
	Breadth Requirement (http://cs.illinois.edu/academics/graduate/professional-mcs-program/mcs-degree-requirements)	12-16
	Advanced courses – chosen from CS 500 - CS 590 and CS 598; CS 597, or an approved non-CS 500-level course may satisfy 4 credit hours of this requirement.	12
	Elective courses (subject to Other Requirements and Conditions below)	4-8
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 24 CS credit hours must be taken from the University of Illinois at Urbana-Champaign campus.

A minimum of 12 500-level credit hours overall.

A maximum of 4 hours of CS 591 and CS 491 may be applied toward the degree.

A grade of B- or higher is required for Breadth course work.

At most, 12 semester credit hours of previous graduate course work may be transferred and applied to the M.C.S. degree requirements and 12 credit hours of non-degree graduate courses completed in the Department of Computer Science at the University of Illinois at Urbana-Champaign campus may be transferred and applied to the M.C.S. degree requirements.

All degree requirements must be completed within three consecutive semesters (only fall and spring semesters are counted).

Off-campus students have 5 years in which to complete this degree.

The minimum program GPA is 3.0.

¹ For additional details and requirements refer to the department's Graduate Degree Requirements (<http://cs.illinois.edu/academics/graduate/professional-mcs-program>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Bioinformatics, Computer Science Concentration

The CS concentration for the M.S. in Bioinformatics is an interdisciplinary degree that can be counted toward the Computer Science Ph.D.

Code	Title	Hours
CS 411 & CS 473	Database Systems and Algorithms	8
STAT 410	Statistics and Probability II	4
	One bioinformatics course chosen from a departmental list of bioinformatics courses. (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4

One biological science course chosen from a departmental list of biological sciences courses. (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
CS electives, chosen from a departmental list of CS electives. (http://cs.illinois.edu/academics/graduate/ms-bioinformatics-program)	12
One additional 4-credit hour graduate course (may be from the bioinformatics or biological science categories above)	4
Total Hours	36

Other Requirements

Other Requirements and Conditions may overlap

A minimum of 12 500-level credit hours overall.

The Minimum program GPA is 3.0

All degree requirements must be completed within five consecutive semesters (only fall and spring semesters are counted).

³ For additional details and requirements refer to the department's *Graduate Degree Requirements* (<http://cs.illinois.edu/academics/graduate/ms-bioinformatics-program>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Computer Science

The Master of Science (M.S.) in Computer Science is a research-oriented degree that can be counted toward the Computer Science Ph.D.

Code	Title	Hours
CS 599	Thesis Research (minimum applied toward degree)	4
	Breadth Requirement - One course from each of three different (out of eight) core areas (http://cs.illinois.edu/current-students/graduate-students/ms-thesis)	9-12
	Advanced courses – One 500-level course from one of the three areas selected in the Breadth Requirement; Remaining hours from any 500-level CS course (500-590 or 598) except CS 591 or CS 597. An approved 500-level non-CS course may satisfy 4 credit hours of this requirement; CS 599 (thesis) may satisfy 4 credit hours of this requirement.	12
	Elective courses (subject to Other Requirements and Conditions below)	4-7
Total Hours		32

Other Requirements ¹

Other Requirements and Conditions may overlap

A minimum of 16 CS credit hours must be taken from the University of Illinois at Urbana-Champaign campus.

A minimum of 12 500-level credit hours overall.

A maximum of 4 hours of CS 591 and CS 491 may be applied toward the degree.

A grade of B- or higher is required for Breadth Requirement course work.

At most, 12 semester credit hours of previous graduate course work may be transferred and applied to the M.S. degree requirements and 12 credit hours of non-degree graduate courses completed in the Department of Computer Science at the University of Illinois at Urbana-Champaign may be transferred and applied to the M.S. degree requirements.

It is each student's responsibility to secure a M.S. thesis advisor and start thesis research no later than the beginning of the third semester in the program.

All degree requirements must be completed within five consecutive semesters (only fall and spring semesters are counted).

The minimum program GPA is 3.0.

¹ For additional details and requirements refer to the department's *Graduate Degree Requirements* (<http://cs.illinois.edu/academics/graduate/ms-program>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Creative Writing

<http://creativewriting.english.illinois.edu/>

Head of the Department: Michael Rothberg
 Director of Graduate Studies: Eleanor Courtemanche
 Director of Creative Writing: Jodee Stanley
 Associate Director of Creative Writing: Steve Davenport
 210 English Building
 608 South Wright Street
 Urbana, IL 61801
 (217) 333-3646
 E-mail: engl_resources@ad.uiuc.edu

Major: Creative Writing
 Degrees offered: M.F.A.

Graduate Degree Programs

The Department of English offers a program of study leading to a Master of Fine Arts. A candidate for the MFA must spend at least four semesters or the equivalent in residence and complete at least 48 graduate hours. A full-time student typically completes this program in three academic years.

Admission

Graduate Record Examination (GRE) scores are required, but the GRE subject test for literature in English is not. All applicants whose native language is not English are required to submit Test of English as a Foreign Language (TOEFL) scores. Currently, a minimum score of 550 on the paper-based test (213 on the computer-based test) is required. Before a teaching assistantship involving classroom instruction or student consultation can be awarded to a non-native speaker of English, the applicant must take the Test of Spoken English (TSE) and achieve a score of 50 or higher (230 or higher before 1996). Because applications for admission usually far exceed capacity, in recent years undergraduate grade point averages of students admitted have been significantly higher than the 3.0 (A = 4.0) required by the Graduate College. The committee on admissions tends to select those applicants who have a solid array of undergraduate courses, strong recommendations, and a compelling writing sample: in short, an academic record that shows promise of a student capable of doing outstanding work in the field and earning a degree within a reasonable time. Preference is given to applicants who will be full-time students and active degree candidates. Applicants

are considered only in spring for fall admission, and the deadline for submitting applications is December 17.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all MFA candidates in this program.

Financial Aid

Financial aid is available to students in the form of fellowships, teaching assistantships, and waivers of tuition and service fees. For complete information about the program, prospective applicants should consult our website at <http://creativewriting.english.illinois.edu/graduate/about/>.

Master of Fine Arts in Creative Writing

Code	Title	Hours
Workshops		16
Craft course in the appropriate genre		4
Proseminar		4
Approved Literature courses at the 400 and 500 level		8
Electives		8
CW 595	Final Project	0-12
Total Hours		40-52

Other Requirements¹

Other requirements may overlap

Four semesters in residence

Teaching experience is required.

A public reading from the completed project is required for graduation

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's program requirements (<http://creativewriting.english.illinois.edu/graduate/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Crop Sciences

<http://www.cropsci.illinois.edu>

Head of the Department: G. A. Bollero
 AW-101 Turner Hall
 1102 South Goodwin Avenue
 Urbana, IL 61801
 (217) 244-0396
 E-mail: sdcarson@illinois.edu

Major: Crop Sciences
 Degrees Offered: M.S., Ph.D.

Major: Bioinformatics
 Degrees Offered: M.S.
 Graduate Concentration: Crop Sciences

Online Program: Crop Sciences
 Degrees Offered: M.S.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Crop Sciences and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Crop Sciences offers programs leading to the Master of Science and Doctor of Philosophy degrees. Great flexibility exists for planning programs in various areas, and no rigid curricula are prescribed. The following areas of specialization, along with some of the corresponding disciplines, indicate the breadth of opportunities:

- plant pathology including epidemiology, control, mycology, phyto bacteriology, virology, nematology, and host plant resistance;
- plant breeding and genetics including cytogenetics, molecular genetics, quantitative genetics, and genetics of host-pathogen interactions;
- molecular biology and physiology including biochemistry, plant physiology, tissue culture, and plant-pathogen interactions;
- crop production including management, crop ecology, plant nutrition, and international crop production;
- weed science including biology, control, and ecology;
- bioinformatics;
- biometry including experimental design and data analysis;
- integrated pest management including response of crops to climate changes and fate of agricultural chemicals.

These areas of specialization apply to both agronomic and horticulture crops including ornamentals, turf grasses, fruits and vegetables.

The genomic and proteomic projects are generating large amounts of complex biological data that require effective storage, retrieval, analysis and interpretation. The bioinformatics degree program provides students with the skills necessary to augment the understanding and use of agricultural, biological and medical information and resources through the application of molecular, chemical, physical, computational, statistical, mathematical and informatic techniques. Students interested in this program may come with undergraduate training in one of the following areas:

1. biological and agricultural sciences,
2. statistical, mathematical and computer sciences,
3. informatics and engineering sciences.

Graduates from the bioinformatics program will be able to integrate basic and applied concepts in the three areas and apply them to biotechnology and medical research. For additional information, please see our website at cropsci.illinois.edu/graduate/programs/ (<http://cropsci.illinois.edu/graduate/programs>).

Admission

Applicants are considered for admission to the Master of Science program if they have a bachelor's or equivalent degree comparable to that granted by the University of Illinois. Admission to the Ph.D. program will be considered for applicants with the M.S., those nearing completion of the M.S., and in some cases, those with the B.S. Because of the diversity of programs in the Department of Crop Sciences, the preparation that is needed varies considerably. Strong letters of reference, evident motivation to undertake graduate study, and good preparation in basic science courses enhance an applicant's credentials. For some programs, greater emphasis is given to previous training in plant

sciences, chemistry, or mathematics. A grade point average equivalent to at least a B in the last 60 semester hours of undergraduate course work plus any graduate level work completed is required. All applicants whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Official scores are required to be submitted directly from TOEFL/ETS or IELTS to the University. Additional information for international applicants can be found at: www.grad.illinois.edu/prospective/international.htm (<http://www.grad.illinois.edu/prospective/international.htm>). Results of the Graduate Record Examination (GRE) are required for applicants to all programs except the Online Master of Science degree program. Please see our web page for additional information: cropsci.illinois.edu/graduate/admission. (<http://cropsci.illinois.edu/graduate/admission>)

Medical Scholars Program

Please note applications are not being accepted at this time to the Medical Scholars Program.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Crop Sciences. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Faculty Research Interests

Please refer to the following webpage for a detailed listing of our faculty and their areas of interest cropsci.illinois.edu/directory/faculty (<http://cropsci.illinois.edu/directory/faculty>).

Facilities and Resources

The department of crop sciences has excellent laboratory, greenhouse, and field research facilities available for all types of research. A network of experimental locations throughout the state and cooperative arrangements with other states make thesis research possible under a wide range of environmental and climatic conditions. The department's involvement in international programs may provide opportunities to conduct thesis research abroad. All phases of research, from bioinformatics, molecular biology and biophysics to field testing and crop production, are supported by state-of-the-art facilities. A map of the facilities can be seen at cropsci.illinois.edu/about/facilities (<http://cropsci.illinois.edu/about/facilities>).

Financial Aid

Fellowships and assistantships are available to outstanding students on a competitive basis. Awards for financial assistance are based

principally on a candidate's academic record, statement of plans, letters of reference, and GRE scores.

- Master of Science in Crop Sciences (p. 729)
- Master of Science in Bioinformatics, Crop Sciences Concentration (p. 728)

Doctor of Philosophy in Crop Sciences

Students are required to pass a preliminary examination within five semesters of first enrolling, not including the summer terms, and after substantial completion of the Ph.D. graded coursework requirement. The preliminary examination is comprised of both an oral and written component and students are expected to defend their Thesis Proposal at the oral component of the examination. Those students on the BA to PhD plan must also pass a Qualifying Exam. An acceptable dissertation is required. Residence requirements are the same as those of the Graduate College.

Entering with approved M.S./M.A. degree

Code	Title	Hours
Minimum Graded Coursework approved by the graduate guidance committee not including CPSC 594 or CPSC 598, with a grade point average of at least a B.		12
CPSC 594	Professional Orientation CPSC ((not required if it was taken in fulfillment of the master's degree.))	1
CPSC 598	Seminar (CPSC 598: Graduate Student Seminar (enrollment required each semester)) ^{Maximum applied toward degree}	14
CPSC/PLPA 599	Thesis Research (minimum applied toward degree)	37
Total Hours		64

Other Requirements ¹

Other requirements and conditions may overlap

64 hours of in-residence credit beyond the M.S.	
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
Coursework approved by the graduate guidance committee not including CPSC 594 or CPSC 598, with a grade point average of at least a B.		32
CPSC 594	Professional Orientation CPSC	1

CPSC 598	Seminar (Enrollment required each semester) <small>Maximum applied toward degree</small>	14
CPSC/PLPA 599	Thesis Research (minimum applied toward degree)	49
Total Hours		96

Other Requirements¹

Other requirements and conditions may overlap

64 hours of in-residence credit beyond the M.S.

Minimum 500-level Hours Required 36

Overall:

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

The Online M.S. in Crop Sciences program enables students to strengthen their education typically through part-time study, as most students are working professionals. Courses are delivered mainly through online and other distance education technologies and occasional site-based programming (site-based courses are optional and not required to complete the degree). The Crop Sciences online M.S. program is typically completed as a non-thesis degree, but a thesis option can be pursued pending Departmental approval. (p. 729) The program has a 30-plus year history of providing high quality University of Illinois courses and began granting off-campus MS degrees in 1986 to agriculture professionals across Illinois, as well as in neighboring states. Students may enroll in individual courses for personal or professional advancement or may apply for admission to the master's degree program in Crop Sciences. Students who successfully complete three qualifying courses may also receive a Professional Development Certificate in Crop Sciences.

The Online M.S. in Crop Sciences program also works in conjunction with the Natural Resources and Environmental Studies Online M.S. program and the Agriculture Education Online M.S. program to offer a diverse set of courses. The Department of Crop Sciences is looking to the future and the needs of non-traditional students. Therefore, new courses are continually in development for online delivery and blended formats. A student may complete their entire degree requirements online from anywhere in the world and they are available to in-state students and out-of-state students at the same tuition rates. For more information on Crop Sciences, the Online M.S. in Crop Sciences degree program or certificate offerings, please visit cropsci.illinois.edu/online-program (<http://cropsci.illinois.edu/online-program>).

Master of Science in Bioinformatics, Crop Sciences Concentration

The Crop Sciences concentration within the M.S. degree in Bioinformatics can be earned with a thesis option or a non-thesis option, which requires optional supervised research experiences.

Thesis Option

Code	Title	Hours
One biology course from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
CS 411 or CS 473	Database Systems Algorithms	4
One bioinformatics course from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
Seminar (1 per semester)		
Electives		16
CPSC/PLPA 599	Thesis Research	4
Total Hours		32

Other Requirements¹

Other requirements and conditions may overlap

A concentration is required

Minimum Hours Required Within the Unit: 5

Minimum 500-level Hours Required overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
One biology course from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
CS 411 or CS 473	Database Systems Algorithms	4
One bioinformatics course from approved list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
Electives		24
Total Hours		36

Other Requirements¹

Other requirements and conditions may overlap

A concentration is required.

Minimum Hours Required Within the Unit: 3

Minimum 500-level Hours Required overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Crop Sciences

Candidates must complete 32 hours of graduate study as approved by their graduate guidance committee with at least a B average. An oral final examination is required of all M.S. candidates, and written examinations may be required at the option of the examining committee.

Thesis Option

Code	Title	Hours
CPSC 594	Professional Orientation CPSC	1
CPSC 598	Seminar (when presenting)	1
Electives including at least 4 hours of graded coursework at the 500 level other than CPSC 599		18
CPSC/PLPA 599	Thesis Research (min-max applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements and conditions may overlap

Minimum Hours Required Within the Unit: 5

Minimum 500-level Hours Required overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
CPSC 594	Professional Orientation CPSC	1
CPSC 598	Seminar (when presenting)	1
Electives including at least 4 hours of graded coursework at the 500 level other than CPSC 599		30
Total Hours		32

Other Requirements ¹

Other requirements and conditions may overlap

Minimum Hours Required Within the Unit: 1

Minimum 500-level Hours Required overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (http://cropsci.illinois.edu/sites/cropsci.illinois.edu/files/pdf/Grad_Student_Handbook_2013.pdf) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Curriculum and Instruction

<http://education.illinois.edu/ci>

Interim Head of the Department: David Brown
 Director of Graduate Studies: Karla Möller
 Graduate Admissions Information: Myranda Crist
 311 Education Building
 1310 South Sixth Street
 Champaign, IL 61820
 (217) 244-8286
 E-mail: gradservices@education.illinois.edu

Major: Curriculum and Instruction
 Degrees offered: Ed.M., M.S., M.A., C.A.S., Ph.D., and Ed.D.
 Graduate Concentration: Second Language Acquisition and Teacher Education (Ph.D. only), Writing Studies (Ph.D. only)

Major: Early Childhood Education
 Degrees offered: Ed.M. with teacher licensure

Major: Elementary Education
 Degrees offered: Ed.M. with teacher licensure

Major: Secondary Education
 Degrees offered: Ed.M. with teacher licensure
 Graduate Concentrations: English, Mathematics, Sciences, Social Studies

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Curriculum and Instruction and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Curriculum and Instruction offers graduate programs leading to the degrees of Master of Education (Ed.M.), Master of Science (M.S.), Master of Art (M.A.), Certificate of Advanced Study (C.A.S.), Doctor of Philosophy (Ph.D.), and Doctor of Education (Ed.D.). An example of faculty research areas:

- Aesthetics Education
- Bilingual/ESL Education
- Curriculum Studies
- Early Childhood Education
- Early Literacy
- Elementary Education
- English Education
- Literature for Children and Adolescents
- Mathematics Education
- Multicultural Education
- Reading Education
- Science Education
- Second Language Literacy
- Secondary Education
- Social Studies Education
- Teacher Education
- Technology Studies
- Writing Education

Graduate students interested in writing can obtain a concentration in Writing Studies (<http://www.cws.illinois.edu/graduate>) at the Ph.D. level.

Through the Master of Education and the Certificate of Advanced Study, experienced teachers are prepared to become more competent and better informed practitioners who serve as leaders for educational reform in local schools and school districts.

Also offered are master's degree programs leading to teacher licensure for individuals who have a degree in a field other than education and wish to become teachers. The three majors leading to licensure are Early Childhood Education, Elementary Education, and Secondary Education. In addition to completing the courses required for an Ed.M. degree, students in these programs follow the same sequence of professional education courses as undergraduate students.

Only master's students wishing to become licensed teachers in one of these three areas should apply to the Early Childhood Education, Elementary Education, or Secondary Education majors. Master's candidates who do not wish to become teachers, or are already teachers, should apply to the major in Curriculum and Instruction.

Two doctoral degree programs are offered. The Ph.D. program prepares degree candidates for careers involving research and scholarship, including those in colleges and universities where research is generally combined with teacher education. The Ed.D. Program prepares scholarly practitioners for leadership positions in teacher training institutions, state education agencies, and public school districts.

Length of time for a degree: an Ed.M. program can be completed in a calendar year, while the M.S. or M.A. often takes longer. The Ed.M. with licensure typically takes two years to complete. Doctoral programs usually require four to five years of full time study.

Admission

Interested applicants should start at <http://education.illinois.edu/programs/grad>. In addition to the application, the applicant is required to submit the following information: a statement of purpose, updated resume, official transcripts from all colleges attended, and three letters of recommendation. Graduate Record Examination (GRE) scores must be submitted for all doctoral applicants. A scholarly writing sample in English, such as a master's thesis, article, or paper, is required for application to a doctoral program. Applicants for the master's degree with teacher licensure must submit passing scores on the Illinois Licensure Testing System Test of Academic Proficiency (TAP) or use their ACT/SAT score in lieu of passing the TAP (<http://education.illinois.edu/students/prospective-students/ACT>) and for secondary education licensure, the appropriate content area examination. Note: The master's with teacher licensure program only admits students for the fall term.

International applicants must submit TOEFL scores. The Department of Curriculum and Instruction's TOEFL requirement for full status admission is greater than 102; the minimum score for limited status is 550 on the paper-based test, 79 on the internet-based test and 213 on the computer-based test. International applicants must also submit a Declaration and Certification of Finances. Please note: TOEFL or IELTS scores must be less than two years old from the first day of class at the proposed term of entry in order to be valid. In addition, individual academic programs may require a higher score, or evidence of spoken English language proficiency; contact your proposed program of study office (<http://www.grad.illinois.edu/admissions/depts>) for the minimum TOEFL, TSE, or IELTS requirement for admission. For additional details, refer to the Graduate College Handbook www.grad.illinois.edu/

[admissions/instructions/04c](http://www.grad.illinois.edu/admissions/instructions/04c) (<http://www.grad.illinois.edu/admissions/instructions/04c>).

Degree Requirements

- Masters (p. 731)
- Doctoral (p. 731)
- C.A.S. (p. 731)

For additional details and requirements refer to the department's Web site (<http://www.education.illinois.edu/ci>), the College of Education Graduate Programs Handbook (http://www.ed.illinois.edu/students/grad_handbook), and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Curriculum and Instruction. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Faculty Research Interests

For information about specific faculty research interests, current grants, and publications, please visit the Faculty Research Profiles web site: www.ed.illinois.edu/ci/frp (<http://education.illinois.edu/ci/people>).

Facilities and Resources

Departmental resources consist of cooperation with Children's Research Center, Center for Small Urban Communities, as well as other resources in the College. Students who are interested in second language acquisition can become a part of the SLATE program. The department is connected to the University of Illinois Writing Project and the following journals: *International Journal of Education & the Arts*, *Journal of Curriculum Studies*, and *American Educational Research Journal*. The department also has resources for graduate students such as the Language and Literacy Student Organization and other student-initiated groups in Curriculum, Aesthetics, and Teacher Education; and Mathematics, Science, and Technology.

The College of Education also has many resources to assist graduate students through their academic career. The Bureau of Educational Research works with students to secure research funding. The Council on Teacher Education (<http://cote.illinois.edu>) entitles candidates seeking a Professional Educator License and provides accreditation of professional education programs. Each student completing a degree program is assigned a graduate adviser, who is available to assist the student with planning the program of study and determining degree requirements, courses and timelines for degree completion.

Information on University resources can be found at <http://www.grad.illinois.edu/current-students>.

Financial Aid

Financial aid in the form of assistantships, scholarships, fellowships, and tuition waivers can be found throughout the college (<http://education.illinois.edu/programs/grad/financial-aid>) and campus. Campus opportunities can be found at the Graduate College (<http://www.grad.illinois.edu/funding-jobs>) and the Office of Student Financial Aid (<http://www.osfa.illinois.edu>). **Please note: Graduate students employed as Staff by the University of Illinois at Urbana-Champaign are not eligible for a College of Education Award or Scholarship.**

- Master of Education in Curriculum and Instruction (p. 732)
- Master of Science and Master of Arts in Curriculum and Instruction (p. 734)
- Degrees with Teacher Licensure
 - Master of Education in Early Childhood Education (p. 733)
 - Master of Education in Elementary Education (p. 733)
 - Master of Education in Secondary Education (p. 734)
- Doctor of Education in Curriculum and Instruction (p. 731)
- Doctor of Philosophy in Curriculum and Instruction (p. 732)

Certificate of Advanced Study (C.A.S.), Curriculum and Instruction

The University of Illinois at Urbana-Champaign's College of Education complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be found here (http://archives.provost.illinois.edu/certificates/CAS_CI/13.0301-Gedt.html).

Code	Title	Hours
If the student does not have a Master's degree from the University of Illinois at Urbana-Champaign, Foundation Courses must be completed as prerequisites:		
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	

EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24-32
General Coursework Required: 16 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Enrollment must be preceded by at least two years of acceptable professional work experience.

500-Level Hours Required: 16 hours (Independent Study included)

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://education.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/handbooks-policies>).

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the M.B.A. program and their major department office for more information.

Doctor of Education in Curriculum and Instruction

Code	Title	Hours
Cognate Requirement (minimum applied toward degree)		16
Research Methods		8
Elective Hours:		36
General Course Work		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-12

CI 599	Thesis Research (min/max applied toward degree)	4-16
Total Hours		64

Other Requirements¹

Master's Degree Required for Admission to Ph.D.

Residency	2 consecutive full-time (12 hours) semesters of study on campus
-----------	---

Qualifying Exams

Human Subjects Approval

Preliminary Exam

Final Exam/Dissertation Defense

Dissertation Deposit

Minimum GPA	3.0
-------------	-----

¹ For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://education.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/handbooks-policies>).

Doctor of Philosophy in Curriculum and Instruction

Code	Title	Hours
Completion of at least 64 hours beyond the master's degree including:		
Major Subject Coursework (minimum)		32
CI 599	Thesis Research (min/max applied toward degree)	4-20
Independent Study (min/max applied toward degree)		0-12
Research Coursework ¹		16-20
Total Hours		64

Other Requirements²

Master's Degree Required for Admission to Ph.D.

Residency	2 consecutive full-time (12 hours) semesters of study on campus
-----------	---

Early Research Requirement

Qualifying Exams

Human Subjects Approval

Preliminary Exam

Final Exam/Dissertation Defense

Dissertation Deposit

Minimum GPA	3.0
-------------	-----

¹ All students will take a minimum of 16-20 credit hours, depending on area of methodology focus, in approved research methods courses (<http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement>).

² For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://education.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/handbooks-policies>).

Master of Education in Curriculum and Instruction

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education: 12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements¹

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site (<http://www.education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://www.ed.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Education in Early Childhood Education with teaching licensure

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education: 12 hours		

Research/Project/Independent Study Hours (min/max applied toward degree):	0-8
Total Hours	32

Other Requirements:¹Field Placement Information <http://education.illinois.edu/sce>
Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://education.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/handbooks-policies>).

Master of Education in Elementary Education with teaching licensure

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24

400/500-Level Hours Required: 12 hours (Independent Study included)	
500-Level Hours Required in Education:12 hours	
Research/Project/Independent Study Hours (min/max applied toward degree):	0-8
Total Hours	32

Other Requirements:¹

Field Placement Information	http://education.illinois.edu/sce
Minimum GPA	3.0

¹ For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the College of Education Graduate Programs Handbook (http://education.illinois.edu/students/grad_handbook), and the Graduate College Handbook (<http://www.grad.illinois.edu/handbooks-policies>).

Master of Education in Secondary Education with teacher licensure

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 422	Race, Educational Policy, and Sociology	
EPS 423	Politics of Education	

EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education:12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements:¹

Field Placement Information	http://education.illinois.edu/sce
Choose a Concentration	English, Mathematics, Science, Social Sciences
Minimum GPA	3.0

¹ For additional details and requirements refer to the department's Web site (<http://education.illinois.edu/ci>), the College of Education Graduate Programs Handbook (http://education.illinois.edu/students/grad_handbook), and the Graduate College Handbook (<http://www.grad.illinois.edu/handbooks-policies>).

Master of Science and Master of Arts in Curriculum and Instruction

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	

EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education: 12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
CI 599	Thesis Research (min/max applied toward degree)	2-8
Total Hours		32

Other Requirements ¹

Minimum GPA	3.0
Human Subjects Approval	

¹ For additional details and requirements refer to the department's Web site (<http://www.education.illinois.edu/ci>), the *College of Education Graduate Programs Handbook* (http://education.illinois.edu/students/grad_handbook), and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Dance

<http://www.dance.illinois.edu>

Head of the Department of Dance: Rebecca Netti-Fiol
MFA Program Director: Cynthia Oliver
907 1/2 West Nevada Street
Urbana, IL 61801
(217) 333-1010
Fax: (217) 333-3000
E-mail: dance@illinois.edu

Major: Dance
Degrees Offered: M.F.A.

Graduate Degree Program

The Department of Dance offers a graduate program leading to the Master of Fine Arts degree. The mission of the MFA Program is to foster substantive choreographic research that posits dance as a force in contemporary culture. The program embraces a wide spectrum of individual movement research and embodied practice to create a dynamic learning atmosphere for critical engagement with choreographic process.

The Dance Department expects MFA candidates to conduct a creative inquiry that leads to the development of a sophisticated sense of self-definition. Individual research and analysis should culminate in the development of a personal artistic process and mission and should be evident in the following contexts:

- Choreographing- Candidates will develop a distinctive choreographic research methodology and demonstrate its skillful application in a performative context. This ideology must establish solid foundation

for ongoing research and engagement that contributes to the global dialogue about dance and contemporary culture.

- Communicating- Candidates will develop the ability to express their choreographic vision and process in verbal and written language that is clear, cogent, and convincing and demonstrates clear analytic skill, critical thinking, awareness of historical context, and knowledge of contemporary culture.
- Moving- Candidates will demonstrate a commitment to movement investigation and practice that defines, advances, and sustains their choreographic vision.
- Teaching- Candidates will apply their research vision in clear pedagogic principles while fostering a stimulating teaching/ learning environment.
- Career Planning- Candidates are assessed on their ability to develop innovative career strategies in order to advance their artistic mission in the field and demonstrate the capacity to implement these plans with professionalism in all the above contexts.

Admission Requirements

Prerequisites for admission to the MFA program are:

1. An undergraduate degree and significant experience in dance is required.
2. Demonstrated choreographic achievement and potential to make innovative contributions to the field.
3. Demonstrated potential to engage in critical thinking and writing.
4. A minimum grade point average of 3.0 on a 4 point scale, computed from the last 60 hours of undergraduate work and any graduate work completed.

International students must have a minimum TOEFL score of 79 on the internet-based test, 213 on the computer-based tests, or 550 on the paper test for limited status admission. Students with these minimum scores must take the English as a Second Language Placement Test (EPT) upon entry to the University. International students who receive a score greater than 103 on the internet-based test, 257 on the computer-based test, or 613 on the paper test are eligible for full status admission. Students with these scores are exempt from the English as a Second Language Placement Test. The GRE is not required.

Faculty Research Interests

An extraordinary faculty of artists, researchers and scholars has gathered at Illinois, who are creating new paradigms for interactions between the professional arena and the academic training ground. Our group of professional artists includes Jan Erkert, Sara Hook, Philip Johnston, Linda Lehovc, Jennifer Monson, Rebecca Netti-Fiol, Tere O'Connor, Cynthia Oliver, Kirstie Simson, Endalyn Taylor, John Toenjes, Renee Wadleigh, and Abby Zbikowski, all of whom share a commitment to teaching and preparing students for leadership roles in the field of dance.

Financial Aid

Two forms of financial aid are offered to graduate students by the Department of Dance:

- Teaching, video and administration assistantships are available to graduate students. Assistantships of 25% or greater qualify the student for a tuition waiver. All students are required to apply for Federal Work Study.
- A variety of Fellowships are available through The Graduate College each year, including: (A full listing of Fellowships can be found at:

www.grad.illinois.edu/fellowships (<http://www.grad.illinois.edu/fellowships>))

- The Creative and Performing Arts Fellowship, which may include stipends up to a maximum of \$6,000 for a student demonstrating outstanding choreographic and performance talent.
- The Graduate College Fellowship for Underrepresented Students provides fellowships in the amount of \$8,000 and are available to outstanding minority students.

Graduate teaching assistantships are awarded to experienced teachers. A letter of recommendation from a dance professional who has observed the applicant's teaching is required with the application.

Prospective MFA candidates are encouraged to apply for financial assistance through the Office of Student Financial Aid, 420 Student Services Bldg., University of Illinois at Urbana-Champaign, Champaign, IL 61820. (217) 333-0100.

Master of Fine Arts in Dance

The MFA Curriculum is designed to promote a candidate's progress through our stated objectives: Choreography, Communication, Moving, Teaching, and Career Planning.

Included in these are courses in dance studies, somatics, pedagogy, and two semesters devoted to an innovative lab team taught by our faculty and designed in collaboration with students. The final year of study is devoted to synthesizing the above objectives evidenced by the production of the candidate's choreography, their written thesis document, oral presentation, and plans for propelling students' career into the professional sphere.

Code	Title	Hours
Physical Practice, at least 2 hours through DANC 560		6
Historical and Theoretical Studies		8
DANC 510	Grad Seminar/Special Topics	
DANC 541	Contemporary Directions I	
DANC 542	Contemporary Directions II	
Composition		4
DANC 462	Composition Workshop	
DANC 562	Graduate Composition II	
Performance		2
DANC 420	Perf Pract Student Works II	
DANC 421	Performance in Grad Thesis II	
DANC 422	Perf Pract November II	
DANC 423	Perf Pract February II	
DANC 424	Collaborative Performance	
Research/Project		8
DANC 598	Creative Thesis Project	
Graduate Synthesis Laboratory		8
DANC 520	Synthesis Laboratory	
Somatics in Dance Training		3
DANC 530	Somatics in Dance Training	
400/500 level elective course outside the Department of Dance in related area of research		4
Electives which may be taken in Dance or related areas of interest		17
Total Hours		60

Other Requirements¹

Other requirements may overlap

Course work taken to completed undergraduate deficiencies will not receive graduate credit.

Residency requirement of three years (six semesters)

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *MFA Handbook* (<http://dance.uiuc.edu/prospective-students/mfa>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

- Minor in Dance (p. 736)

Minor in Dance

The Graduate Minor in Dance offers physical, creative, and theoretical engagement with contemporary dance and performance. The program of study presents interested graduate students the chance to endow their major graduate degree studies with interdisciplinary ideas and presents an alternate pedagogic window into research through the body. Prospective graduate minor students will be required to have successfully completed one of the required Dance Graduate Minor courses prior to official admission to the program. In addition, they will have to be interviewed by the MFA in Dance Program Director, and they will have to provide a letter of endorsement from their home department advisor that is co-signed by their home department Graduate Program Director.

For additional information, please contact dance@illinois.edu.

Code	Title	Hours
DANC 510	Grad Seminar/Special Topics	4
DANC 541	Contemporary Directions I	2
or DANC 542	Contemporary Directions II	
DANC 462	Composition Workshop	2
or DANC 562	Graduate Composition II	
DANC 550	Advanced Research in Dance (or additional enrollment in DANC 541, 542, 462, or 562)	1 to 4
DANC 560	Advanced Physical Practice	1 to 4
Total Hours		12

Minimum 500-level hours required 10 overall:

East Asian Languages and Cultures

<http://ealc.illinois.edu>

Head of Department: Robert Tierney
 Director of Graduate Studies: Chilin Shih
 2090 Foreign Languages Building
 707 South Mathews Avenue
 Urbana, IL 61801
 (217) 244-1432
 E-mail: ealc@illinois.edu

Major: East Asian Studies
 Degrees Offered: M.A.

Major: East Asian Languages and Cultures
Degrees Offered: Ph.D.

Graduate Concentration: Medieval Studies (p. 837) (Ph.D.), Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in East Asian Languages and Cultures and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>).

Graduate Degree Programs

The Department of East Asian Languages and Cultures offers academic programs in the languages and the humanistic cultures of China, Japan, and Korea, and of the East Asian region as a whole, leading to the Master of Arts in East Asian Studies and the Doctor of Philosophy in East Asian Languages and Cultures.

www.ealc.illinois.edu/programs/graduate/ (<http://www.ealc.illinois.edu/programs/graduate/>)

Admission

Applicants are expected to have a strong background in at least one East Asian language; normally, this means a minimum of two years of formal study. Applicants to the graduate program must submit an application for admission online (www.grad.illinois.edu/admissions/apply) (<http://www.grad.illinois.edu/admissions/apply>) and submit a statement of purpose, three letters of reference completed by teachers, advisers, or recent employers, and a 10-20 page writing sample. Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should be sent to:

SLCL Graduate Student Services
3070 Foreign Languages Bldg.
707 S. Mathews Ave.
Urbana, IL 61801

Graduate Record Examination (GRE) scores are required and should be submitted to institution code 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 103 on the internet-based test (iBT) for admission with full standing; they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c) (<http://www.grad.illinois.edu/Admissions/instructions/04c>). Students with a B.A. or B.S. only should apply to the M.A. Applications are accepted for fall admission only. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu. (slclgradservices@illinois.edu)

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including East Asian Languages and Cultures. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical

Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at <https://www.med.illinois.edu/mdphd/>.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program. Therefore, applicants are requested to include information on teaching background as part of the application, and students can normally be expected to teach at least one semester as part of their graduate experience. Non-native English speakers must first pass a test of their oral English ability.

www.grad.uiuc.edu/admissions/taengprof.htm (<http://www.grad.uiuc.edu/admissions/taengprof.htm>)

Financial Aid

The Department makes every effort to assist graduate students in securing financial aid. Financial aid packages usually combine some form of fellowship support with teaching or research assistantships in a manner that allows for both teaching experience and timely completion of the degree. In recent years, almost all EALC graduate students have received some form of financial support. Financial aid for graduate students in the Department of East Asian Languages and Cultures may include:

- University Fellowships
- Foreign Language and Area Studies (FLAS) Fellowships
- University Dissertation Completion Fellowships
- Minority Academic Partnership Plan (MAPP) Fellowships
- teaching assistantships
- research assistantships

All awards of financial aid are made following competitive application.

<https://www.grad.illinois.edu/fellowship/>

Master of Arts in East Asian Studies

Thesis Option

Code	Title	Hours
	Two 500-level courses in the major field including one course designated as a research seminar in which the student produces a research paper using Asian language sources.	8
EALC 500	Proseminar in EALC	4
	Distribution requirements. a minimum of two (8 hours) 400- or 500-level courses that are: 1. outside the major field of interest. 2. in an East Asian culture other than the major areas of interest. 3. in a Second Period (modern or premodern)	8
	Elective hours	8
	Language Requirement: Candidates must demonstrate a knowledge of one East Asian language at the fourth-year level by satisfactory completion of appropriate (400-level) coursework or examination and passage of a written examination covering material studied while in residence.	
EALC 599	Thesis Research (min/max applied toward degree)	4
	Total Hours	32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's guide to Graduate Programs (<http://www.ealc.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Two 500-level courses in the major field including one course designated as a research seminar in which the student produces a research paper using Asian language sources.	8
EALC 500	Proseminar in EALC	4
	Distribution requirements. a minimum of two (8 hours) 400- or 500-level courses that are: 1. outside the major field of interest. 2. in an East Asian culture other than the major areas of interest. 3. in a Second Period (modern or premodern)	8
	Elective hours	12
Language Requirement: Candidates must demonstrate a knowledge of one East Asian language at the fourth-year level by satisfactory completion of appropriate (400-level) coursework or examination and passage of a written examination covering material studied while in residence.		
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

M.A. Examination

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's guide to Graduate Programs (<http://www.ealc.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in East Asian Languages and Cultures

Applicants to the Ph.D. program normally must hold a master's degree in East Asian studies or a related discipline with an East Asian concentration.

Candidates for the Ph.D. may specialize in culture (e.g., religion, literature, history, anthropology), language acquisition, or language pedagogy, with a major concentration in China, Japan, or Korea.

Other general requirements include: an annual review of progress, including an evaluation of research capability; a written and oral preliminary examination in the major and two minor fields (after completion of coursework); presentation of a dissertation proposal (often as part of the preliminary exam); **and completion and defense of the dissertation.**

Entering with approved M.S./M.A. degree

Code	Title	Hours
	Courses in the major field defined by culture and discipline (500-level)	16
	Research seminars (500-level)	8
	Elective 500-level courses	8
Two graduate courses in a second discipline and two in a second culture must be completed as part of the Ph.D. coursework		
Language Requirement:		
Candidates must demonstrate a knowledge of one East Asian language at the fourth-year level by satisfactory completion of appropriate (400-level) coursework or examination and passage of a written examination covering material studied while in residence.		
Demonstration of proficiency in a second language relevant to the student's course of study usually Chinese, Japanese, Korean evidenced by either a) completion of minimum of two years of an approved sequence courses; or b) by examination.		
EALC 599	Thesis Research (32 max applied toward degree)	0-32
Total Hours		64

Other Requirements¹

Other Requirements may overlap

In addition to the language requirements noted above, Ph.D. students whose primary focus is Japan are required to take one year of classical Japanese, and those whose primary focus is China are required to take one year of classical Chinese. These may be counted toward degree requirements.

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's guide to Graduate Programs (<http://www.ealc.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
EALC 500	Proseminar in EALC	4
	Two 500-level courses in the major field including one course designated as a research seminar in which the student produces a research paper using Asian language sources.	8
	Distribution requirements. a minimum of two (8 hours) 400- or 500-level courses that are: 1. outside the major field of interest. 2. in an East Asian culture other than the major areas of interest. 3. in a Second Period (modern or premodern)	8

Elective hours to earn MA equivalency	12
Courses in the major field defined by culture and discipline (500-level)	16
Research seminars (500-level)	8
Elective 500-level courses	8
EALC 599 Thesis Research (32 max applied toward degree)	32
Total Hours	96

- microeconomic theory
- public economics
- macroeconomic theory
- international economics
- labor economics
- development economics
- mathematical economics
- econometrics
- industrial organization

Other Requirements ¹

Other Requirements may overlap

In addition to the language requirements noted above, Ph.D. students whose primary focus is Japan are required to take one year of classical Japanese, and those whose primary focus is China are required to take one year of classical Chinese. These may be counted toward degree requirements.

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's guide to Graduate Programs (<http://www.ealc.illinois.edu/programs/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Economics

<http://www.economics.illinois.edu>

Head of the Department: Martin Perry
Associate Head: George Deltas
214 David Kinley Hall
1407 W. Gregory Dr.
Urbana, IL 61801
(217) 333-0120
Fax: (217) 244-6571
E-mail: econ@illinois.edu

Major: Economics
Degrees Offered: M.S., Ph.D.
Graduate Concentration: Policy Economics (M.S. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Economics and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Economics offers graduate programs leading to the Master of Science in Policy Economics and Doctor of Philosophy degrees. The candidate for a Ph.D. may specialize in the following fields:

The department is not admitting students to the M.A. at this time.

Admission

Admission to the Ph.D. program is available only for the fall semester. In addition to the standard undergraduate preparation in economics, students are expected to have had at least two semesters of calculus and one of linear algebra to be admitted to the Ph.D. program. The results of the Graduate Record Examination (GRE) should accompany applications for admission. Graduate College admission requirements apply. In addition, international students must submit Test of English as a Foreign Language (TOEFL) or IELTS results; if they wish to apply for a teaching assistantship, the Test of Spoken English (TSE) or completion of the speaking section of the TOEFL-IBT or IELTS is also required.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Economics. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the Department of Economics and the College of Medicine. Students in the combined program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at <https://www.med.illinois.edu/mdphd/>.

Graduate Teaching Experience

Experience in teaching is considered an important part of the graduate program and is encouraged as part of the academic work of all Ph.D. candidates in this program.

Financial Aid

In recent years, the Department of Economics has been able to offer assistantships to most students who meet the standards for admission or continuation in the Ph.D. program. In order to qualify for a teaching assistantship, non-native speakers of English must pass a speaking proficiency test of the English language.

- Master of Science in Economics (p. 740)
- Master of Science in Economics, Policy Economics Concentration (p. 741)

Doctor of Philosophy in Economics

Students must pass comprehensive qualifying examinations on Econometrics, Macroeconomics and Microeconomics. Those who fail the comprehensive examinations will have a 2nd chance in the start of

the fall semester and a 3rd chance at the end of the fourth semester (in this 3rd chance they will take the exams with the first year students of the next cohort). Students who have failed the 3rd chance will not be allowed to register for the following year. Upon meeting course and GPA requirements, they will be eligible to receive a master's degree in Economics, provided they have not previously received such a degree from another institution.

Candidates must also successfully complete two fields through coursework and/or a written examination. A research paper must be submitted prior to the start of the third year and approved prior to the end of that year. Students who fail to meet these deadlines will have reduced financial support and be placed on academic probation. Unless they return to good standing by satisfying the requirement, they will be dropped from the program at the end of the following semester.

A dissertation is also required. In addition, candidates are required to give an oral defense of the dissertation proposal and pass an oral final examination covering the research. A student with an appropriate background who devotes full time to graduate work can complete the Ph.D. degree in four years beyond the bachelor's degree. An additional year or more is usually necessary, especially for those holding part-time assistantships. Students in the Ph.D. program may earn a master's degree as they work toward the Ph.D. degree.

Optional: A not-for-credit Math Camp after campus orientation, consisting of 12 hours of instruction. The aim of the Math Camp is to prepare students with no master's level coursework in mathematical economics for the program's first year classes. However, it will be open to all incoming students.

Additional information can be found at www.economics.illinois.edu/programs/phdprogram/ (<http://www.economics.illinois.edu/programs/phdprogram/>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
	Macroeconomic theory	8
	Microeconomic theory	8
	Statistics and econometrics	8
	Field electives	24
	Workshop and research seminar	16
ECON 599	Thesis Research (min/max applied toward degree)	32
Total Hours		96

Other Requirements ¹

Other Requirements may overlap

Research paper must be submitted before the start of the third year of study and be approved by the end of the third year.

Master's Degree Required for Admission to Ph.D.? No

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.economics.uiuc.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved M.S./M.A. degree

Code	Title	Hours
	Field electives	24
	Workshop and research seminar	16
ECON 599	Thesis Research (min/max applied toward degree)	32
Total Hours		72

Other Requirements ¹

Other Requirements may overlap

Research paper must be submitted before the start of the third year of study and be approved by the end of the third year.

Master's Degree Required for Admission to Ph.D.? Yes

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.economics.uiuc.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Economics

Code	Title	Hours
ECON 530	Microeconomic Theory I	4
ECON 533	Microeconomic Theory II	4
ECON 531	Macroeconomic Theory I	4
ECON 534	Macroeconomic Theory II	4
ECON 532	Econometric Analysis I	4
ECON 535	Econometric Analysis II	4
Four electives, at least two of which are in economics		16
Total Hours		40

Other Requirements ¹

A concentration is not required.

Minimum 500-level Hours Required 40

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.economics.uiuc.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Economics, Policy Economics Concentration

This is a specially designed one- to two-year program to address the needs of two groups of students. One is promising young professionals and administrators who need additional training in the areas of economic analysis and quantitative techniques. The other is students who are potentially interested in pursuing a Ph.D. degree but require additional qualification to enable them to do so. While earning the master's degree and acquiring the necessary tools for further studies, they will learn if the pursuit of a Ph.D. degree is within their reach and suits their purposes.

Students enter the program only in the fall term.

The required coursework is further enriched through

1. academic advising wherein an academic advisor with an open-door policy allows the MSPE students to drop by his office at their convenience, discuss their academic questions with him, and re-optimize their program of study on a continual basis. The academic advisor also provides guidance on study plans beyond graduation and provides support in achieving them;
2. an orientation program that includes an intensive mathematics course; this course serves as a refresher for the math content to be utilized during the students' courses in the program;
3. opportunities to participate in field trips to observe the operation of financial institutions, modern industrial production facilities, federal and state government agencies, and international institutions;
4. scheduled lectures by outstanding, internationally known economists;
5. discussion groups and tutoring for participants who are having difficulty;
6. program staff assistance with visas, housing, and other nonacademic concerns; and
7. participation in social activities, including graduation dinners, holiday parties, picnics, and special luncheons.

This is a designated full-cost recovery program and no financial aid is available for the students in this program.

Please see www.mspe.illinois.edu (<http://www.mspe.illinois.edu>) for detailed information on the MSPE Program.

Code	Title	Hours
ECON 500	Microeconomics	4
ECON 501	Macroeconomics	4
ECON 502	Economic Statistics	4
ECON 503	Econometrics	4
Two graduate credit courses are to be completed in a selected specialization		8
Four electives, at least two of which are in economics		16
Total Hours		40

Other Requirements ¹

The minimum length of stay in the Program is one year (fall and spring semesters plus one summer session).

Minimum Hours Required Within the Unit:	32
Minimum 500-level Hours Required Overall:	32
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.economics.uiuc.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Education Policy, Organization and Leadership

<http://education.illinois.edu/epol>

Acting Department Head: Yoon Pak
 Director of Graduate Studies: K. Peter Kuchinke
 349 Education Building
 1310 South Sixth Street
 Champaign, IL 61820
 Phone: (217) 333-0807
 Fax: (217) 244-5632
 E-mail: gradservices@education.illinois.edu

Major: Education Policy, Organization and Leadership
 Degrees offered: Ed.M., M.A., C.A.S., Ed.D., Ph.D.
 Graduate Concentrations: African American Studies (p. 644) (M.A. and Ph.D. only), Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Higher Education, History of Education, Human Resource Development, Learning Design and Leadership, Philosophy of Education, and Social Sciences & Education Policy.

Off-Campus Program: Ed.M., C.A.S., Ed.D.
 Graduate Concentration: Educational Administration and Leadership.

Online Programs: Ed.M., Ed.D.
 Graduate Concentrations: Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Human Resource Development, and Learning Design and Leadership.

Graduate Minor: College Teaching

Joint Degree Program: Education Policy, Organization and Leadership and Business Administration
 Degrees Offered: Ed.M./M.B.A., M.A./M.B.A.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Education Policy, Organization and Leadership and Doctor of Medicine (M.D.) through the Medical Scholars Program. (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

Degree programs in the Department of Education Policy, Organization and Leadership are designed to meet the academic and professional

interests of individuals preparing for careers as academic professionals, adult educators, college professors, corporate trainers, educational policy analysts, governmental administrators, instructional designers/technologists, non-profit representatives, organizational development specialists, and university administration leaders.

Admission

The Department of Education Policy, Organization and Leadership carefully considers all applicants for graduate study. Applicants should consult the department website for more detailed application information <http://education.illinois.edu/epol/admissions/howtoapply> and should apply online at <http://www.grad.illinois.edu/admissions/apply>. The quality of the applicant's undergraduate and graduate training and grade point average are primary considerations. Other important factors evaluated include the three letters of recommendation and statement of purpose. International applicants must submit a TOEFL score.

Off-Campus Programs

The Education Policy, Organization and Leadership department offers selected off-campus programs in the Chicago region, through the use of a cohort model. The Ed.M. and C.A.S. degree options with General Administrative Endorsement are offered in the Chicago region. An Ed.D. degree cohort also is available in School Executive Leadership. Requirements for the off-campus Ed.M., C.A.S., and Ed.D. programs are identical to the on-campus degrees.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Facilities and Resources

The College of Education also has many resources to assist graduate students through their academic career. The Bureau of Educational Research works with students to secure research funding. The Council on Teacher Education entitles candidates seeking a Professional Educator License and provides accreditation of professional education programs. Each student completing a degree program is assigned a graduate adviser, who is available to assist the student with planning the program of study and determining degree requirements, courses and timelines for degree completion.

Information on University resources can be found at <http://www.grad.illinois.edu/current-students>.

Financial Aid

Financial aid in the form of assistantships, scholarships, fellowships, and tuition waivers can be found throughout the college and campus. There are opportunities available through the department (<http://education.illinois.edu/epol>), the College of Education ([\[education.illinois.edu/students/graduate-financialaid\]\(http://education.illinois.edu/students/graduate-financialaid\)\), and the Bureau of Educational Research \(<http://www.ed.illinois.edu/ber/fundingresources.html>\). Please note: Graduate students employed as Staff by the University of Illinois at Urbana-Champaign are not eligible for a College of Education Award or Scholarship. Campus opportunities can be found at the Graduate College \(<http://www.grad.illinois.edu/financial-aid>\) and the Office of Student Financial Aid \(<http://www.osfa.illinois.edu>\).](http://</p>
</div>
<div data-bbox=)

Degree requirements for the two masters degrees in Education Policy, Organization and Leadership (EPOL), the Master of Education (M. Ed.) and the Master of Arts (M.A.) are listed below. Students may select an optional concentration (p. 745). Concentrations are available in Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Higher Education, History of Education, Human Resource Development, Learning Design and Leadership, Philosophy of Education, and Social Sciences & Education Policy. The African American Studies concentration (p. 644) is available for the M.A. degree.

Master of Education (M. Ed.) in Education Policy, Organization and Leadership

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		4
Select one of the following:		
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		4
Select one of the following:		
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	

EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
500-Level Courses Required in Education (Thesis Research Credit not included)		12
400/500-Level Courses approved by Advisor (Thesis Research Credit not included, up to 8 hours of Independent Study can be applied)		12
(Optional) Concentration Courses. May overlap with other coursework requirements		12-24
Total Hours		32

Other Requirements ¹

Requirements may overlap.

A concentration is not required.

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's program information online (<http://education.illinois.edu/epol>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts (M.A.) in Education Policy, Organization and Leadership

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		4

Select one of the following:

EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	

Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		4
--	--	----------

Select one of the following:

EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	

EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
500-Level Courses Required in Education (Thesis Research Credit not included)		12
400/500-Level Courses approved by Advisor (Thesis Research Credit and Independent Study can be applied up to a maximum of 8 hours each)		12
Thesis Research Credit (min/max applied toward degree)		2-8
(Optional) Concentration Courses. May overlap with other coursework requirements		12-24
Total Hours		32

Other Requirements ¹

Requirements may overlap.

A concentration is not required.

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's program information online (<http://education.illinois.edu/epol>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Degree requirements for the two doctoral degrees in Education Policy, Organization and Leadership (EPOL), the Doctor of Education (Ed. D.) and the Doctor of Philosophy (Ph. D.) are listed below. Students may select an optional concentration (p. 745). Concentrations are available in Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Higher Education, History of Education, Human Resource Development, Learning Design and Leadership, Philosophy of Education, and Social Sciences & Education Policy. The African American Studies concentration (p. 644) is available for the Ph.D. degree.

Doctor of Education in Education Policy, Organization and Leadership

Required Courses:	Required Hours
Cognate requirement (minimum applied toward degree)	16
Research methods	8
Elective hours (includes 24 hours required in the specialization and 0-12 hours of independent study)	36
Dissertation research hours required (min/max applied toward degree)	4-16
(Optional) Concentration Courses. May overlap with other coursework requirements	12-24
Total minimum hours	64

Other Requirements ¹

Other requirements may overlap

A concentration is not required

Masters degree required for admission to Ed. D.

Residency: 16 hours over 4 consecutive semesters of study

Qualifying exams

Human subjects approval

Preliminary exam

Final exam/dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's program information online (<http://education.illinois.edu/epol>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Education Policy, Organization and Leadership

Code	Title	Hours
Completion of at least 64 hours beyond the master's degree including:		
Major Subject Coursework (minimum)		32
Dissertation Research (min/max applied toward degree)		4-20
Independent Study (min/max applied toward degree)		0-12
Research Coursework ¹		16-20
(Optional) Concentration Courses. May overlap with other coursework requirements		12-24
Total Hours		64

Other requirements ²

A concentration is not required

Minimum GPA: 3.0

Master's degree required for admission to Ph. D.

Residency requirement: 2 consecutive full-time (12 hours) semesters of study on campus

Early research requirement

Qualifying exams

Human subjects approval

Preliminary exam

Final exam/dissertation defense

Dissertation deposit

¹ All students will take a minimum of 16-20 credit hours, depending on area of methodology focus, in approved research methods courses (<http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement>).

² For additional details and requirements refer to the department's program information online (<http://education.illinois.edu/epol>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Certificate of Advanced Study in Education Policy, Organization and Leadership

The University of Illinois at Urbana-Champaign's College of Education complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be found here (http://archives.provost.illinois.edu/certificates/CAS_EPOL/13.0401-Gedt.html).

Degree requirements for the Certificate of Advanced Study in Education Policy, Organization and Leadership (EPOL) are listed below. Students may select an optional concentration (p. 745). Concentrations are available in Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Higher Education, History of Education, Human Resource Development, Learning Design and Leadership, Philosophy of Education, and Social Sciences & Education Policy.

If the student does not have a Master's degree from the University of Illinois at Urbana-Champaign, the foundation courses listed below must be completed. The minimum GPA is 3.0.

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		4
Select one of the following:		
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		4
Select one of the following:		
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	

EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
500-Level Courses		16
400/500-Level Courses		16
Independent Study		0-8
(Optional) Concentration Courses. May overlap with other general coursework requirements		12-24
Total Hours		32

For additional details and requirements refer to the department's Web site, the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Graduate Minor in College Teaching

The Department of Education Policy, Organization and Leadership (EPOL) offers a Graduate Minor in College Teaching. The minor provides students with the opportunity to explore the scholarly literature on and practice of teaching and learning in postsecondary settings. Students in good standing in the Illinois Graduate College are eligible to apply for the minor. For additional information, please contact EPOL.

Note: Students within the major can not minor in the same program.

Code	Title	Hours
EOL 572	The College Student	4
EOL 585	College Teaching	4
Select one of the following:		4
EOL 573	The Community College	
EOL 574	Diversity in Higher Education	
EOL 582	College Student Development	
EOL 586	Changing College Curriculum	
Total Hours		12

¹ For additional details and requirements refer to the department's Web site, the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

African American Studies

The graduate credit needed for this concentration fulfills general coursework requirements for the M.A. (p. 742) and Ph. D. (p. 743) degrees. The requirements for this concentration are determined by the Department of African American Studies (p. 644).

Diversity & Equity in Education

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees and the online (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#onlinetext>) Ed.M. and Ed.D. degrees.

Code	Title	Hours
Select eight hours from the following courses:		8
EOL 568	Diversity, Leadership & Policy	
EPS 536	Race, Gender & Sexuality Issu	
SPED 514	Equity Issues in Spec Educatio	

Select four hours from the following courses:		4
EPS 405	Historical & Social Barriers	
EPS 415	Technology & Educational Reform	
EPS 529	Education and Human Rights	
EPS 530	Education and Globalization	
EPS 533	Global Youth & Citizenship	
EPS 580	Researching Global Education	
HRD 530	Organization Development	
Total Hours		12

Educational Administration and Leadership

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees, the online (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#onlinetext>) Ed.M. and Ed.D. degrees, and the off-campus Ed.M., C.A.S., and Ed.D. degrees.

Code	Title	Hours
Select twenty-four hours from the following courses:		24
EOL 540	Intro to Educational Leadership	
EOL 541	Supervision of Learning Envir	
EOL 542	Leading Learning-Centrd Schls	
EOL 543	Leading School Improvement	
EOL 544	Leading Improvement and Innovation	
EOL 546	Public School Finance	
EOL 547	Education Law	
EOL 548	Poli & Cultural Context of Ed	
EOL 549	Organizational Theory for Educational Leaders	
EOL 550	Ed Ldrshp & Prof Development	
EOL 560	Clinical Experience Admin	
EOL 561	Ed Politics and Policies	
EOL 562	Law and School District Leader	
EOL 563	The School Superintendency	
EOL 564	District Change for Equity and Social Justice	
EOL 565	Human Resource Management	
EOL 566	School District Financial Management	
EOL 567	Program Planning & Evaluation	
EOL 568	Diversity, Leadership & Policy	
EOL 588	Capstone Experience I & II	
EPOL 595	Independent Study	
EPOL 599	Thesis Research	
Total Hours		24

Global Studies in Education

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees and the online (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#onlinetext>) Ed.M. and Ed.D. degrees.

Code	Title	Hours
EPS 530	Education and Globalization	4
EPS 533	Global Youth & Citizenship	4
EPS 537	Globalizing Educational Policy	4
Total Hours		12

Higher Education

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees.

Code	Title	Hours
Select twenty-four hours from the following courses:		24
EOL 570	Organization of Higher Ed	
EOL 571	Foundation of Higher Edu	
EOL 572	The College Student	
EOL 573	The Community College	
EOL 580	Critical Issues in Higher Ed	
EOL 583	Student Affairs Admin	
EOL 585	College Teaching	
EOL 589	Internship in Higher Ed	
EOL 590	Advanced Seminar (Sections A, AA, CCL, CHE, DHE, HEF, HEL, PPH, HPM, AHE, LDR, MPR, OA, R1, or R2)	
EPOL 595	Independent Study	
Total Hours		24

History of Education

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees.

Code	Title	Hours
EPS 400	History of American Education	4
or EPS 405	Historical & Social Barriers	
EPS 423	Politics of Education	4
Select four hours from the following courses:		4
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 481	History of Amer Indian Educ	
EPS 500	Topics in Educational Policy	
EPS 501	History of U.S. Ed Thought	
EPS 502	Education in the 20th Century	
EPS 503	Seminar in the History of Ed	
EPS 508	Uses/Abuses of Educ Research	
Total Hours		12

Human Resource Development

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A.

(p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees and the online (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#onlinetext>) Ed.M. and Ed.D. degrees.

Code	Title	Hours
HRD 400	Principles of HRE	4
or HRD 440	Work Analysis	
HRD 411	Training System Design	4
or HRD 472	Learning Technologies	
HRD 530	Organization Development	4
or HRD 540	Learning on the Job	
Total Hours		12

Learning Design and Leadership

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees and the online (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#onlinetext>) Ed.M. and Ed.D. degrees.

Code	Title	Hours
EPS 431	New Learning	4
HRD 472	Learning Technologies	4
HRD 585	Program Evaluation	4
or EPSY 474	Evaluating Learning Technology	
Total Hours		12

Philosophy of Education

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees.

Code	Title	Hours
Select twelve hours from the following courses:		12
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 427	Philosophy of Middle School	
EPS 510	Traditions in Philosophy of Ed	
EPS 511	Contemporary Philosophy of Ed	
EPS 512	Advanced Topics in Philosophy of Education	
EPS 515	Philosophy and Ed Research	
EPS 516	Social Theories and Education	
EPS 517	Case Studies Professional Ethics & Education	
EPS 518	Philosophical Issues in Technology and Education	
EPS 520	Foundations of Aesthetic Ed	
EPS 522	Ethical Dimensions in Educational Leadership	

EPS 529	Education and Human Rights	
Total Hours		12

Social Sciences & Education Policy

The graduate credit needed for this concentration fulfills general coursework requirements for the on-campus Ed. M. (p. 742), M.A. (p. 742), C.A.S. (p. 744), Ed. D. (p. 743) and Ph. D. (p. 743) degrees.

Code	Title	Hours
Select twelve hours from the following courses:		12
EPS 420	Sociology of Education	
EPS 422	Race, Educational Policy, and Sociology	
EPS 423	Politics of Education	
EPS 508	Uses/Abuses of Educ Research	
EPS 522	Ethical Dimensions in Educational Leadership	
EPS 531	Critical Race Theory & Educ	
EOL 577	Public Policy in Higher Ed	
Total Hours		12

We offer a Master of Education and a Doctor of Education degree that enables students to receive a University of Illinois education without ever coming to our campus. The online Master of Education in Education Policy, Organization and Leadership follows the requirements as listed under the Masters tab (p. 742). The online Doctor of Education degree follows the requirements as listed under the Doctoral tab (<http://catalog.illinois.edu/graduate/graduate-majors/ed-pol-org-leadership/#doctoratetext>). Students may select an optional concentration (p. 745) with either degree. Concentrations are available in Diversity & Equity in Education, Educational Administration and Leadership, Global Studies in Education, Human Resource Development, and Learning Design and Leadership.

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (<https://mba.illinois.edu/academics/joint-degrees>) and contact the M.B.A. program and their major department office for more information.

Educational Psychology

<http://education.illinois.edu/edpsy>

Chair: Dan Morrow
 Director of Graduate Studies: Kiel Christianson
 Graduate Admissions Information: Myranda Crist
 210 Education Building
 1310 South Sixth Street
 Champaign, IL 61820-6990
 Phone: (217) 333-2245
 Email: gradservices@education.illinois.edu

Major: Educational Psychology
 Degrees offered: Ed.M., M.S., M.A., C.A.S., Ph.D.

Graduate Concentration: African American Studies (<http://www.afro.illinois.edu/education/gradconc>) (available to all on-campus degrees), Second Language Acquisition and Teacher Education (<http://www.slate.illinois.edu>) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Educational Psychology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Educational Psychology offers admission to doctoral programs in the following areas of specialization:

- Cognitive Science of Teaching and Learning (CSTL)
- Child Development
- Studies in Interpretive, Statistical, Measurement, and Evaluative Methodologies for Education (QUERIES)
- Counseling Psychology

Students entering without a master's degree must first complete the requirements for a Master of Science (including a master's thesis).

The Department offers admission to a terminal on-campus Master of Science (M.S.) degree with a focus on Studies in Interpretive, Statistical, Measurement, and Evaluative Methodologies for Education (QUERIES).

There is no admission to terminal masters degrees in Cognitive Science of Teaching and Learning, Child Development, or Counseling Psychology areas of specialization.

Admission

The department accepts applications for the Ph.D. degree, from both applicants who have completed their bachelor's degrees and those who have a master's degree. Students who enter the program without a prior master's incorporate their master's class work and research into their doctoral program, and earn a master's degree as the first step toward their Ph.D. The department does not accept applications for master's degrees in CSTL, Child Development or Counseling Psychology.

Applications

Doctoral applicants must submit a complete application for university admission, including three letters of reference, transcripts from all schools where undergraduate and graduate degrees were awarded or expect to be awarded prior to the application enrollment term, and other items listed in the department Web site (<http://www.education.illinois.edu/edpsy>). Applicants to our doctoral program apply for Fall enrollment. Current deadlines are posted on our department Web site (<http://www.education.illinois.edu/edpsy>).

Doctoral candidates are admitted into one of four divisions: CSTL, Child Development, QUERIES and Counseling Psychology. When making admission decisions, division committees consider academic performance (e.g., grade-point average, GPA), GRE scores, letters of recommendation, and statement of purpose. Preference is given to those with research experience and research interests that are aligned with existing research programs in the Department.

Master's candidates are only admitted into QUERIES.

Grade Point Average

The preferred department standard for grade point average is 3.5 on a 4.0 scale. The University calculates undergraduate GPAs on the last

two years of grades for degreed applicants and in the last one year for students who have not yet completed their bachelor's degree. Graduate GPAs are calculated on the total of all graduate level courses taken beyond the undergraduate degree.

Test of English as a Foreign Language (TOEFL)

International applicants must have demonstrated English language competence with TOEFL scores of greater than 610 (paper and pencil test), greater than 253 (computer-based test), or greater than 102 iBT. An IELTS score of greater than 6.5 overall, with at least 6 in each sub-section, can be substituted for the TOEFL score. Students who are accepted with lower scores will be required by the University to enroll on a limited status basis for at least their first semester.

Area of Study Affiliation

All applicants to the Educational Psychology doctoral program must specify one of four areas in which they wish to study:

- Cognitive Science of Teaching and Learning (CSTL)
- Counseling Psychology (Counseling);
- Child Development
- Studies in Interpretive, Statistical Measurement, and Evaluative Methodologies for Research (Queries)

Detailed information about each area and about the research interests of the faculty can be found on the department Web site (<http://www.education.illinois.edu/edpsy>).

Although all Ph.D. students are admitted to a specific area of study, the actual coursework, research, and faculty often overlap area boundaries. Departmental policy makes it possible for a student to change advisers and affiliation from one area to another when interests and research foci become more clearly defined or change. Many faculty members are affiliated with more than one area of study.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Educational Psychology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Faculty Research Interests

The faculty's research agendas span a wide range of topics related to the study and application of psychological principles to develop and inform educational interventions and facilitate human development across the life span. Faculty conduct basic and translational research that explores the cognitive, life-span developmental, social-emotional, and socio-cultural factors that affect behavior, learning, and achievement in educational, clinical, and community contexts. They also engage in research on approaches to educational inquiry and the development

of quantitative, qualitative and evaluative methodologies that underpin the development of evidence-based, policy-relevant studies. Faculty research profiles are available on the department Web site (<http://www.education.illinois.edu/edpsy>).

Center, Programs, and Institutes

Department faculty are affiliated with both research centers and institutes in the College of Education and the university more broadly, including the Adult Learning Lab, the Center for Education in Small Urban Communities, the Center for Advanced Study, the Beckman Institute, the Center for the Study of Reading, the Social Development Consortium, and others.

Facilities and Resources

The Department of Educational Psychology puts a high priority on working with its graduate students to secure fellowships and other awards.

The College of Education also has many resources to assist graduate students through their academic career. The Bureau of Educational Research works with students to secure research funding. The Council on Teacher Education entitles candidates seeking a Professional Educator License and provides accreditation of professional education programs. Each student completing a degree program is assigned a graduate adviser, who is available to assist the student with planning the program of study and determining degree requirements, courses and timelines for degree completion.

Information on University resources can be found at <http://www.grad.illinois.edu/current-students>.

Financial Aid

Financial aid in the form of assistantships, scholarships, fellowships, and tuition waivers can be found throughout the college and campus. Please note: Graduate students employed as Staff by the University of Illinois at Urbana-Champaign are not eligible for a College of Education Award or Scholarship. Campus opportunities can be found at the Graduate College (<http://www.grad.illinois.edu/funding-jobs>) and the Office of Student Financial Aid (<http://www.osfa.illinois.edu>).

The department does not require a separate financial aid application.

- Master of Education in Educational Psychology (p. 751)
- Master of Education in Educational Psychology, African American Studies Concentration (p. 751)
- Master of Science and Master of Arts in Educational Psychology (p. 752)
- Master of Science and Master of Arts in Educational Psychology, African American Studies Concentration (p. 752)
- Doctor of Philosophy (Ph.D.) in Educational Psychology (p. 750)
- Doctor of Philosophy (Ph.D.) in Educational Psychology, African American Studies Concentration (p. 751)
- Certificate of Advanced Study (C.A.S.) in Educational Psychology (p. 749)
- Certificate of Advanced Study (C.A.S.) in Educational Psychology, African American Studies Concentration (p. 749)

Master of Education in Educational Psychology

Educational Psychology offers an online professional Master of Education (Ed.M.) degree specialization in Evidence-Based Decision Making. Admissions requirements are somewhat different and applicants should consult the college's on-line program Web site (<http://education.illinois.edu/online-offcampus>) for current admissions criteria and specific course requirements.

Code	Title	Hours
Psychological Foundation Course		
EPSY 400	Psyc of Learning in Education	4
Social and Philosophical Foundation Course		
EPS 415	Technology & Educational Reform	4
EPSY 480	Educational Statistics	4
EPSY 486	Principles of Measurement	4
EPSY 501	Evaluation in Society	4
EPSY 505	Data, Evidence, & Decisions	4
EPSY 507	Econ Analysis & Ed Policy	4
EPSY 590	Advanced Seminar in Educ Psyc (Section CP)	4
Total Hours		32

Other Requirements:¹

Minimum of 12 hours at the 500 level

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Certificate of Advanced Study (C.A.S.) in Educational Psychology

The University of Illinois at Urbana-Champaign's College of Education complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be found here (http://archives.provost.illinois.edu/certificates/CAS_EPSY/42.2806-Gedt.html).

Code	Title	Hours
If the student does not have a Masters degree from the University of Illinois at Urbana-Champaign, Foundations Courses must be completed:		
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	

EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		32
500-Level Hours Required: 16 hours (Independent Study included)		
General Coursework Required: 16 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements:¹

Enrollment must be preceded by at least two years of acceptable professional work experience.

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Certificate of Advanced Study in Educational Psychology, Concentration in African American Studies

The University of Illinois at Urbana-Champaign's College of Education complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be

found here (<http://creativeservices.illinois.edu/ProgramsOfStudy/2014/fall/programs>).

Code	Title	Hours
If the student does not have a Masters degree from the University of Illinois at Urbana-Champaign, Foundations Courses must be completed:		
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education (pagelink:https://nextcourses.illinois.edu/graduate/graduate-majors/african-amer-studies/#concentrationconcentrationtext:Concentration courses)	
Concentration courses (https://nextcourses.illinois.edu/graduate/graduate-majors/african-amer-studies/#concentrationconcentrationtext)		24
Elective Hours:		32
500-Level Hours Required: 16 hours (Independent Study included)		
General Coursework Required: 16 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8

EPSY 599	Thesis Research	4-32
Total Hours		56

Other Requirements ¹

Other requirements may overlap

Enrollment must be preceded by at least two years of acceptable professional work experience.

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Doctor of Philosophy (Ph.D.), Educational Psychology

Code	Title	Hours
Completion of at least 64 hours beyond the master's degree including:		
Major Subject Coursework (minimum)		32
EPSY 599	Thesis Research (min/max applied toward degree)	4-20
Independent Study (min/max applied toward degree)		0-12
Research Coursework ¹		16-20
Total Hours		64

Other Requirements ²

Master's degree is not required for admission to the Ph.D. but is required for completion.

Minimum GPA 3.0

Residency 2 consecutive full-time (12 hours) semesters of study on campus

Early Research Requirement

Qualifying Exams

Human Subjects Approval

Preliminary Exam

Final Exam/Dissertation Defense

Dissertation Deposit

¹ All students will take a minimum of 16-20 credit hours, depending on area of methodology focus, in approved research methods courses (<http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement>).

² For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Doctor of Philosophy in Educational Psychology, Concentration in African American Studies

Code	Title	Hours
Completion of at least 64 hours beyond the master's degree including:		
Major Subject Coursework		32
EPSY 599	Thesis Research (min/max applied toward degree)	4-20
Independent Study (min/max applied toward degree)		0-12
Research Coursework ¹		16-20
Concentration courses		24
Total Hours		88

Other Requirements ²

Other requirements may overlap

Master's Degree Is Not Required for Admission to PhD but is required for completion

Residency 2 consecutive full-time (12 hours) semesters of study on campus

Early Research Requirement

Qualifying Exams

Human Subjects Approval

Preliminary Exam

Final Exam/Dissertation Defense

Dissertation Deposit

Minimum GPA 3.0

¹ All students will take a minimum of 16-20 credit hours, depending on area of methodology focus, in approved research methods courses (<http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement>).

² For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Master of Education in Educational Psychology

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	

EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education: 12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements: ¹

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Master of Education in Educational Psychology, African American Studies Concentration

The requirements below are not applicable to the online Ed.M. offered by the CTER program.

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	

EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Concentration courses. May overlap with other requirements. (p. 644)		24
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study included)		
500-Level Hours Required in Education: 12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements ¹

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.**Master of Science and Master of Arts in Educational Psychology**

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	

EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
400/500-Level Hours Required: 12 hours (Independent Study and Thesis Hours included)		
500-Level Hours Required in Education: 12 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
EPSY 599	Thesis Research (min/max applied toward degree)	2-8
Total Hours		32

Other Requirements ¹

Human Subjects Approval

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.**Master of Science or Arts in Educational Psychology, African American Studies Concentration**

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	

EPSY 401	Child Language and Education
EPSY 402	Sociocultural Infl on Learning
EPSY 404	Adjustment in School Settings
EPSY 405	Personality and Soc Dev
EPSY 406	Psyc of Classroom Management
EPSY 407	Adult Learning and Development
EPSY 408	Learning & Hum Dev w/ EdTech
EPSY 430	Early Adolescent Development
EPSY 485	Assessing Student Performance
EPSY 490	Developments in Educ Psyc

Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership

Select one of the following: 4

EOL 548	Poli & Cultural Context of Ed
EPS 400	History of American Education
EPS 401	History of Educational Ideas
EPS 402	Asian American Education
EPS 403	European Education to 1600
EPS 404	European Education since 1600
EPS 405	Historical & Social Barriers
EPS 410	Professional Ethics in Education
EPS 411	School and Society
EPS 412	Critical Thinking for Teachers
EPS 413	Aesthetic Education
EPS 415	Technology & Educational Reform
EPS 420	Sociology of Education
EPS 421	Racial and Ethnic Families
EPS 423	Politics of Education
EPS 424	Economics of Education
EPS 426	Comparative Education

Concentration courses. May overlap with other requirements. 24
(p. 644)

Elective Hours: 24

400/500-Level Hours Required: 12 hours (Independent Study and Thesis Hours included)

500-Level Hours Required in Education: 12 hours

Research/Project/Independent Study Hours (min/max applied toward degree): 0-8

EPSY 599 Thesis Research (min/max applied toward degree) 2-8

Total Hours 32

Other Requirements¹

Human Subjects Approval

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, (<http://education.illinois.edu/edpsy>) the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Electrical and Computer Engineering

<http://ece.illinois.edu>

Head of the Department: William H. Sanders

Director of Graduate Studies: Nitin H. Vaidya
Graduate Programs
2120 Electrical and Computer Engineering Building
306 N. Wright St.
Urbana, IL 61801
(217) 300-2414
Email: ece-grad-apps@illinois.edu

Major: Electrical and Computer Engineering
Degrees Offered: M.Eng., M.S., Ph.D.

Medical Scholars Joint Degree Program: Doctor of Philosophy (Ph.D.) in Electrical and Computer Engineering and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The department offers graduate study and research in electrical and computer engineering leading to the degrees of Master of Engineering, Master of Science, and Doctor of Philosophy. Virtually every specialty within electrical and computer engineering is represented. Courses and research opportunities exist in the following areas:

- applied computation theory
- bioengineering, acoustics, and magnetic resonance engineering
- communications
- computer-aided design and test
- computer systems
- computer vision and robotics
- decision and control
- electromagnetic fields
- electrooptics, lasers, and plasmas
- integrated circuits
- microelectro-mechanical systems
- mobile computing and communication
- optoelectronics
- power and energy systems
- power electronics
- remote sensing and propagation
- semiconductor materials and devices
- semiconductor physics and computational electronics
- signal, image, and speech processing

The Master of Engineering degree in ECE is designed for students having a B.S. degree in ECE or a related field and offers an opportunity to broaden knowledge of areas in ECE beyond what is possible in a four-year undergraduate curriculum. The M.Eng. is a professional degree and is not intended for students interested in obtaining research experience. Students interested in a research-oriented career and all students interested in obtaining a Ph.D. should instead apply to the traditional M.S. program.

The programs are very flexible to encourage interdisciplinary studies and research. Opportunity also exists for specializing in:

1. computational science and engineering and
2. energy and sustainability engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<http://cse.illinois.edu/education-programs/graduate->

program) and the Energy and Sustainability Engineering (EaSE) Option. (<http://ease.illinois.edu>)

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Electrical and Computer Engineering.

For complete program information, visit the Electrical and Computer Engineering graduate program Web site (<http://www.ece.illinois.edu/students/grad>).

Admission

Applicants must have completed an electrical engineering curriculum or a computer engineering curriculum substantially equivalent to those of the University of Illinois at Urbana-Champaign. A minimum grade point average of 3.00 (A = 4.00) for the last two years of undergraduate study is required. However, because of space limitations, applicants with GPAs below 3.50 are rarely admitted. All applicants must submit scores from the general test of the Graduate Record Examination (GRE) (<http://www.ets.org>).

A master's degree is required for admission to the PhD program. Applicants with master's degrees are admitted only if a faculty member is willing to serve as the Ph.D. thesis advisor. Accordingly, such applicants should write, call, or e-mail prospective Ph.D. advisors and discuss their research interests and potential Ph.D. thesis topics well in advance of application deadlines. Admission for the spring semester is possible, in addition to the usual fall semester admissions.

Graduates of curricula in the physical sciences, mathematics, and computer science may be admitted if they are judged to have the necessary background to profit from graduate work in electrical and computer engineering.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 96 (iBT), 243 (CBT), or 590 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Electrical and Computer Engineering and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Electrical and Computer Engineering graduate program. Further information on this program is available by contacting the:

Medical Scholars Program
125 Medical Sciences Building
(217) 333-8146

mospo@illinois.edu

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Electrical and Computer Engineering graduate degree.

Faculty Research Interests

Research interests of the Electrical and Computer Engineering faculty include the broad areas of study described in the graduate programs section and more. Many faculty members hold affiliate status with other departments, and a number of faculty members from other departments hold affiliate status with the department. In addition, some faculty hold appointments in the Beckman Institute for Advanced Science and Technology, the Coordinated Science Laboratory, the Materials Research Laboratory, and the Micro and Nanotechnology Laboratory. All these affiliations provide opportunities for graduate student appointments to conduct research. For a detailed list of current research interests of the faculty, visit the department's research Web site (<http://ece.illinois.edu/research>).

Centers, Programs, and Institutes

There are numerous interdisciplinary programs, laboratories, and centers for research within the department. These are described at the department's research Web site (<http://ece.illinois.edu/research>).

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are available for the majority of students who are admitted to the M.S. and Ph.D. programs. International applicants generally are not awarded teaching assistantships but are eligible for the other forms of financial aid. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 5 is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

Please see the financial aid eligibility for the M.Eng. in Electrical and Computer Engineering under the "Masters" tab.

- Master of Engineering in Electrical and Computer Engineering (p. 755)
- Master of Science in Electrical and Computer Engineering (p. 755)

Doctor of Philosophy in Electrical and Computer Engineering

Code	Title	Hours
ECE 599	Thesis Research (min-max applied toward degree)	32-40

ECE 500	ECE Colloquium (registration for 0 hours every term while in residence)	0
3 permanent 500-level courses in 3 different Ph.D. Breadth Requirement areas (http://www.ece.illinois.edu/students/grad/overview/#breadth)		12
Elective courses (subject to Other Requirements and Conditions below)		12-20
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Credit in ECE 415, ECE 445, ECE 590 (seminar), ECE 596, ECE 597 (individual study), PHYS 404, PHYS 435, and PHYS 436, STAT 400, or any other seminar or individual study course does not count toward the degree.

At least one ECE 500-level course must be taken.

No course used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

A Masters degree is required for admission to the Ph.D. program.

Ph.D. exam and dissertation requirements:

Qualifying exam²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Study Manual* (<http://www.ece.illinois.edu/academics/grad/overview>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

² *Qualifying Exam information* (<http://www.ece.illinois.edu/students/grad/QualExams/qual.html>)

Master of Science in Electrical and Computer Engineering

Required Courses:	Required Hours
Thesis research – ECE 599 (min/max applied toward degree)	8
ECE Colloquium – ECE 500 (registration for 0 hours every term while in residence)	0
Elective courses (subject to Other Requirements and Conditions below)	24
Total hours	32

Other Requirements and Conditions ¹

Credit in ECE 415, ECE 445, ECE 590, ECE 596, PHYS 404, PHYS 435, PHYS 436, and STAT 400 does not count toward the degree.

12 credit hours must be 500-level ECE courses other than ECE 590, ECE 596, ECE 597, and ECE 599.

No course used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

A maximum of 4 hours of ECE 597 (or other individual study) may be applied toward the elective coursework requirement.

There is no final examination for the M.S. degree.

M.S. thesis deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Study Manual* (<http://www.ece.illinois.edu/academics/grad/overview>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Master of Engineering in Electrical and Computer Engineering

Required Courses:	Required Hours
ECE 500-registration (0 hours) every 0 term while in residence	0
500-level courses, including 8 hours of ECE 500-level courses and up to 4 hours of non-ECE 500-level courses (subject to Other Requirements and Conditions below)	12
Professional Development: ECE 596 4 Master's Project supervised by ECE (or affiliate) graduate faculty or course(s) in leadership, entrepreneurship, or other business-related topic approved by ECE Director of Graduate Studies	4
Elective courses (subject to Other Requirements and Conditions below)	16
Total credit hours for the degree	32

Other Requirements and Conditions (may overlap) ¹

A minimum of 12 credit hours of coursework at the 500-level must be applied toward the degree, including at least 8 hours of ECE coursework.

Up to 4 hours of ECE 596 and/or ECE 597 (or other individual study) may be applied toward this degree requirement. Up to 4 hours of non-ECE 500-level course(s) from approved list or as approved by the ECE Director of Graduate Studies may be applied toward this degree requirement.

Coursework must include at least 18 credit hours of ECE courses; 15 of these hours must be from no more than 3 different focus areas. The ECE Graduate Committee maintains the focus area course lists.

Credit in ECE 415, 445, 590, PHYS 404, 405, 435, 436, and STAT 400 do not count toward the degree.

No course used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

This degree option is non-thesis only.

Minimum program GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Study Manual* (<http://www.ece.illinois.edu/academics/grad/overview>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

For tuition information and external funding resources, please visit the department's graduate program website (<https://www.ece.illinois.edu/academics/grad/overview>). Students in the ECE major for the M.Eng. degree are not eligible for BOT tuition waivers.

English

<http://www.english.illinois.edu>

Head of the Department: Michael Rothberg
 Director of Graduate Studies: Eleanor Courtemanche
 210 English Building
 608 South Wright Street
 Urbana, IL 61801
 (217) 333-3646
 E-mail: engl_resources@ad.uiuc.edu

Major: English
 Degrees Offered: M.A., Ph.D.
 Graduate Concentrations: Medieval Studies (p. 837) (available to all degrees), Writing Studies (p. 922) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in English and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Affiliated Programs offering certificates or minors:

- Department of African American Studies
- Asian American Studies Program
- American Indian Studies
- Center for Latin American and Caribbean Studies
- Gender and Women's Studies Program
- The Holocaust, Genocide, and Memory Studies Initiative
- Illinois Program for Research in the Humanities
- Latina-Latino Studies Program
- The Program in Jewish Culture and Society
- Unit for Cinema Studies
- Unit for Criticism and Theory

Graduate Degree Programs

The Department of English offers programs of study leading to the Master of Arts and the Doctor of Philosophy degrees. We welcome qualified students who wish to pursue their interests in English, American, and Anglophone language, literature and film beyond the undergraduate level. The Ph.D. program is, in general, designed to educate and train teacher-scholars who will take positions in colleges and universities throughout the country. We consider the Master of Arts program to be the first step toward the Ph.D. degree; we expect students admitted to the M.A. program to receive the M.A. and go on to complete a Ph.D. We therefore do not offer a formal terminal M.A. program.

Both the M.A. and Ph.D. may be earned with a specialization in Writing Studies. Also, doctoral students specializing in other fields may earn a graduate concentration in Writing Studies.

For information on the Master of Fine Arts (M.F.A.) program in Creative Writing, see Creative Writing (p. 725).

Admission

A student who wishes to be considered for admission to graduate studies in English must present the equivalent of at least 20 semester hours of undergraduate work in English and American literature, excluding required work in rhetoric or composition. Graduate Record Examination (GRE) scores for the verbal and subject tests are required for those applying for the literature program. The GRE subject test for literature in English is not required of writing studies applicants. All applicants whose native language is not English are required to submit Test of English as a Foreign Language (TOEFL) scores. Currently, a minimum score of 550 on the paper-based test (213 on the computer-based test) is required. Before a teaching assistantship involving classroom instruction or student consultation can be awarded to a non-native speaker of English, the applicant must take the Test of Spoken English (TSE) and achieve a score of 50 or higher (230 or higher before 1996). Because applications for admission usually far exceed capacity, in recent years undergraduate grade point averages of students admitted have been significantly higher than the 3.0 (A = 4.0) required by the Graduate College. The committee on admissions tends to select those applicants who have a solid array of undergraduate courses, knowledge of a foreign language, strong recommendations, and a compelling writing sample: in short, an academic record that shows promise of doing outstanding work in the field and earning degrees within a reasonable time. We do not admit part-

time students. Applicants are considered only in spring for fall admission, and the deadline for submitting applications is noon on December 2nd.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including English. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting:

Medical Scholars Program
125 Medical Sciences Building
(217) 333-8146
or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>)

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and all M.A. and Ph.D. candidates will have ample opportunity to teach undergraduate writing classes.

Financial Aid

Financial aid is available to students in the form of fellowships, teaching assistantships, research assistantships, and waivers of tuition and service fees. For complete information about the program, prospective applicants should consult our website at www.english.illinois.edu/graduate/program/ (<http://www.english.illinois.edu/graduate/program/>) or write to the above address.

Master of Arts in English

A full-time student can complete this program in two academic years. Students must choose to complete a specialization in Literature or Writing Studies.

Code	Title	Hours
	Virtually every student will teach rhetoric classes, and is required to enroll in a teaching proseminar (ENGL 593). Course work selected from list below in consultation with advisor	4
	Language Requirement: Students must demonstrate a reading knowledge of at least one foreign language.	
Total Hours		32

Other Requirements¹

Other requirements may overlap

At least two semesters or the equivalent in residence

Minimum Hours Overall Required 24 (12 at 500-level)

Within the Unit:

Minimum 500-level Hours Required 16

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Studies in English* (<http://www.english.illinois.edu/graduate>) *Website* and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Course work listing for M.A. requirements for the Literature Specialization:

Eight semester-long courses in British and American Literature and Critical Theory.

Courses (worth four hours of credit each) must be taken in six of the following nine areas:

- Medieval British Literature (beginning to 1485)
- Renaissance British Literature (1485-1660)
- Restoration/Eighteenth-Century British Literature (1660-1800)
- Nineteenth-Century British Literature (1800-1900)
- Twentieth-Century British Literature (1900-2000)
- Early American Literature (beginning to Civil War)
- Later American Literature (Civil War to present)
- Anglophone Literature (other than British and American)
- Critical Theory

Candidates may substitute another area (such as film) for one on the above list with the permission of the Director of English Graduate Studies. However, all students must take at least one course in a period before 1660, and one course in either Early or Later American Literature.

At least four of the eight courses must be in 500-level graduate seminars (limited to 14-18 students). The others may (but need not) be in 400-level courses (limited to 36 students) in which graduate students complete work beyond that expected of undergraduates.

In their first year of teaching, students are required to complete a Professional Seminar in the teaching of composition or business and technical writing for four hours of credit. (ENGL 593)

The Foreign Language Requirement may be satisfied by demonstrating a reading knowledge of an appropriate foreign language in one of the following three ways:

1. By completing the equivalent of three full years of undergraduate work
2. By passing a proficiency exam administered by a UIUC foreign language department
3. By passing a non-credit 501 language course with a grade of B or better

Course work listing for M.A. requirements for the Writing Specialization:

Eight semester-long courses in Writing Studies, Literature, and Theory.

Courses (worth four hours each) must be taken as follows:

At least 16 of the 32 required hours must be in 500-level courses. Eight of the 16 hours must be ENGL 505 and 1 course from the following list: ENGL 582, ENGL 583, ENGL 584. In addition, students must take two courses in Literature or Theory and four courses approved by the Writing Studies advisor.

At least four of the eight courses must be 500-level graduate seminars (limited to 14-18 students). The others may (but need not) be 400-level

courses (limited to 36 students) in which graduate students complete work in addition to that expected of undergraduates.

In their first year of teaching, students are required to complete a Professional Seminar (ENGL 593) in the teaching of composition or the teaching of business and technical writing for four hours of credit.

The Foreign Language Requirement may be satisfied by demonstrating a reading knowledge of an appropriate foreign language in one of the following three ways:

1. By completing the equivalent of three full years of undergraduate work
2. By passing a proficiency exam administered by a University of Illinois foreign language department
3. By passing a non-credit 501 language course with a grade of B or better.

Doctor of Philosophy in English

Students in the program who have earned their master's degrees must apply formally to the Ph.D. program. Applicants who have completed their master's degrees elsewhere may also apply. Seldom are applicants accepted with graduate grade point averages below 3.5. Students must choose to complete a specialization in Literature or Writing Studies. In addition, students may choose to complete the graduate concentration in Writing Studies (p. 921).

Interdisciplinary work is encouraged. Students may take courses outside of English. The special field examination is taken as the student completes coursework and prepares to write the thesis. The student then goes on to complete and defend the thesis under the direction of a committee composed of four professors. A full-time student can complete this program in four years beyond the master's degree.

Code	Title	Hours
Virtually every student will teach rhetoric classes, and is required to enroll in a teaching proseminar (ENGL 593) if s/he has not taken such a class at the Master's level.		
Elective hours selected from the list below in consultation with advisor, to bring total course work hours to 32		32
Language Requirement: Students must demonstrate knowledge of one foreign language in a level equivalent to that required of master's candidates in the English Department's program.		
ENGL 599	Thesis Research (32 max applied toward degree)	32
Total Hours		64

Other Requirements¹

Other requirements may overlap

The special field examination is taken as the student completes coursework and prepares to write the thesis.

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes

Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Studies in English* (<http://www.english.illinois.edu/graduate>) Website and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Course work listing for Ph.D. requirements for the Literature Specialization:

- Eight additional semester-long courses at the 400 and 500 level. These, selected in consultation with a faculty advisor, either focus on the proposed field of specialization and allied fields—in English or in other disciplines—or fill gaps in the student's background.
- Doctoral students in literature will either take a Professional Seminar in the teaching of literature or film or act as a teaching assistant for two semesters in a large lecture course before they teach literature courses. They are expected to teach at least one literature course during their Ph.D. work.
- The Foreign Language Requirement (if not already satisfied at the M.A. level) may be satisfied by demonstrating a reading knowledge of an appropriate foreign language in one of the following three ways: By completing the equivalent of three full years of undergraduate work; By passing a proficiency exam administered by a UIUC foreign language department; By passing a non-credit 501 language course with a grade of B or better.
- Completion of a Special Field Examination (oral, written, or both). The exam, administered by a committee of four faculty members selected by the student, is based upon the student's approved Special Field list of primary and secondary sources, including a discussion of its rationale and relation to the proposed dissertation topic. Approved fields include historical periods, genres, film, and critical theory.
- Completion and two-hour oral defense of a dissertation. Students working on their dissertations are eligible for fellowship support or released time from teaching. All students in good standing and making good progress will ordinarily receive at least one semester free from teaching. A few students receive a year or more of fellowship aid to work full-time on their dissertations.

Course work listing for Ph.D. requirements for the Writing Studies Specialization:

- Eight additional semester-long courses at the 400 and 500 level. These selected in consultation with a faculty advisor, focus on the proposed field of specialization and allied fields—in English or in other disciplines—or fill gaps in the student's background and include ENGL 505 and 2 methodology courses (at least one of which is an ENGL 582; the second methodology course should be approved by the advisor and typically will be approved by the Center for Writing Studies for the methodology requirement in its Writing Studies Graduate Concentration). In addition, students must take one course in Literature or Theory. Specific courses taken at the MA level (ENGL 505 and ENGL 582) are counted as fulfilling those specific requirements at the PhD level.
- Students who enter the Ph.D. program with an M.A. from another institution must show demonstrated reading knowledge of a foreign language.
- Completion of a Special Field Examination (oral, written, or both). This exam, administered by a committee of four faculty members selected by the student, is based upon the student's approved special field list—which includes a discussion of its rationale and relation to the proposed dissertation topic. Lists are representative of the

field of Writing Studies and include two or three concentrations within it. Approved fields include: Cognition and Composition, Computers and Composition Studies, Classical Rhetoric, Critical Theory, Discourse Processes, Gender and Writing, Literacy Studies, Technical Communication, Writing Across the Curriculum, Writing in the Disciplines, and Writing Assessment. Other combinations of fields are possible, including those that combine disciplines (e.g. African-American Studies, women's studies, and literacy).

- Completion and two-hour oral defense of a dissertation. Students working on their dissertations are eligible for fellowship support or released time from teaching. All students in good standing and making good progress will ordinarily receive at least one semester free from teaching. A few students receive a year or more of fellowship aid to work full-time on their dissertations.

Entomology

<http://www.life.illinois.edu/entomology/>

Head of the Department: May R. Berenbaum
320 Morrill Hall
505 South Goodwin Avenue
Urbana, IL 61801
(217) 333-2910
E-mail: entowork@life.uiuc.edu

Major: Entomology
Degrees Offered: M.S., Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Entomology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Entomology offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. The program is designed to accommodate incoming students with a wide range of entomological expertise. The goal of the program is to provide students with a strong background in basic biology as it relates to insects and to equip them with the specialized intellectual and technical skills to pursue a career in research, teaching, and service in entomology and related biological disciplines.

Major areas of specialization within the department include systematics, evolutionary biology, molecular genetics, genomics, phytochemical ecology, population biology, toxicology, neurophysiology, neuroanatomy, developmental biology, behavior, sociobiology, endocrinology, and integrated pest management.

Admission

The Graduate Record Examination (GRE) general test is not required, but strongly recommended. A Test of English as a Foreign Language (TOEFL) score of 550 or better is preferred. Previous training in entomology is unnecessary. It is recommended that students who intend to study for advanced degrees in entomology gain a thorough grounding in the physical and biological sciences, mathematics, and the liberal arts. Spring Admission is possible.

Medical Scholars Program

Please note the Medical Scholars program is not accepting applications at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Entomology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program and is strongly recommended.

Financial Aid

Graduate student awards are available, including teaching and research assistantships. In addition, fellowships and traineeships are offered by the Graduate College and the School of Integrative Biology, and the Program in Ecology, Evolution and Conservation Biology. A single application to the department is sufficient for consideration for all awards currently available.

Master of Science in Entomology

A candidate for the M.S. degree is expected to become knowledgeable in entomology through coursework and independent research and to complete a research thesis in an area of interest chosen in consultation with an adviser.

Code	Title	Hours
Select four of the following:		14
IB 427	Insect Physiology	
IB 444	Insect Ecology	
IB 468	Insect Classification and Evol	
IB 482	Insect Pest Management	
IB 504	Genomic Analysis of Insects	
ENT 599	Thesis Research (12 max applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Prescription Exam Required (administered upon entrance into program)	Yes
Masters Thesis Defense Required	Yes
Masters Thesis Deposit Required	Yes
Minimum 500-level Hours Required	12

Overall:

The grade point average required for degree certification is 3.0 (A = 4.0).

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://www.life.illinois.edu/entomology/handbook.html>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Entomology

A candidate for the Ph.D. degree should be conversant with entomological aspects of ecology, genetics, systematics, physiology, and integrated pest management. The candidate must demonstrate professional competence in a specialized area by presenting an acceptable thesis based on original research designed in consultation with a faculty adviser and approved by a graduate faculty thesis committee.

Entering with approved M.S./M.A. degree

Code	Title	Hours
Select 0-20 hours from the following:		0-20
IB 427	Insect Physiology	
IB 444	Insect Ecology	
IB 468	Insect Classification and Evol	
IB 482	Insect Pest Management	
IB 504	Genomic Analysis of Insects	
IB 526	Seminar in Entomology (Special Topics)	3
Statistics course		4
ENT 599	Thesis Research (0 min applied toward degree)	0
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Prescription Exam Required Yes
(administered upon entrance into program)

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

The grade point average required for degree certification is 3.0 (A = 4.0).

Minimum GPA: 3.0

Entering with approved B.S./B.A. degree

Code	Title	Hours
Select 20 hours from the following:		20
IB 427	Insect Physiology	
IB 444	Insect Ecology	
IB 468	Insect Classification and Evol	
IB 482	Insect Pest Management	
IB 504	Genomic Analysis of Insects	
IB 526	Seminar in Entomology (Special Topics)	3

Statistics course		4
ENT 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Prescription Exam Required Yes
(administered upon entrance into program)

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

The grade point average required for degree certification is 3.0 (A = 4.0).

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://www.life.illinois.edu/entomology/handbook.html>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

European Union Studies

<http://europe.illinois.edu/>

Director of the European Union Center: Carla Santos

European Union Center

International Programs and Studies

328 International Studies Building, MC-429

910 S. Fifth Street

Champaign, IL 61820

Contact: Carla Santos

(217) 265-7515

Email: eucenter@illinois.edu

Major: European Union Studies

Degrees Offered: M.A.

Graduate Minor: European Union Studies

Graduate Degree Programs

The European Union Center administers an interdisciplinary program of language and area courses leading to a Master of Arts degree. The program is intended to serve four constituencies of students: those working on the completion of the 5-year BA/MA program; those seeking to combine area expertise with professional training; those proceeding to disciplinary-based doctoral work; and those seeking a stand-alone, professional degree.

Admission

Applicants for admission to the Master of Arts program should have completed at least two years of a language of the European Union and hold a bachelor's degree from an accredited institution of higher education. The Graduate Record Examination (GRE), or another post-secondary examination such as the LSAT, GMAT, MCAT, is required and international students are required to take the Test of English as a

Foreign Language (TOEFL), with minimum scores set by the Graduate College. All admission requirements of the Graduate College also apply.

Applicants must submit the Graduate College application for admission, certified transcripts of all undergraduate and graduate work, Graduate Record Examination (GRE) scores (verbal quantitative, and written) or other post-secondary examination scores, a writing sample, and three letters of reference." Applicants must also submit to the European Union Center a statement of purpose showing how the M.A. degree in European Union Studies fits into their educational and career plans. This statement must show that the interdisciplinary nature of the MA in EU Studies will serve the student better than a disciplinary degree. Admission is ordinarily limited to the fall semester, but exceptions are made for spring and summer admission.

Master of Arts in European Union Studies

Students pursuing the thesis option are required to conduct an oral thesis defense before an MA thesis committee. The thesis committee must consist of at least two individuals, with a minimum of one individual drawn from the EU Center Executive Staff. The thesis advisor must be a member of the Graduate Faculty.

Thesis Option

Code	Title	Hours
EURO 501 & EURO 502	EU Institutions and Governance and The EU in a Global Context	8
Language Requirement: A candidate must demonstrate proficiency in a language of the European Union, other than English, at the advanced (third-year) level. Up to seven hours of advanced language (third or fourth-year) course work may be used toward the MA total hours. (Max 7)		7
EURO 599	Thesis Research (min/max applied toward degree)	0-8
Total Hours		36

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12 overall:

Coursework must come from at least three different academic units

Up to twelve hours may be credited for MA-equivalent study abroad courses or eight hours for internship placement

Up to twelve hours may be credited from graduate level courses taken as an undergraduate enrolled in participating partner departments at the University of Illinois Urbana Champaign as part of the European Union Center's 5-year BA/MA program

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://euc.illinois.edu/academic/degree.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
EURO 501 & EURO 502	EU Institutions and Governance and The EU in a Global Context	8
Language Requirement: A candidate must demonstrate proficiency in a language of the European Union, other than English, at the advanced (third-year) level. Up to seven hours of advanced language (third or fourth-year) course work may be used toward the MA total hours. (Max 7)		7
Total Hours		36

Other Requirements ¹

Other Requirements may overlap

Minimum 500-level Hours Required 12 overall:

At least two substantial research papers on European Union topics as part of course work, when relevant to the candidate's professional orientation, are required.

Coursework must come from at least three different academic units

Up to twelve hours may be credited for MA-equivalent study abroad courses or eight hours for internship placement

Up to twelve hours may be credited from graduate level courses taken as an undergraduate enrolled in participating partner departments at the University of Illinois Urbana Champaign as part of the European Union Center's 5-year BA/MA program

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://euc.illinois.edu/academic/degree.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in European Union Studies

The graduate minor in European Union Studies complements PhD programs in many departments and provides an opportunity for students to pursue an area studies program as well as their primary field. Graduate students may also come from professional schools, such as law, business, and education, and departments with professional degree programs, such as urban and regional planning.

Graduate students seeking admission to the graduate minor in European Union Studies program should check with an academic advisor in their major degree-granting school or department to confirm eligibility prior to pursuing an application. Students must submit a graduate minor application, available from the Center, and if approved, a petition to the Graduate College requesting to add the European Union Studies minor.

Students in the European Union Studies graduate minor program must earn at least 16 hours of graduate credit in approved courses in at least two departments. Two of the courses must be EURO 501 and EURO 502.

The graduate minor requires that students demonstrate the equivalent

of two years of college-level study of a language of the European Union other than English, to support development of a technical vocabulary in fields such as business, law, and agriculture. A list of courses fulfilling the minor is available from the Center.

Note: Students within the major can not minor in the same program.

Code	Title	Hours
EURO 501 & EURO 502	EU Institutions and Governance and The EU in a Global Context	8
Courses from the Center's approved course list. Courses must be from two departments		8
Language Requirement: Students demonstrate the equivalent of two years of college-level study of a language of the European Union other than English, to support development of a technical vocabulary in fields such as business, law, or agriculture.		0
Total Hours		16

Other Requirements ¹

Other requirements may overlap

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://euc.illinois.edu/academic/graduate.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Finance

<http://www.business.illinois.edu/finance>

Chair of the Department: Louis Chan
 Director of Graduate Studies: Martin Widdicks (MSF); Heitor Almeida (PhD)
 330 Wohlers Hall
 1206 S. Sixth Street
 Champaign, IL 61820
 PH (217) 244-2239
 FX (217) 333-1144

Major: Finance
 Degrees Offered: M.S., Ph.D.
 Graduate Concentrations: Accountancy (p. 639) (M.S. only), Business and Public Policy (p. 764) (M.S. only), Corporate Governance and International Business (p. 687) (M.S. only), Information Technology and Control (p. 688) (M.S. only)

Graduate Minor: Finance

Graduate Concentrations: Business and Public Policy, Finance, Real Estate (M.B.A. and M.A.S. only)

Graduate Degree Programs

The Department of Finance offers graduate work leading to the Master of Science and Doctor of Philosophy degrees. The following fields are available for specialization: banking and financial institutions, corporate finance, insurance and risk management, investments, and real estate and urban land economics.

Admission

The minimum required grade point average for admission is 3.0 (A = 4.0). To be admitted without deficiencies, the applicant should have completed one undergraduate course each in computer science, financial accounting, managerial accounting, and principles of economics as well as two courses each in calculus, probability and statistics, and financial management. Courses to remove deficiencies may be taken after beginning the program, but such courses will not count toward the departmental requirements for graduation. All applicants are required to submit Graduate Management Admission Test (GMAT) or GRE scores. Most international applicants are also required to submit Test of English as a Foreign Language (TOEFL) IELTS or iBT scores. The test scores will be used by the Admissions Committee, along with other information, in evaluating the applicant's qualifications for graduate study.

Master of Science in Finance

Terminal masters: The Master of Science in Finance (terminal master's) is a 15 month program designed primarily for practitioners in finance-related positions. The program is designed to be completed in 15 months, beginning in August.

Admission requirements and other details about the program can be found at www.business.illinois.edu/msf (<http://www.business.illinois.edu/msf>).

Code	Title	Hours
Core courses		16
Graduate level finance courses		12
Elective graduate coursework		12
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required	12
Overall	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.business.illinois.edu/finance/program.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Ph.D. only option

For Ph.D. students: A Master of Science degree is available for students in the Ph.D. program. Ph.D. students may earn a masters degree as they work toward the Ph.D. degree. Students interested in a terminal masters degree are not admitted to the Ph.D. program. Options available at this University for a terminal masters degree in finance include the M.S. in Finance (terminal masters) described above, and the MBA with a track in finance as described under the section on Business Administration - MBA.

Code	Title	Hours
Total Hours		32

Other Requirements ¹

Other Requirements may overlap

Minimum 500-level Hours Required 12
Overall

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.business.illinois.edu/finance/program.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Finance

The first stage toward the degree of Doctor of Philosophy ends when the candidate receives a master's degree in finance or earns the equivalent credit (a minimum of 32 graduate hours at this University or 32 semester hours or 48 quarter hours of acceptable work at another recognized university). The second stage comprises certain minimum coursework, fulfillment of other departmental requirements, and successful completion of qualifying and preliminary examinations. The third stage includes research, preparation of the dissertation, and the final examination. The minimum number of graduate hours required for the second and third stages combined is 64. A student plans courses and research with his or her adviser. Consideration is given to previous academic training, career objective, and the general requirements of the Graduate College and the department. The student should become familiar with these requirements and satisfy them as soon as possible.

To enter the third stage of the doctoral program, a candidate must pass a written qualifying examinations to test his or her qualifications for further advanced study and research, as well as teaching. An oral preliminary examination is required for the field of finance. An oral defense of the proposal for the dissertation is the final step in the second stage.

The Doctor of Philosophy is primarily a research degree, and the candidate must demonstrate the capacity for independent research by producing an original thesis on a topic within his or her major field of study. The subject of the thesis must be reported to the doctoral committee and to the Graduate College at the time of the preliminary examination. The candidate is admitted to the final oral examination by the dean of the Graduate College upon completion of the dissertation and the recommendation of the department.

The doctoral program generally begins in the fall semester. The application period typically runs October 1 through February 1.

Additional details on the program may be found at <https://business.illinois.edu/finance/programs/>

Code	Title	Hours
ECON 502	Economic Statistics (and prerequisites if required (ECON 500, ECON 501, ECON 506))	4-16
MATH 464	Statistics and Probability II (4 min)	3,4
ECON 507	Computable G E Modeling	4
At least two doctoral level courses beyond the minimum course requirements in econometrics and statistics, with a minimum grade of B in each		8
FIN 590	Individual Study and Research	4
FIN 591	Theory of Finance	4
FIN 592	Empirical Analysis in Finance	2-4

FIN 594	Seminar in Corporate Finance	4
FIN 593	Seminar in Investments	4
Research Seminars in Finance (16 min)		16
FIN 599	Thesis Research (min/max applied toward degree 0 min)	0
Total Hours		96

Other Requirement ¹

Other requirements may overlap

Students who do not already hold a Master's degree or its equivalent prior to enrollment must also take additional finance courses to complete the requirements of the MS Finance degree

Teaching experience

Second-year paper

Masters Degree Required for Admission to PhD? No, earned during Ph.D.

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.business.illinois.edu/finance/program.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Finance

The graduate minor in Finance is reserved for students admitted to the Master of Accounting Science program. Accountants with expertise in finance are increasingly highly valued by many employers. The graduate minor in Finance is designed to allow students in the MAS program to demonstrate substantive competency in the field of Finance. Counting the prerequisite requirement, the graduate minor is the equivalent of four graduate courses. Admission is limited and acceptance is on a competitive basis.

Prerequisites for the Minor

Admission to the minor requires the completion of either FIN 221 and FIN 300 or FIN 520 as a prerequisite. All courses must have been taken for a grade.

Admission to the Minor

Admitted MAS students should first consult with the MAS Program Advisor to determine if the minor is appropriate for the student. Information on how to apply will be available through the MAS Program Advisor. Students admitted to the MAS program may also email finance@illinois.edu for more information on the Finance Minor.

Advising Notes

The graduate minor can only be completed within the Fall semester of the fifth year of the MAS program. The three required graduate courses are

not available in the Spring semester. Students who drop any of the three required courses in Fall will be treated as having dropped the minor.

Students should have already completed FIN 300 before enrolling in the graduate minor. Students may apply while enrolled in FIN 300; however, the application decision may be deferred until successful completion of FIN 300. FIN 300 must be taken on this campus. Students who plan to take the graduate minor SHOULD NOT register for FIN 321, FIN 411, or FIN 412 as undergraduates. Students who have completed any of the following courses are not eligible to pursue the minor: FIN 411, FIN 321, or FIN 412.

Note: Students within the major can not minor in the same program.

Code	Title	Hours
FIN 511	Investments	4
FIN 512	Financial Derivatives	4
FIN 521	Advanced Corporate Finance	4
Total Hours		12

Other Requirements ¹

The Finance minor consists of these 3 courses, designated for the MAS students, completed during the Fall semester. There are no substitute courses.

Please contact your department for more information regarding the addition of a minor to your program of study.

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Concentrations

- Finance (p. 764)
- Business and Public Policy (p. 764)
- Real Estate (p. 764)

Graduate Concentration in Business and Public Policy

Today's business leaders must make strategic decisions in an extremely complex world. In addition to navigating the rapidly changing market forces in their industry, companies operate in an environment that is strongly influenced by regulatory and public policy considerations. Furthermore, our public sector leaders must also understand how market forces can help or hinder alternative solutions to society's most pressing problems. The business and public policy graduate concentration is designed to provide graduate business students a framework for evaluating the impact of public policy on firms and the markets in which they operate.

The concentration is open to all master's programs (Master of Accountancy Science, Master of Science in Accountancy, Master of Science in Finance, Master of Science in Business Administration, Master of Science in Technology Management, and Master of Science in Business Administration (International Management) in the College of Business but required of none.

Candidates will apply to the Department of Finance for admission into the concentration. Students wishing to be admitted to the concentration should consult with their program advisor before applying.

Code	Title	Hours
Complete 12 hours from the following list:		12
FIN 536	Government Insurance Programs	
FIN 571	Retirement Policy	
FIN 572	Health Care Policy	
FIN 573	Competition Policy	
FIN 574	Individual Tax Policy	
FIN 575	Business Tax Policy	
FIN 576	Domestic Environmental Policy	
FIN 577	International Environmental Policy	
FIN 578	Govt Market Economy	
Total Hours		12

Other Requirements

In addition to the concentration requirements, students must also complete the requirements of their major degree.

Graduate Concentration in Finance

This concentration is only available to students enrolled in the Master of Accounting Science program. Students admitted into the concentration must have successfully completed Finance 300. The Finance concentration consists of these 3 courses, with sections designated for the MAS students, completed during the Fall semester. There are no substitute courses.

Admitted MAS students should first consult with the MAS Program Advisor to determine if the concentration is appropriate for the student. Information on how to apply will be available through the MAS Program Advisor. Students admitted to the MAS program may also email finance@illinois.edu for more information on the Finance Concentration.

Code	Title	Hours
FIN 511	Investments	4
FIN 512	Financial Derivatives	4
FIN 521	Advanced Corporate Finance	4
Total Hours		12

Other Requirements

In addition to the concentration requirements, students must also complete the requirements of their MAS degree.

Graduate Concentration in Real Estate

The concentration in Real Estate is designed to prepare MBA/MAS students for jobs in real estate or real estate-related fields. In addition to learning the "language" of real estate, most of the courses will emphasize analytical techniques for evaluating potential investments in real estate with the emphasis on commercial real estate. Students will be

prepared for entry-level and more advanced jobs in a variety of areas related to real estate: for example, working as an analyst for Real Estate Investment Trusts, real estate investment divisions of major insurance companies, real estate valuation divisions of major accounting firms, major international real estate firms such as CBRE, Colliers International and Jones Lang LaSalle, real estate development firms, etc. The concentration requires 12 hours of graduate credit in real estate courses within the Department of Finance. There are no prerequisites. Courses taken for this concentration cannot also be counted toward another concentration.

Admission to the concentration requires enrollment in the MBA or MAS programs and approval by the Department of Finance.

Code	Title	Hours
FIN 541	Real Estate Fundamentals	4
Select two of the following courses:		8
FIN 443	Legal Issues in Real Estate	
FIN 447	Real Estate Development	
FIN 544	Urban Real Estate Valuation	
FIN 545	Real Estate Investment ¹	
FIN 546	Real Estate Financial Markets ¹	
Total Hours		12

¹ At least one of the courses selected must be FIN 545 or FIN 546.

Financial Engineering

Sponsoring Departments

Finance

Chair of Department: Louis Chan
340 Wohlers Hall
1206 South Sixth Street
Champaign, IL, 61820
(217) 244-2239

Industrial and Enterprise Systems Engineering

Head of Department: Rakesh Nagi
117 Transportation Building
104 South Mathews Avenue
Urbana, IL 61801
(217) 244-5703

Email: msfe@illinois.edu

Website: <http://msfe.illinois.edu/>

Major: Financial Engineering

Degree offered: M.S.

Graduate Degree Programs

This Master of Science in Financial Engineering (MSFE) degree program is jointly sponsored by the Department of Industrial and Enterprise Systems Engineering (ISE) in the College of Engineering and the Department of Finance in the College of Business. Graduates from this program receive the MSFE degree awarded by the Graduate College. The MSFE program complements other Finance (<http://www.business.illinois.edu/finance>) and ISE (<http://www.iese.illinois.edu>) graduate programs offered by the sponsoring departments.

Financial Engineering (FE) is a relatively young, multidisciplinary field that pertains to the application of engineering approaches and methods

to the analysis and management of financial problems, particularly in the financial asset arena. Common problems involve identifying and managing financial risk in asset portfolios and asset positions and pricing of financial derivatives. Other applications exist in proprietary security trading operations, as well as in practically all practical domains where risk is an important concern. The field has emerged as the result of the ever growing complexity required in describing and solving these business problems whose resolution requires fundamental economic principles and finance theory coupled with state-of-the-art mathematical methods, computational tools, and computer programming expertise.

Admission

Successful applicants to the MSFE Program will have a Bachelor's degree with one year of calculus, one semester of linear algebra and differential equations, one semester of programming (preferably in C/C++), and one semester of probability and statistics. Knowledge of basic finance and economics is helpful but not necessary. Given its technical emphasis, applicants to this program typically will have completed a Bachelor's degree in an engineering field, mathematics, physics, computer science, or economics that provides sufficient preparation to facilitate a fast-paced, in-depth learning environment.

All applicants are expected to have a minimum grade point average of at least 3.25 (A=4.00) for the last two years of undergraduate study and a 3.50 for any previous graduate work completed. Scores on the Graduate Record Examination (GRE) general test are required of all applicants. All applicants whose native language is not English must submit a minimum Test of English as a Foreign Language (TOEFL) score of at least 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) academic exam scores of 7.0 overall and 6.0 in all subsections.

Master of Science in Financial Engineering

Covering topics in finance, economics, numerical methods, stochastic calculus, and computer programming, the MSFE is a rigorous, three-semester, 48-credit, resident degree program with a summer internship opportunity. Twelve courses each of 4 graduate credits are required for graduation; they are expected to be taken in sequence in the respective semesters. Details on the program may be found at msfe.illinois.edu (<http://msfe.illinois.edu>).

Code	Title	Hours
Core Courses		40
Project		4
Elective Graduate Coursework, may be 400 or 500 level		4
Total Hours		48

Other Requirements ¹

Minimum 500-level Hours Required Overall: 44

Minimum GPA: 2.75

¹ For additional details and requirements refer to the program's Web site (<http://msfe.illinois.edu/academics/curriculum.aspx>) and the Graduate (<http://www.grad.illinois.edu/gradhandbook>) College (<http://www.grad.illinois.edu/gradhandbook>) Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Food Science and Human Nutrition

<http://www.fshn.illinois.edu>

Head of the Department: Sharon Nickols-Richardson
Correspondence and Admission Information: Terri Cummings
264 Bevier Hall
905 South Goodwin Avenue
Urbana, IL 61801
(217) 244-4405
E-mail: FSHN-General@ad.uiuc.edu

Major: Food Science and Human Nutrition
Degrees Offered: M.S., Ph.D.
Graduate Concentrations: Food Science (all degrees), Human Nutrition (all degrees), Professional Science Master's (p. 770) (M.S. only)

Off-Campus Program: Food Science and Human Nutrition
Degree Offered: M.S.

Joint Degree Program: Doctor of Philosophy in Food Science and Human Nutrition and Master of Public Health (p. 718)
Degrees Offered: Ph.D. and M.P.H.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Food Science and Human Nutrition and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Food Science and Human Nutrition offers traditional graduate programs leading to the Master of Science and Doctor of Philosophy degrees with either a food science or human nutrition concentration. In addition to receiving training in the general field of food science or human nutrition, students have the opportunity to conduct research in the following areas of specialization:

- *Food processing, engineering, and biotechnology
- *Food ingredients, properties, and interactions
- *Food microstructures, micro-carriers, and nanotechnology
- *Food chemistry
- *Food microbiology and biomass conversion
- *Food safety and security
- *Sensory sciences
- *Dietary quality and food and nutrition patterns for optimal health
- *Nutrition and disease interactions, including cancer, metabolic disorders, and gastrointestinal health
- *Nutrition across the life span
- *Biochemical and molecular nutrition
- *Clinical nutrition
- *Community nutrition

For additional information go to fshn.illinois.edu/graduate (<http://fshn.illinois.edu/graduate>).

The department also offers a Professional Science Master's (PSM) concentration. The PSM involves rigorous scientific training in the area of food science and/or human nutrition; additionally, instruction is provided in applied business knowledge and skills. This program is designed for those who seek careers in a science-based setting with significant managerial and leadership responsibilities. For additional information go to psm.illinois.edu/prospectivestudents/programs/foodscience.htm (<http://psm.illinois.edu/prospectivestudents/programs/foodscience.htm>).

Admission

In addition to meeting the Graduate College admission requirements, a student planning to pursue a graduate degree in the department should have a baccalaureate degree in a recognized field of biological, physical, agricultural, or engineering science. Background deficiencies may be removed with graduate credit courses designed for this purpose. Graduate Record Examination (GRE) scores are required of all applicants, and those whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Minimum TOEFL and IELTS scores can be found at grad.illinois.edu/admissions/instructions/04c (<http://www.grad.illinois.edu/admissions/instructions/04c>). Students can be admitted to start in fall, spring, or summer semesters except for the PSM concentration, which admits fall semester only. For information on the role faculty have in the admissions process go to fshn.illinois.edu/graduate/applying (<http://www.fshn.illinois.edu/graduate/applying>).

Internship in Dietetics

The Department of Food Science and Human Nutrition offers a dietetic internship for master's and doctoral students specializing in human nutrition. Completion of the degree and the internship qualifies the student to take the Academy of Nutrition and Dietetics registration examination administered by the Commission on Dietetic Registration. For information on our dietetic internship program please contact Ms. Jessica Madson (jamadson@illinois.edu).

Off-Campus Program

A non-thesis Master of Science in Food Science program is offered via live, synchronous online sessions using distance education technology. The program ensures the same degree of excellence, and courses are instructed by the same faculty, as the on-campus non-thesis program. Courses are typically offered in the evening. For requirements and additional information, please contact Dr. Dawn Bohn at dbrehart@illinois.edu.

Medical Scholars Program

Please note the Medical Scholars program is not accepting applications at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Food Science and Human Nutrition. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical

Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Teaching is neither a Graduate College nor a FSHN requirement. A limited number of teaching assistantships are available to FSHN graduate students. Students are selected to be Graduate Teaching Assistants by the Department Head in consultation with the course instructor.

Financial Aid

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted. Financial aid for non-PSM graduate students is available in the form of fellowships, teaching and research assistantships, and tuition and partial fee waivers. Qualified candidates are considered for financial support upon application. Additional information on financial aid for graduate students can be found at fshn.illinois.edu/graduate/financial-assistance (<http://fshn.illinois.edu/graduate/financial-assistance>).

- Master of Science in Food Science and Human Nutrition, Food Science Concentration (p. 769)
- Master of Science in Food Science and Human Nutrition, Human Nutrition Concentration (p. 770)
- Master of Science in Food Science and Human Nutrition, Professional Science Master's Concentration (p. 770)
- Doctor of Philosophy in Food Science and Human Nutrition, Food Science Concentration (p. 767)
- Doctor of Philosophy in Food Science and Human Nutrition, Human Nutrition Concentration (p. 768)
- Master of Public Health and Ph.D. in Food Science & Human Nutrition, Food Science Concentration (p. 768)
- Master of Public Health and Ph.D. in Food Science & Human Nutrition, Human Nutrition Concentration (p. 769)

Master of Science in Food Science and Human Nutrition, no concentration, Online

Code	Title	Hours
FSHN 414	Food Chemistry	3
FSHN 461	Food Processing I	4
FSHN 471	Food & Industrial Microbiology	3
Electives from departmental list (http://fshn.illinois.edu/online/course-offerings)		22
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

Additional courses may be required beyond the minimums listed above.

Final Exam Required: Yes
Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Food Science and Human Nutrition, Food Science Concentration

If a candidate has a master's degree in a related area, a minimum of 64 graduate hours, including up to 38 graduate hours of thesis research, must be completed. In consultation with the adviser and advisory committee, the remainder of the 64 graduate hours required for the degree consists of courses selected from inside or outside the department that are appropriate for training in the student's field of specialization. Upon completion of all necessary formal courses and special options, the student is required to take an oral preliminary examination. After passage of the preliminary examination, the student's activities are primarily devoted to thesis research. Upon submission of the dissertation, the candidate is required to pass a final oral examination before a graduate faculty committee. The Ph.D. degree may be combined with an M.D. in the Medical Scholars Program.

Entering with approved M.S./M.A. degree

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook)		26
FSHN 599	Thesis Research (max applied toward degree)	38
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Thesis Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

Entering with approved B.S./B.A. degree

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook)		26
FSHN 599	Thesis Research (max applied toward degree)	70
Total Hours		96

Other Requirements¹

Other requirements may overlap

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Thesis Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Food Science and Human Nutrition, Human Nutrition Concentration

If a candidate has a master's degree in a related area, a minimum of 64 graduate hours, including up to 38 graduate hours of thesis research, must be completed. In consultation with the adviser and advisory committee, the remainder of the 64 graduate hours required for the degree consists of courses selected from inside or outside the department that are appropriate for training in the student's field of specialization. Upon completion of all necessary formal courses and special options, the student is required to take an oral preliminary examination. After passage of the preliminary examination, the student's activities are primarily devoted to thesis research. Upon submission of the dissertation, the candidate is required to pass a final oral examination before a graduate faculty committee. The Ph.D. degree may be combined with an M.D. in the Medical Scholars Program.

Entering with approved M.S./M.A. degree

Code	Title	Hours
See handbook for required courses (26 min) (http://fshn.illinois.edu/graduate/student-handbook)		26
Electives from departmental list: At least 3 must be must be graded courses at the 500-level		
FSHN 599	Thesis Research (max applied toward degree)	38
Total Hours		64

Other Requirements¹

Other requirements may overlap

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendations

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes

Dissertation Deposit Required	Yes
Minimum GPA:	3.0

Entering with approved B.S./B.A. degree

Code	Title	Hours
See handbook for required courses (26 min) (http://fshn.illinois.edu/graduate/student-handbook)		26
Electives from departmental list: At least 3 must be must be graded courses at the 500-level		
FSHN 599	Thesis Research (max applied toward degree)	70
Total Hours		96

Other Requirements¹

Other requirements may overlap

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendations

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.P.H. and Ph.D. in Food Science & Human Nutrition, Food Science Concentration

The M.P.H. can be earned jointly with the Ph.D. in Food Science & Human Nutrition. In the joint program, up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH 469	Environmental Health	4
CHLH 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 594	Special Topics	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)		

Electives and seminars, min 3 (may be met by Ph.D. core courses)

See handbook for required Ph.D. courses (<http://fshn.illinois.edu/graduate/student-handbook>) 26

Electives from Ph.D. departmental list (may be met by M.P.H. core courses) (At least 3 must be must be graded courses at the 500-level)

FSHN 599	Thesis Research (min/max applied toward degree)	32-38
----------	---	-------

Total Hours	100
-------------	-----

Other Requirements ¹

Other requirements may overlap

A Ph.D. concentrations is required.

Minimum Number of 500-level Hours Required overall in Program:	12 (8 within M.P.H.)
--	----------------------

Additional courses may be required beyond the concentration minimum per Advisory Committee

Additional courses may be required beyond the concentration minimum per Advisory Committee

Approved Masters Degree Required for Admission?	No
---	----

Qualifying Exam Required:	Yes
---------------------------	-----

Preliminary Exam Required:	Yes
----------------------------	-----

Final Exam/Dissertation Defense Required:	Yes
---	-----

Dissertation Deposit Required:	Yes
--------------------------------	-----

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.P.H. and Ph.D. in Food Science & Human Nutrition, Human Nutrition Concentration

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH 469	Environmental Health	4
CHLH 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 594	Special Topics	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2

Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)

Electives and seminars, min 3 (may be met by Ph.D. core courses)

See handbook for required Ph.D. courses (26 min) (<http://fshn.illinois.edu/graduate/student-handbook>) 26

Electives from Ph.D. departmental list (may be met by M.P.H. core courses) (At least 3 must be must be graded courses at the 500-level)

FSHN 599	Thesis Research (min/max applied toward degree)	32-38
----------	---	-------

Total Hours	100
-------------	-----

Other Requirements ¹

Other requirements may overlap

A Ph.D. concentrations is required.

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendations:

Approved Masters Degree Required for Admission?	No
---	----

Qualifying Exam Required:	Yes
---------------------------	-----

Final Exam/Dissertation Defense Required:	Yes
---	-----

Dissertation Deposit Required:	Yes
--------------------------------	-----

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Food Science and Human Nutrition, Food Science Concentration

Thesis Option

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook)		17-18

Electives	8
-----------	---

FSHN 599	Thesis Research (min/max applied toward degree)	0-6
----------	---	-----

Total Hours	32
-------------	----

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8
---	---

Minimum 500-level Hours Required Overall	12
--	----

Overall

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Final Exam/Thesis Defense Required

Thesis Deposit Required

Minimum GPA:	3.0
--------------	-----

Non-Thesis Option

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook)		17-18
Electives from departmental list (At least 3 hours must be at the 500 level):		14
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall 12

A non-thesis degree is considered a terminal degree, and requires a committee as well as an adviser.

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Food Science and Human Nutrition, Human Nutrition Concentration

Thesis Option

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook) ¹		16-18
Electives from departmental list (At least 3 must be must be graded courses at the 500-level)		8-16
FSHN 599	Thesis Research (min/max applied toward degree)	0-6
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall 12

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Final Exam/Thesis Defense Required

Thesis Deposit Required

Minimum GPA: 3.0

Non-Thesis Option

Code	Title	Hours
See handbook for required courses (http://fshn.illinois.edu/graduate/student-handbook) ¹		16-18
Electives from departmental list (At least 6 must be must be graded courses at the 500-level)		14-16
Total Hours		32

Other Requirements

Other requirements may overlap

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall 12

A non-thesis degree is considered a terminal degree, and requires a committee as well as an adviser.

Additional courses may be required beyond the concentration minimum per Advisory Committee recommendation

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Food Science and Human Nutrition, Professional Science Master's Concentration

Code	Title	Hours
See PSM concentration-specific course work (http://psm.illinois.edu/food-science-human-nutrition/science-curriculum)		24
FSHN 598 or NUTR 593	Advanced Special Problems Individual Topics in Nutrition	1-8
Business courses prescribed by the Illinois PSM program		10
PSM 501	PSM Industry Seminar I	0
PSM 502	PSM Industry Seminar II	0
PSM 503	PSM Industry Seminar III	0
PSM 555	PSM Internship	0
Total Hours		42

Other Requirements ¹

Other requirements may overlap

The PSM concentration is required.

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

A non-thesis degree required a committee as well as an adviser.

Additional courses may be required beyond the concentration minimum.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://fshn.illinois.edu/graduate/student-handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

French and Italian

<http://www.frit.illinois.edu>

Head of the Department: Robert Rushing
 Director of Graduate Studies: Zsuzsanna Fagyal
 2090 Foreign Languages Building
 707 South Mathews Avenue
 Urbana, IL 61801
 (217) 333-2020
 E-mail: french-italian@illinois.edu

Major: French
 Degrees Offered: M.A., Ph.D.
 Graduate Concentration: Medieval Studies (p. 837) (available to all), Romance Linguistics (Ph.D.) (p. 882), Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in French and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Major: Italian
 Degrees Offered: M.A., Ph.D.
 Graduate Concentration: Medieval Studies (p. 837) (available to all), Romance Linguistics (Ph.D.) (p. 882), Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Italian and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of French and Italian offers graduate programs leading to the Master of Arts and the Doctor of Philosophy degrees in French and in Italian. Candidates for the master's degree may specialize in French Studies, French Linguistics, French Language Learning, or Italian. Candidates for the doctoral degree in French may choose one of three specializations: French Studies, French Linguistics, or Second Language Acquisition and Teacher Education (SLATE).

The following minors and certificates may be pursued: Cinema Studies (p. 924), Gender and Women's Studies (p. 924), Translation Studies (<http://www.translation.illinois.edu/programs/certificate1.html>), Criticism and Interpretive Theory (<http://criticism.english.illinois.edu>)

Admission

French

Students considering admission to the master's program should usually have had a college major in French. Applicants should apply online

(www.grad.illinois.edu/admissions/apply (<http://www.grad.illinois.edu/admissions/apply>)) and submit a statement of purpose, three letters of recommendation and two writing samples (5-10 pages each), at least one of which must be in French. Original transcripts showing all undergraduate and graduate work completed should be sent to SLCL Graduate Student Services. Graduate Record Examination (GRE) scores are required of all domestic applicants and should be submitted to institution code 1836. International applicants who have taken the GRE are encouraged to submit their scores as well. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 79 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (<http://www.grad.illinois.edu/Admissions/instructions/04c.cfm>). Admission for the spring semester is rare. Students seeking admission to the Ph.D. program with a Master of Arts degree earned elsewhere are expected to have a minimum 3.5 grade point average in graduate coursework. The master's degree should be in French literature, French studies, or French linguistics. Candidates seeking admission to the Ph.D. specialization in Second Language Acquisition and Teacher Education may hold a Master of Arts in Teaching degree instead.

For more information about how to apply, see <http://www.frit.illinois.edu/graduate/french/apply/>. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu.

Italian

The normal prerequisite for a graduate major is an undergraduate major in Italian or consent of the department. Students doing graduate work for any advanced degree in Italian must possess a command of the language. Applicants should apply online (www.grad.illinois.edu/admissions/apply) (<http://www.grad.illinois.edu/admissions/apply>) and submit a statement of purpose, three letters of recommendation and a writing sample of approximately 10-20 pages in the form of one or two papers. Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should also be uploaded. Graduate Record Examination (GRE) scores are required of all domestic applicants and should be submitted to institution code 1836. International applicants who have taken the GRE are encouraged to submit their scores as well. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 79 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c) (<http://www.grad.illinois.edu/Admissions/instructions/04c>). Applications are accepted for fall admission only. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with the study for a graduate degree in a second discipline, including French and Italian. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in a graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available

by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at <http://www.med.illinois.edu/msp>.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, the department requires Ph.D. candidates to do some teaching as part of their academic work because such experience is considered a vital part of graduate training and professionalization. Non-native English speakers must first pass a test of their oral English ability. See www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>).

Teaching Assistants in French and Italian are required to take FR 505 or ITAL 505 respectively (4 hours) as part of their contractual obligation. The course does not count toward the graduate degrees.

Faculty Research Interests

Our faculty (<http://www.frit.illinois.edu/people/faculty>) possess strengths in literary interpretation, critical theory, the study of civilization, cinema, theoretical and applied linguistics, and computer-assisted teaching. Members of the faculty have received national and international recognition; graduates serve on the faculties of numerous colleges and universities both in this country and abroad. See also the faculty's areas of research (<http://www.frit.illinois.edu/people/faculty>).

Centers, Programs, and Institutes

Our faculty hold appointments with the Departments of African American Studies, Gender and Women's Studies, Linguistics, Media and Cinema Studies, as well as the European Union Center and the Center for South Asian and Middle Eastern Studies, the Program in Comparative and World Literature, the Program in Jewish Culture and Society, the Program in Medieval Studies, and the Unit for Criticism and Interpretive Theory, broadening opportunities for interdisciplinary work.

Facilities and Resources

A language learning lab provides computer-based access to resources and audio-video services. The phonetics lab contains state-of-the-art equipment available to graduate student researchers. The Kolb-Proust Archive for Research, a unit of the Library, houses a wealth of information about Marcel Proust and his time, including the important collection of notes and materials assembled by Philip Kolb, who was a professor in the Department. Documents from the collection are accessible on the World-Wide Web through a searchable SGML-encoded Virtual Archive (www.library.illinois.edu/kolbp) (<http://www.library.illinois.edu/kolbp>).

Financial Aid

All students who apply for admission are considered for financial aid. Subject to budgetary conditions, and assuming satisfactory academic and teaching performance, the Department offers two years of financial aid toward the M.A. degree and an additional four years of support toward completion of the Ph.D.

Teaching Assistantships are the most common form of graduate student support. The usual appointment requires teaching three courses during the academic year.

Research Assistantships require the recipient to assist with a faculty member's research for a specific number of hours per week. A research assistantship may be combined with a teaching assistantship.

Fellowships are offered for new and continuing students. No separate application form is required.

Tuition and Fee Waivers are included in waiver-generating fellowship, teaching assistantship, and research assistantship awards.

Graduate students in French may spend the academic year abroad under exchange agreements with universities in France, Belgium, and Canada, employed as teaching assistants.

- Master of Arts in French (p. 773)
- Master of Arts in Italian (p. 773)
- Doctor of Philosophy in French (p. 772)
- Doctor of Philosophy in Italian (p. 773)

Doctor of Philosophy in French

Code	Title	Hours
Coursework should be selected in consultation with advisor.		32
Language Requirement: depends on specialization area		
FR 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate programs (<http://frit.illinois.edu/graduate/french>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Specialization in French Studies

The doctoral program in French Studies is designed to prepare specialists in literature and culture. Candidates are required to include courses in textual criticism, linguistics or linguistically oriented textual theory, and French/Francophone literature and culture. Students are expected to demonstrate reading proficiency in one modern foreign language (other than French or English). They may fulfill this requirement by passing a fourth-semester reading course with a grade of B or better or by demonstrating an equivalent ability by examination. Students may choose to complete a minor in Cinema Studies, Gender and Women's Studies, or to obtain a certificate in Medieval Studies, Translation Studies or in Criticism, and Interpretive Theory.

Specialization in French Linguistics

The Ph.D. curriculum in linguistics offers training in French and Romance linguistics in cooperation with the Department of Spanish and Portuguese and the Department of Linguistics. Candidates selecting this option are required to complete course work in linguistic theory, advanced study of French language and culture, and French and

Romance linguistics beyond the requirements of the M.A. in French Linguistics. Advanced course work related to the candidate's research area is chosen from courses offered by participating departments in consultation with the advisors in French and Romance Linguistics. Students are expected to demonstrate proficiency in at least one other Romance language and may select a concentration in Romance Linguistics.

Specialization in French Second Language Acquisition and Teacher Education (SLATE)

This Ph.D. curriculum in French SLATE combines advanced studies in French with a research focus on some aspect of second language learning and teaching. It is an inter-disciplinary Ph.D. concentration that offers training in a wide range of disciplines related to second language learning and teaching, with a focus on bilingualism, foreign, second, and heritage language teaching and learning. Courses are offered in collaboration with multiple departments and units in the School of Literatures, Cultures, and Linguistics, the College of Liberal Arts and Sciences, and the College of Education. Candidates in French selecting this option are required to complete course work in theories of language teaching and acquisition, linguistic theory, and French language and culture beyond the requirements of the M.A. in Language Learning. Advanced course work related to the candidate's research area is chosen in consultation with the French SLATE advisor.

Doctor of Philosophy in Italian

Areas of specialization offered in Italian are literary and cultural studies, Italian linguistics, and Romance linguistics.

Code	Title	Hours
Coursework selected in consultation with advisor		
Language Requirement: Students in all programs except SLATE must demonstrate reading proficiency in two languages besides the foreign language of specialization (not including English).		
ITAL 599	Thesis Research	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

Masters Degree Required for Admission to PhD? Yes

Qualifying Exam Required No

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's guidelines for graduate students and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in French

Candidates in French Studies must take an examination based on a reading list covering the fields of French literature and culture. The written and oral examination in French linguistics is based on a list of readings in linguistics and in literature and/or civilization. The written exam in French linguistics may be substituted by an extended research paper. The examination in French language learning/teaching includes readings in second-language acquisition and teaching methods in addition to selected readings in French literature and/or civilization. Candidates in all programs are required to demonstrate, at the time of the master's examination, an ability to communicate effectively in both written and oral French.

Code	Title	Hours
Course work dependent on specialization area		32
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall

Comprehensive exam

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate programs (<http://www.french.illinois.edu/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Italian

Areas of specialization offered in Italian are Italian literature and cultural studies and Italian linguistics. The M.A. in Italian requires a minimum of 32 graduate hours. Students must also successfully complete exams in four areas of Italian literature/cultural studies or three areas of Italian linguistics, chosen in consultation with their advisor.

Code	Title	Hours
Coursework selected in consultation with advisor		32
Total Hours		32

Other Requirements ¹

Other Requirements may overlap

ITAL 505 is required of all teaching assistants

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's guidelines for graduate students and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Geography and Geographic Information Science

<http://www.geog.illinois.edu/>

Head of the Department: Shaowen Wang

2044 Natural History Building
1301 W. Green Street
Urbana, IL 61801
(217) 333-1880
E-mail: geograph@illinois.edu

Major: Geography
Degrees Offered: M.A., M.S., Ph.D.
Graduate Concentration: Professional Science Masters; Geographic Information Science (M.S. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Geography and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Geography and Geographic Information Science offers programs leading to the Master of Arts, Master of Science and Doctor of Philosophy degrees in Geography. The department's specializations are organized into four programs:

1. Cities and Metropolitan Areas (urban health and quality of life, urban governance and politics, race, class, and city policing, critical studies of urban transportation and mobilities, globalization, neoliberalization and the city);
2. Geographic Information Science (geographic information systems, dynamic modeling of ecological and social systems, geocomputation and cyber GIS, aerial photogrammetry, remote sensing, interregional input-output modeling, regional science and spatial analysis);
3. River, Watershed and Landscape Dynamics (fluvial geomorphology, watershed science and management, and ecosystem dynamics);
4. Society, Space and Environments (political ecology, environmental policy and social vulnerability, urban analysis, health geography and geopolitical analysis).

Admission

Students applying for admission to the master's program are expected to have a strong undergraduate background in geography and/or related disciplines. In addition to other Graduate College admission requirements, a grade point average of at least 3.0 (A = 4.0) in the undergraduate major is required. Ph.D. candidates are generally expected to have at least a 3.5 average in previous graduate work.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program. We have implemented a professionalization program in our department, where graduate students work with faculty members to receive advice and gain first-hand experience in teaching undergraduate courses. Several graduate students have also been provided an opportunity to teach introductory undergraduate courses over the last few years.

Facilities and Resources

The department also includes several state-of-the-art research laboratories maintained by individual faculty members. The CyberInfrastructure and Geospatial Information Laboratory (CIGI), housed in the department, researches and develops cutting-edge

cyberinfrastructure to advance geospatial sciences and technologies. The department is also a sponsor of the CyberGIS Center for Advanced Digital and Spatial Studies whose mission is to empower advanced digital and spatial studies through innovation of CyberGIS technologies and applications. The laboratory houses several high performance computers and servers for performing computationally intensive geographic analysis and problem solving in various research, education, and outreach contexts. The Global Environmental Analysis and Remote Sensing (GEARS) Laboratory examines the impacts of climate change and land use/land cover change on vegetated ecosystems using remote sensing data. The Regional Economics Applications Laboratory focuses on the development of models of urban and regional economies for impact analysis and economic forecasting. The department is a participant in the Social Dimensions of Environmental Policy (SDEP) strategic initiative, which aims to understand the social and political-economic forces shaping just and sustainable environmental policy. The soil laboratory has a wide array of equipment for physical and chemical analysis of earth materials.

Map and Geography Library

The University Library has a substantial collection of geography books and journals. Most of the new and more recent books are located in the Social Sciences, Health, and Education Library (SSHEL); nearly all geography journals are available full-text through the University Library's website. The Map Library holds a collection of over 626,000 maps and aerial photographs. Additionally, the Map Library houses an extensive collection of books on cartography and geographic information science. The Map Library also has a small collection of geospatial data on CD-ROM, and assistance in locating geospatial data can be obtained in either the Map Library or the University Library's Scholarly Commons.

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Geography. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Financial Aid

Fellowships, teaching and research assistantships, and waivers of tuition and some fees are available in the department for MA/MS and Ph.D. students.

- Master of Arts or Master of Science in Geography (p. 776)
- Professional Science Master's in Geographic Information Science (p. 775)

Doctor of Philosophy in Geography

Admission presupposes distinction in undergraduate and graduate study. In the doctoral program, the student develops depth in the program

chosen for specialization and further advances in research competence. A student must complete the course requirements as determined by an individually planned program, initiate and complete research projects, and qualify for candidacy by passing the departmental qualifying and preliminary examinations. Although there is no departmental foreign language requirement, students may study a foreign language as a research tool.

Entering with approved M.S./M.A. degree

Code	Title	Hours
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Doctoral students are required to demonstrate competence in a specific research technique		
Departmental minor		16
Students must fulfill program requirements specific to his/her specialty area		
GEOG 599	Thesis Research (4 min applied toward degree)	4
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required	24
Within the Unit:	
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

Entering with approved B.S./B.A. degree

Code	Title	Hours
At least two graduate-level courses on analytical research methods (At least one of these courses must be in geographic information systems (GIS) or related geospatial techniques)		
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Doctoral students are required to demonstrate competence in a specific research technique		
Departmental minor		16
Students must fulfill program requirements specific to his/her specialty area		
GEOG 599	Thesis Research (4 min applied toward degree)	4
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall:	12 (8 in Geog)
Must complete a major research paper of publishable quality approved by the student's advisory committee.	

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.geog.illinois.edu/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Professional Science Master's in Geographic Information Science

Department Head: Sara McLafferty

Computing Applications Building
605 E. Springfield Avenue
Champaign, IL 61820
E-mail: geograph@illinois.edu
PH: (217) 333-1880
<http://www.geog.illinois.edu/>

Faculty Coordinator: Shakil Kashem, Ph.D.

Admissions: Matt Cohn

Major: Geography
Degree Offered: M.S.
Graduate Concentration: Professional Science Master's; Geographic Information Science (M.S. only)

Graduate Degree Program

This program is designed for careers in business management using geospatial technologies. Students build a flexible, cross-disciplinary expertise around a strong Geographic Information Science core, while acquiring business knowledge and professional skills. The business curriculum includes technology management, marketing, entrepreneurship, finance, project and/or process management. PSM students typically complete the program in 16 months, consisting of 3 full-time, on-campus semesters and a summer internship.

Admission

Candidates for admission must have a bachelor's degree from an accredited U.S. institution, or comparable degree from a recognized institution abroad with a GPA or 3.0 (4.0 scale) for the last 60 hours of undergraduate or graduate coursework. The Graduate Record Examination (GRE), test of English as a Foreign Language (TOEFL, IELTS, TSE) for non-native speakers of English, and letters of recommendation are required. Transfer credit from Illinois or other institutions is not permitted.

Master of Science in Geography, Professional Science Master's Concentration in Geographic Information Science

Code	Title	Hours
32 hours of coursework from departmental approved list in consultation with the faculty coordinator. ¹		32
PSM Business Courses		10
PSM 501	PSM Industry Seminar I ²	0

PSM 502	PSM Industry Seminar II	0
PSM 503	PSM Industry Seminar III	0
PSM 555	PSM Internship (Summer)	0
Total Hours		42

Other Requirements

Code	Title	Hours
Other requirements may overlap.		
The PSM concentration is required.		
Minimum hours required within the unit:		16
Minimum 500-level credit hours (8 in GEOG):		12
Evaluation conducted by the GIS-PSM Director and/or members of the GIS-PSM committee		
Full-time enrollment (12 credit hours or higher) is required in fall and spring semesters; summer enrollment is required for the internship.		
Minimum GPA:		3.0

¹ Students with no previous experience in GIS are required to take a graduate-level GIS course.

² PSM Seminars and Internship may be taken for 1 credit-hour, but may not be applied to the business or science credit hours required for the degree.

Financial Aid

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments, but may be eligible for student loans. Statutory waivers and tuition scholarships are accepted.

Please refer to the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>) and *Geography PSM Handbook [PDF]* (http://catalog.illinois.edu/graduate/graduate-majors/geography/psm-gis/Fall_2016_PSM_in_Geography_Handbook.pdf) for additional details and requirements.

Master of Arts in Geography

Thesis Option

Successful candidates for the master's degree whose backgrounds are largely in physical geography or geographical information science are recommended for the Master of Science; others receive the Master of Arts.

Code	Title	Hours
At least one course on geographic information systems (GIS) and related geospatial techniques		
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Each student must also fulfill program requirements specific to his/her specialty area		
GEOG 599	Thesis Research (min/max applied toward degree (max 8)	8
Total Hours		32

Other Requirements

Minimum Hours Overall Required 16
Within the Unit:

Minimum 500-level Hours Required	12 (8 in Geog)
Overall:	
Other Requirements: ¹	Some Geography program options do not allow the non-thesis Master's degree option. Contact the department for further details.
	A maximum of 2 elective courses may be taken CR/NC.
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Programs* (<http://www.geog.illinois.edu/students/grad>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
At least one course on geographic information systems (GIS) and related geospatial techniques		
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Each student must also fulfill program requirements specific to his/her specialty area		
Total Hours		32

Other Requirements

Minimum Hours Overall Required	16
Within the Unit:	
Minimum 500-level Hours Required	12 (8 in Geog)
Overall:	
Other Requirements: ¹	Some Geography program options do not allow the non-thesis Master's degree option. Contact the department for further details.
	Two written research papers which address substantive research questions are required along with a comprehensive examination.
	A maximum of 2 elective courses may be taken CR/NC.
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Programs* (<http://www.geog.illinois.edu/students/grad>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts or Master of Science in Geography

Successful candidates for the master's degree whose backgrounds are largely in physical geography or geographical information science are recommended for the Master of Science; others receive the Master of Arts.

Thesis Option

Code	Title	Hours
At least one course on geographic information systems (GIS) and related geospatial techniques		
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Each student must also fulfill program requirements specific to his/her specialty area		
GEOG 599	Thesis Research (8 max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A maximum of 2 elective courses may be taken CR/NC.

Minimum Hours Overall Required 16

Within the Unit:

Minimum 500-level Hours Required 12 (8 in Geog)
Overall:

Minimum GPA: 3.0

Non-Thesis Option

Code	Title	Hours
At least one course on geographic information systems (GIS) and related geospatial techniques		
GEOG 471	Recent Trends in Geog Thought	4
GEOG 491	Research in Geography	2
Each student must also fulfill program requirements specific to his/her specialty area		
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Some Geography program options do not allow the non-thesis Master's degree option. Contact the department for further details.

Two written research papers which address substantive research questions are required along with a comprehensive examination.

A maximum of 2 elective courses may be taken CR/NC.

Minimum Hours Overall Required 16

Within the Unit:

Minimum 500-level Hours Required 12 (8 in Geog)
Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.geog.illinois.edu/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Geology

<http://geology.illinois.edu>

Head of the Department: Thomas Johnson

3028 Natural History Building

1301 W. Green St.

Urbana, IL 61801

(217) 333-3540

E-mail: holben@illinois.edu

Major: Geology

Degrees Offered: M.S., Ph.D.

Major: Teaching of Earth Science

Degrees Offered: M.S.

Graduate Degree Programs

The Department of Geology offers programs leading to the Master of Science in Geology, the Doctor of Philosophy in Geology, and the Master of Science in the Teaching of Earth Science. Students have a wide variety of choices in their courses and research programs. Departmental research programs include many aspects of geology, geochemistry, and geophysics.

Admission

The admission requirements of the Graduate College apply. In addition, scores for the aptitude test of the Graduate Record Examination (GRE) are required for admission to graduate work in geology, as well as completion of at least one year each of study in college-level calculus, chemistry, and physics. For more information, write to the graduate secretary. Under special circumstances, students can be admitted at the beginning of the spring term.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Candidates for graduate degrees are usually supported through fellowships, research assistantships, teaching assistantships, and work-study programs. Fellowships and assistantships include tuition and service fee waivers. Awards for financial assistance are based principally on a candidate's academic record, statement of plans, and letters of reference. Continuation of financial aid depends on student performance and, in the case of teaching assistants, on the receipt of good evaluations. Some assistants are appointed by the State Geological Survey located on campus.

- Master of Science in Geology (p. 778)
- Master of Science in Teaching of Earth Science (p. 779)

Doctor of Philosophy in Geology

Ph.D. students are evaluated by three oral examinations: a qualifying examination, a preliminary examination, and a final examination. The qualifying examination tests breadth of knowledge as well as the ability to define and defend a research proposal in a specialized field at an early stage of graduate study. The preliminary examination tests advanced knowledge in a specialized field and the ability to define and defend a

Ph.D. dissertation proposal. The final examination tests the ability to complete and defend Ph.D. dissertation research.

Entering with approved M.S. degree

Code	Title	Hours
Formal Coursework (must include 4 hours of electives outside Geology)		32
GEOL 599	Thesis Research (32 min applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12
Within the Unit:

Minimum 500-level Hours Required 20
Overall:

Each student must present a colloquium on the dissertation research

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

All students must maintain a minimum grade point average (GPA) of 3.0 (A = 4.0). If the GPA falls below this minimum after 12 or more graduate hours of graded coursework, it must be raised to 3.0 or above after the completion of 12 additional graduate hours of graded coursework and must be maintained at or above the minimum thereafter.

Entering with approved B.S. degree

Code	Title	Hours
Formal Coursework (must include 4 hours of electives outside Geology)		40
GEOL 599	Thesis Research (32 min applied toward degree)	32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12
Within the Unit:

Minimum 500-level Hours Required 20
Overall:

Each student must present a colloquium on the dissertation research

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

All students must maintain a minimum grade point average (GPA) of 3.0 (A = 4.0). If the GPA falls below this minimum after 12 or more graduate hours of graded coursework, it must be raised to 3.0 or above after the completion of 12 additional graduate hours of graded coursework and must be maintained at or above the minimum thereafter.

¹ For additional details and requirements refer to the department's *Graduate Degree Programs* (<http://www.geology.illinois.edu/grad/programs>) and the *Graduate College Handbook* (<http://www.grad.uiuc.edu/gradhandbook>).

Master of Science in Geology

Students in the Master of Science program can follow the "standard" (or thesis) option or the "applied geology" (or non-thesis) option. The non-thesis option is intended as a terminal degree for students preparing for professional work in environmental and engineering geology or in applied geophysics and who have already been admitted to the program. We do not currently accept new students for the non-thesis master's degree. Admitted students must declare their intent to pursue the non-thesis option at least one semester prior to completing degree requirements.

Thesis Option

Code	Title	Hours
Formal coursework (24 min)		24
GEOL 599	Thesis Research (8 max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12
Within the Unit:

Minimum 500-level Hours Required 12
Overall:

Each student must present a colloquium on the thesis research

All students must maintain a minimum grade point average (GPA) of 3.0 (A = 4.0). If the GPA falls below this minimum after 12 or more graduate hours of graded coursework, it must be raised to 3.0 or above after the completion of 12 additional graduate hours of graded coursework and must be maintained at or above the minimum thereafter.

¹ For additional details and requirements refer to the department's *Graduate Degree Programs* (<http://www.geology.illinois.edu/grad/programs>) and the *Graduate College Handbook* (<http://www.grad.uiuc.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Formal coursework (32 min)	32
	Research/Project Hours (4 min applied toward degree)	4
	Total Hours	40

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12
Within the Unit:

Minimum 500-level Hours Required 12
Overall:

Requires a written report

400 level coursework is limited to 8 hours required in any of the options of the undergraduate curriculum in geology and geophysics at Urbana-Champaign

All students must maintain a minimum grade point average (GPA) of 3.0 (A = 4.0). If the GPA falls below this minimum after 12 or more graduate hours of graded coursework, it must be raised to 3.0 or above after the completion of 12 additional graduate hours of graded coursework and must be maintained at or above the minimum thereafter.

¹ For additional details and requirements refer to the department's *Graduate Degree Programs* (<http://www.geology.illinois.edu/grad/programs>) and the *Graduate College Handbook* (<http://www.grad.uiuc.edu/gradhandbook>).

Master of Science in Teaching of Earth Science

Contact the certification officer of the Council on Teacher Education (130 Education Building, 217-333-7195 for information pertaining to pursuing certification while enrolled in the graduate program.

Code	Title	Hours
	Electives in earth science	8
	Electives in education	8
	Total Hours	32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 16
Within the Unit:

Minimum 500-level Hours Required 12

Overall:

Students must maintain a minimum grade point average (GPA) of 3.0 (A = 4.0). If the GPA falls below this minimum after 12 or more graduate hours of graded coursework, it must be raised to 3.0 or above after the completion of 12 additional graduate hours of graded coursework and must be maintained at or above the minimum thereafter.

¹ For additional details and requirements refer to the department's *Graduate Degree Programs* (<http://www.geology.illinois.edu/grad/programs>) and the *Graduate College Handbook* (<http://www.grad.uiuc.edu/gradhandbook>).

German

<http://www.germanic.illinois.edu>

Department of Germanic Languages and Literatures

Head of the Department: Stephanie Hilger

Director of Graduate Studies: Anke Pinkert

2090 Foreign Languages Building

707 South Mathews Avenue

Urbana, IL 61801

E-mail: germanic@illinois.edu

Major: German

Degrees Offered: M.A., Ph.D.

Graduate Concentration: Medieval Studies (p. 837) (available to all degrees), Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Graduate Degree Programs

The Department of Germanic Languages and Literatures offers graduate programs leading to the degrees of Master of Arts in German, and Doctor of Philosophy in German. Students in the department may choose an additional specialization in Cultural Studies and Interpretive Research (<http://www.germanic.illinois.edu/graduate>) or a concentration in Medieval Studies. Candidates for the Ph.D. in German may additionally obtain a certificate in Second Language Acquisition and Teacher Education (<http://www.slate.uiuc.edu>) (SLATE Certificate).

Admission

Applicants should apply online (www.grad.illinois.edu/admissions/apply/) and submit a statement of purpose, three letters of recommendation and a sample of their written work in English or German or both. For admission to the Master of Arts program, the writing sample might be a term paper, and for admission to the doctoral level, a master's thesis or seminar paper. Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should be sent to:

SLCL Graduate Student Services

3070 Foreign Languages Bldg.

707 S. Mathews Ave.

Urbana, IL 61801

Graduate Record Examination (GRE) scores are required. The applicant should ask the ETS to submit scores to institution 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 79 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program, and all students teach. Non-native English speakers must first pass a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Research Interests

The department faculty includes nationally and internationally recognized scholars in all areas of research within the field, from older and modern German language, literature, and culture to Scandinavian languages, literatures and cultures. Some of the current research areas of faculty encompass (but are not limited to) Arctic Studies, Literature and Music, Literature and Medicine, Migration and Multilingualism, Film and Visual Studies, Digital Humanities, Memory Studies, and Intersectional Studies of Race, Gender, and Sexuality. We offer courses on topics in German and Scandinavian languages, literatures, and cultures across all periods, including historical and synchronic Germanic linguistics, and German language pedagogy. The University Library has one of the nation's outstanding collections of works pertaining to study and research in Germanic literatures of all periods and in Germanic and general linguistics.

Financial Aid

All students accepted into the program have financial support, usually in the form of a Teaching Assistantship (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

The department has contacts with a variety of universities and institutions in German-speaking countries; these cooperative endeavors also include arrangements for graduate students to study and teach abroad.

For continuing graduate students, the awarding of financial aid of all types is contingent upon making satisfactory progress toward a degree.

Master of Arts in German

Applicants should have completed undergraduate studies similar to the concentration in German at the University of Illinois at Urbana-Champaign, have a grade point average of 3.0 (A = 4.0) for the last 60 hours of undergraduate coursework, and be able to follow lectures in the German language. Acquaintance with German history and culture in their relation to the general European background is desirable. Admission to the program is on a competitive basis.

Candidates for the Master of Arts degree may emphasize either German literature or linguistics. All candidates must take courses in both literature and linguistics.

Thesis Option

Code	Title	Hours
GER 510	Introduction to Graduate Study	4
GER 515	Middle High German	4
or GER 520	History of the German Language	
A 500 level course (not including GER 593) in German literature before 1800		4
A 500 level course (not including GER 593) in German literature after 1800		4
Electives within or outside of the department with advisor's approval		12
Language Requirement: proficiency in reading one language other than English and German.		
GER 599	Thesis Research	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 24
Within the Unit:

Minimum 500-level Hours Required 12
Overall:

Deficiencies in undergraduate preparation may necessitate more than 32 graduate hours to meet the requirements

Written and oral examinations

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Website (<http://www.germanic.illinois.edu/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
GER 510	Introduction to Graduate Study	4
GER 515	Middle High German	4
or GER 520	History of the German Language	
A 500 level course (not including GER 593) in German literature before 1800		4
A 500 level course (not including GER 593) in German literature after 1800		4
Electives within or outside of the department with advisor's approval		16
Language Requirement: proficiency in reading one language other than English and German.		
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 24
Within the Unit:

Minimum 500-level Hours Required 12

Overall:

Deficiencies in undergraduate preparation may necessitate more than 32 graduate hours to meet the requirements

Written and oral examinations

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Website (<http://www.germanic.illinois.edu/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in German

Applicants must meet the admission standards outlined for the Master of Arts and, in addition, hold a Master of Arts in German (or equivalent) with a graduate grade point average of 3.5 (A = 4.0). Admission to the program is on a competitive basis.

Candidates for the Ph.D. in German may specialize in older German literature, modern German literature, Germanic linguistics, or Scandinavian literature.

Students working toward the Ph.D. degree must have completed all requirements for the Master of Arts degree given above and must complete an additional 40 graduate hours of coursework approved by the graduate adviser. At least 32 graduate hours must be for courses in Germanic Languages and Literatures. No more than 8 hours of credit in 400 level courses beyond those presented for the M.A. will be counted toward these ten units. The 40 hours may include up to 4 hours of GER 593, but may not include any credit for GER 496 for work taken as independent study. Residence requirements are those of the Graduate College.

Code	Title	Hours
	One course in German or Scandinavian literature before 1500	4
	One course in German literature since 1500	4
	One course in German, Germanic, or Scandinavian linguistics	4
GER 582	Theories of German Lang Tchg	4
GER 515 & GER 520	Middle High German and History of the German Language (unless completed during masters)	8
Course work electives at the 500 level (to total 40)		
GER 593	Research in Special Topics (4 max hours applied toward degree)	0-4
Language Requirement: a reading knowledge of two research languages other than English and German		
GER 599	Thesis Research (min/max applied toward degree)	12-32
Total Hours		68-72

Other Requirements ¹

Other requirements may overlap

Credit in GER 496 will not count toward degree requirements

Teaching of elementary or intermediate German (at least one half-time appointment as teaching assistant for one academic year).

Minimum Hours Required in the Unit: 32 (not including GER 599)

Minimum 500-level Hours Required 72

Overall:

Masters Degree Required for Admission to PhD? Yes

Preliminary Exam Required

Yes

Final Exam/Dissertation Defense Required

Yes

Final Exam/Dissertation Defense Required

Yes

Dissertation Deposit Required

Yes

Minimum GPA:

3.0

¹ For additional details and requirements refer to the department's Website (<http://www.germanic.illinois.edu/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

History

<http://www.history.illinois.edu>

Chair of the Department: Clare Crowston
 Director of Graduate Studies: Kevin Mumford
 Department of History
 309 Gregory Hall
 810 South Wright Street
 Urbana, IL 61801
 (217) 244-2591
 E-mail: history@illinois.edu

Major: History

Degrees offered: M.A., Ph.D.

Graduate Concentrations: African American Studies (p. 644) (available to all degrees), Medieval Studies (p. 837) (available to all degrees)

Major: Social Studies, Teaching of

Degrees offered: M.A.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in History and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Department of History offers graduate courses leading to the Doctor of Philosophy degree, complete details of which may be found in the Graduate Studies section of the department's web site. Students are not normally admitted to a terminal master's degree program.

Admission

Applicants should have a minimum of 20 semester hours of undergraduate work in history and cognate disciplines with an overall GPA of 3.25 in the last two years. Applicants who have a master's degree should have a grade point average of 3.5 for previous graduate-level work. All applicants are required to submit Graduate Record Examination (GRE) scores (verbal, writing, and quantitative are mandatory; history is optional). All applicants are required to submit a writing sample. Language preparation may be weighted heavily, depending upon the field of specialization. Foreign students whose native language is not English need a paper-based Test of English as a Foreign Language

(TOEFL) score of at least 600 (250 on the computer-based test). Most successful applicants have GRE verbal scores of over 80% and/or TOEFL scores of over 630 (260 computer). Only in exceptional circumstances are students admitted for the spring term. The department is not currently admitting to the Teaching of Social Studies program. For additional details refer to www.history.illinois.edu/graduate/prospective/ (<http://www.history.illinois.edu/graduate/prospective/>).

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including History. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Facilities and Resources

The extraordinary University Library is the department's main research facility; within it, the History, Philosophy & Newspaper Library, the Rare Book Room, and the area studies libraries (Slavic, Africana, Latin American, Asian Libraries) all serve faculty and students with expert bibliographers and focused collections. Among other special collections much used by historians are Afro-Americana and Women's Studies; the library is also a major repository for government documents.

Financial Aid

Financial aid is almost always awarded on an academic-year basis. Applications by incoming students are considered with admission applications. All fellowships and assistantships include a stipend plus tuition and service fee waiver.

Both University and department endowment fellowships are available to entering students and to advanced doctoral students embarked on their research or the writing of their dissertations. Foreign Language and Area Studies (FLAS) Fellowships may support first- and second-year students who have special interests in foreign area studies. Entering students from underrepresented groups may be awarded one- to three-year Graduate College Fellowships. The Illinois Consortium for Educational Opportunity Program (ICEOP) offers renewable fellowships to underrepresented minority students who are Illinois residents and plan academic careers within the state. Half-time teaching assistantships are the department's primary form of financial aid for graduate students in the Ph.D. program. Students who progress satisfactorily toward their degrees and demonstrate effective teaching will have their teaching assistantships renewed for a second, and usually a third, year.

Master of Arts in History

Students enrolled in the Ph.D. program can usually petition to earn a Master of Arts in History within three semesters.

Thesis Option

Code	Title	Hours
HIST 598 (2 hours per term)	is required of candidates who hold teaching assistantships, during each semester they hold an appointment	
HIST 593 & HIST 594	Approaches to History and Intro Historical Writing	8
	Two additional 500-level courses in history	8
	Two courses in each of two of the fields of specialization offered by the department.	16
Language Requirement: candidate must demonstrate ability to read one foreign language related to his or her field of interest as approved by the graduate advisers		
HIST 599	Thesis Research (8 max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

At least one research seminar (HIST 596) with a grade of B or better must be included.

Students may take up to two of the required eight courses in departments other than History, if approved.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://www.history.illinois.edu/graduate/current/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
HIST 598 (2 hours per term)	is required of candidates who hold teaching assistantships, during each semester they hold an appointment	
HIST 593 & HIST 594	Approaches to History and Intro Historical Writing	8
	Two additional 500-level courses in history	8
	Two courses in each of two of the fields of specialization offered by the department.	16
Language Requirement: candidate must demonstrate ability to read one foreign language related to his or her field of interest as approved by the graduate advisers		
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

At least one research seminar (HIST 596) with a grade of B or better must be included.

Students may take up to two of the required eight courses in departments other than History, if approved.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://www.history.illinois.edu/graduate/current/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in History

In certain circumstances, a student in British history may substitute courses in quantitative skills for the second language. For the preliminary examination, the candidate customarily offers three fields in history - one major and two minor fields. At least one of these must be a "geographical/chronological field" and one must be a "comparative/thematic" field. One must involve a period of time before 1815. At least two geographical areas must also be represented by the fields offered for the examination. One of the three fields may be in a specialization outside the Department of History or may be a "constructed" field specially designed by the candidate in consultation with field examiners and the major advisor.

Entering with approved M.S./M.A. degree

Code	Title	Hours
HIST 598	(2 hours per term) is required of candidates who hold teaching assistantships during each semester they hold an appointment; students with research assistantships may enroll for HIST 596 for 2 hours credit per semester during the assistantship.	
HIST 593 & HIST 594	Approaches to History and Intro Historical Writing	8
	Research seminars (or HIST 596), under the direction of at least two faculty members (may be reduced by one four-hour course at the discretion of the advisor)	8
	Three additional courses at the 500 level	12
HIST 591	History and Social Theory	4
HIST 597	Reading Course (Oral History)	4
	Another methods course in consultation with the Director of Graduate Studies	
	To fulfill the minimum requirement of 64 or 96 graduate hours, 16 graduate hours in disciplines other than history may be applied.	0-16

Language Requirement: The department requires proven competence in two foreign languages for the Ph.D. degree, except for students of US History who must demonstrate competence in one foreign language. Language competence means the ability to read and comprehend a foreign language well enough to paraphrase a scholarly article in English. Students admitted into the Ph.D. program are expected to demonstrate competence in the second language within four semesters and always before they take their last prelim exam. A major advisor may require a student to acquire a reading knowledge of more than two languages, or more than one for US History students.

HIST 599	Thesis Research (32 max applied toward degree)	32
Total Hours		64

Other Requirements¹

Other requirements may overlap

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://www.history.illinois.edu/graduate/current/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
HIST 598	(2 hours per term) is required of candidates who hold teaching assistantships during each semester they hold an appointment; students with research assistantships may enroll for HIST 596 for 2 hours credit per semester during the assistantship.	
HIST 593 & HIST 594	Approaches to History and Intro Historical Writing	8
	Research seminars (or HIST 596), under the direction of at least two faculty members (may be reduced by one four-hour course at the discretion of the advisor)	12
	Three additional courses at the 500 level	12
HIST 591	History and Social Theory	4
HIST 597	Reading Course (Oral History)	4
	To fulfill the minimum requirement of 64 or 96 graduate hours, 16 graduate hours in disciplines other than history may be applied.	0-16

Language Requirement: The department requires proven competence in two foreign languages for the Ph.D. degree, except for students of US History who must demonstrate competence in one foreign language. Language competence means the ability to read and comprehend a foreign language well enough to paraphrase a scholarly article in English. Students admitted into the Ph.D. program are expected to demonstrate competence in the second language within four semesters and always before they take their last prelim exam. A major advisor may require a student to acquire a reading knowledge of more than two languages, or more than one for US History students.

HIST 599	Thesis Research (32 max applied toward degree)	32
----------	--	----

Total Hours		96
-------------	--	----

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's graduate degree requirements (<http://www.history.illinois.edu/graduate/current/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Human Development and Family Studies

<http://hdfs.illinois.edu>

Head of the Department: Susan Koerner
 Director of Graduate Programs: Ramona Faith Oswald
 222 Bevier Hall
 905 South Goodwin Avenue
 Urbana, IL 61801
 (217) 333-3790
 Fax: (217) 244-6144
 E-mail: hdfs@aces.illinois.edu

Major: Human Development and Family Studies
 Degrees offered: M.S. and Ph.D.

Joint Degree Program: Doctor of Philosophy in Human Development and Family Studies and Master of Public Health (p. 719)
 Degrees Offered: Ph.D. and M.P.H.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Human Development and Family Studies and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Ph.D. in Human Development and Family Studies (HDFS) focuses on positive development and resilience of diverse children, youth, and families in everyday life contexts. Our doctoral concentration is interdisciplinary, drawing upon the canons of anthropology, economics,

education, family studies, human development, psychology, and sociology. Further, we value qualitative, quantitative, and mixed methodologies.

Students who enter the doctoral program without a master's will complete one as the first part of their doctoral requirements.

Admission

Admission is based upon both academic record and the applicant's fit with faculty research programs. We examine grade point average (GPA), Graduate Record Examination (GRE, we will accept MCAT scores for Medical Scholar applicants) scores, letters of recommendation, and a personal statement. International applicants from non-English speaking countries must have an official paper Test of English as a Foreign Language (TOEFL) score of at least 103 on the internet based test. We will not admit anyone with a GPA less than 3.0 on a 4.0 scale. All applicants are required to submit official GRE scores (MCAT in the case of Medical Scholar applicants) and to have previous coursework in a relevant area of social or behavioral sciences. GRE, MCAT and TOEFL scores should be taken no more than two years prior to application. Our application deadline is January 15 for possible admission the following fall semester. We admit students for fall enrollment only. Please refer to our department website for further information.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Human Development and Family Studies. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

We do not require our students to teach but recognize the importance of teacher development for their future marketability. Thus, we make teaching assistantships available and encourage students to pursue a variety of teaching experiences as well as mentorship from experienced instructors. We also encourage our students to utilize the variety of teacher training resources that are available across campus.

Faculty Research Interests

Faculty information is available on our department website at <http://hdfs.illinois.edu/directory/faculty>.

Centers, Programs, and Institutes

Child Care Resource Service (<http://ccrs.illinois.edu/>)
 Child Development Lab (www.cdl.illinois.edu (<http://www.cdl.illinois.edu>))
 Pampered Chef Family Resiliency Program (www.familyresiliency.illinois.edu (<http://www.familyresiliency.illinois.edu>))
 Family Resiliency Center (www.familyresiliency.illinois.edu (<http://www.familyresiliency.illinois.edu>))

University of Illinois Extension (<http://web.extension.illinois.edu/state/index.html>)

Facilities and Resources

Bevier Hall
Child Development Lab
Doris Kelly Christopher Hall
Early Child Development Lab

Financial Aid

We are committed to funding all of our students who are making timely progress. The duration and amount of our commitment varies by program. Funding may include fellowships, research assistantships, and/or teaching assistantships. These opportunities typically include stipends and tuition waivers. In some cases, fees are also waived. All applicants are automatically considered for all department funding opportunities; there is no separate application process. Federal and state financial aid is completely separate from the support provided by our department. For information regarding federal and state financial aid, please refer to www.osfa.illinois.edu/ (<http://www.osfa.illinois.edu/>).

Master of Science in Human Development and Family Studies

Code	Title	Hours
Theory		
HDFS 501	Human Development Theories	4
HDFS 521	Family Theories	4
HDFS 533	Community In American Society	4
Research Methods and Statistics		12
HDFS 590	Advanced Research Methods	
HDFS 591	Qualitative Methods	
HDFS 594	Intermed Statistical Analysis	
HDFS 599	Thesis Research	0 to 16
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12 (8 within the unit)

Overall:

A doctoral student terminating our program early and without a master's thesis, must complete 36 hours rather than 32.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *Graduate Program Information* (<http://hdfs.illinois.edu/graduate/handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Human Development and Family Studies

The HDFS doctoral program prepares students to be researchers, educators, policy developers, or professionals who develop, evaluate, and implement programs for children, families, and communities. Those entering the doctoral program without a master's degree will complete

one within their first two years in the doctoral program. Students entering with a non-thesis master's will be required to complete a "thesis equivalency" paper within the first two years of their doctoral program. Requirements for the Ph.D. include 66 graduate hours beyond the M.S. degree, completion of the written qualifying examination, defense of the written dissertation proposal, and a final thesis defense upon completion of the dissertation. Doctoral students may also complete a supporting program in "applied HDFS." This 16 graduate hour option includes 4 hours in program development or policy studies, 4 hours in program evaluation, and two 4 hour internships. The applied optional supporting program prepares students to enter careers in administration, human services, social policy, international aid agencies, and government, as well as traditional careers in teaching and research.

Code	Title	Hours
Theory Courses		
HDFS 501	Human Development Theories	
HDFS 521	Family Theories	
HDFS 533	Community In American Society	
Substantive Courses		
Select four of the following:		8-16
HDFS 503	Social-Emotional Development	
HDFS 505	Advanced Adolescence	
HDFS 523	Ethnic Families	
HDFS 525	Family Interaction	
HDFS 526	Intimate Partner Violence	
HDFS 527	Family Resiliency	
HDFS 528	Parenting	
HDFS 540	Gender & Sexuality	
HDFS 534	Neighborhoods and Human Dev	
HDFS 539	Youth, Culture and Society	
HDFS 543	Ethnography Urban Communities	
WGGP 581	Gender Relations & Intl Dev	
Quantitative Methods		12
HDFS 590	Advanced Research Methods	
HDFS 594	Intermed Statistical Analysis	
an advanced statistics course		
Qualitative Methods		8
HDFS 591	Qualitative Methods	
Professional Development		24
HDFS 500	Professional Development	
HDFS 599	Thesis Research	
Elective Courses (required hours depend upon content of M.S. degree)		0-16
Total Hours		64

Other Requirements ¹

Other requirements may overlap

MS equivalent, or student will earn MS in first two years of PhD program

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Graduate Program Information (<http://hdfs.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Public Health and Ph.D. in Human Development and Family Studies

The Ph.D. in Human Development & Family Studies can be earned jointly with the M.P.H. In the joint program up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH 469	Environmental Health	4
CHLH 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
Area of concentration coursework from approved list (may be met by Ph.D. core courses)		
Electives and seminars (may be met by Ph.D. core courses)		
Ph.D. Theory Courses		
HDFS 501	Human Development Theories	4
HDFS 521	Family Theories	4
HDFS 533	Community In American Society	4
Ph.D. Substantive Courses		
Select four of the following:		16
HDFS 503	Social-Emotional Development	
HDFS 505	Advanced Adolescence	
HDFS 523	Ethnic Families	
HDFS 525	Family Interaction	
HDFS 526	Intimate Partner Violence	
HDFS 527	Family Resiliency	
HDFS 528	Parenting	
HDFS 540	Gender & Sexuality	
HDFS 534	Neighborhoods and Human Dev	
HDFS 539	Youth, Culture and Society	
HDFS 543	Ethnography Urban Communities	
WGGP 581	Gender Relations & Intl Dev	
Ph.D. Quantitative Methods		4
An advanced statistics course		
Ph.D. Qualitative Methods		8
HDFS 591	Qualitative Methods	
Professional Development		2

HDFS 500	Professional Development	
HDFS 599	Thesis Research	0 to 16
Total Hours		100

Other Requirements ¹

Other requirements may overlap

A concentration is required	
Minimum Number of 500-level	12 (8 within M.P.H.)
Hours Required Overall in Program:	
Approved Masters Degree Required for Admission?	No
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Program Information (http://www.hcd.illinois.edu/student_information/graduate/grad_handbook.html) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Illinois Informatics Institute

Allen Renear, Interim Director

3014 NCSA
1205 W. Clark, MC-257
Urbana, IL 61801
PH: (217) 333-4930
FX: (217) 333-5878

<http://informatics.illinois.edu/>

E-mail: informatics@illinois.edu

Prospective students may contact:

Karin Readel
Coordinator for Informatics Education Programs
Tel: (217) 244-1220
kereadel@illinois.edu

Major: Bioinformatics
Degrees Offered: M.S.

Graduate Concentrations: Animal Sciences, Bioengineering, Crop Sciences, School of Information Sciences, Chemical and Biomolecular Engineering, Computer Science

Major: Informatics
Degrees Offered: Ph.D.

Graduate Degree Programs

The Illinois Informatics Institute (I3) at the University of Illinois offers two graduate degrees: a Ph.D. in Informatics, and Masters of Science in Bioinformatics. Both are interdisciplinary programs with many participating departments. Students can earn the Master of Science in Bioinformatics with a concentration in one of the following departments: Animal Sciences, Bioengineering, Crop Sciences, Library and Information Science, Chemical and Biomolecular Engineering, Computer Science. The program is overseen by I3, but students are also members of the department of their concentration. Students can earn the Ph.D. in

Informatics with specializations in Bioinformatics; Health and Medical Informatics; Spatial Informatics; Art and Cultural Informatics; Design, Technology, and Society; Data Analytics and Information Visualization; Cognitive Science and Language Processing.

Facilities

University research centers in this area include the Center for Biophysics and Computational Biology (<http://www.life.uiuc.edu/biophysics>) and an NIH Resource for Macromolecular Modeling and Bioinformatics (<http://www.ks.uiuc.edu>). The campus also offers state-of-the-art experimental bioinformatics facilities, including those in the Keck Center for Comparative and Functional Genomics (<http://www.biotech.uiuc.edu>) and the Institute for Genomic Biology (<http://www.igb.illinois.edu>).

The National Center for Supercomputing Applications (<http://www.ncsa.uiuc.edu>) (NCSA), located at the University, offers opportunities for accessing, developing, and experimenting with state-of-the-art computational facilities for bioinformatics.

Master of Science in Bioinformatics

The M.S. degree can be taken in a thesis or non-thesis format, depending on the department. For either format, the research adviser must be affiliated with the Bioinformatics program. Departments may have requirements in addition to those below. See the departmental entries in this Program of Study for more information.

Thesis Option

Code	Title	Hours
	4 hours of coursework from the approved list of biology courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	4 hours of coursework from the approved list of bioinformatics courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	4 hours of coursework from the approved list of computer science courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	
	Thesis Hours Required (min/max applied toward degree):	4-8
Total Hours		32 or 36

Other Requirements ¹

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

A concentration is required.

Non-Thesis Option

Code	Title	Hours
	4 hours of coursework from the approved list of biology courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4
	4 hours of coursework from the approved list of bioinformatics courses (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)	4

4 hours of coursework from the approved list of computer science courses (<http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses>)

Total Hours 36

Other Requirements ¹

Other requirements may overlap

A concentration is required.

Minimum Hours Required Within the Unit: 8

Minimum 500-level Hours Required Overall: 12

¹ For additional details and requirements refer to the degree requirements (<http://www.informatics.illinois.edu/academics/bioinformatics-ms>), the appropriate department's graduate handbook, and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Admission

Applicants must hold a bachelor's degree equivalent to that granted by the University of Illinois at Urbana-Champaign. The recommended background for graduate students entering the Bioinformatics degree program is a bachelor's or master's degree in life sciences, computer and mathematical sciences, or engineering, with a minimum of five hours of molecular and cell biology, six hours of general chemistry, nineteen hours of mathematics and statistics, and three hours of introduction to computing. Prerequisites vary somewhat for the different departmental concentrations. Students should view the web page of the specific department they wish to apply to for detailed information about admission criteria and degree requirements. Those links are below:

- Department of Animal Sciences (<http://www.ansci.illinois.edu>)
- Department of Bioengineering (<http://bioengineering.illinois.edu>) - Not currently accepting applications
- Department of Chemical and Biomolecular Engineering (<http://chbe.illinois.edu>) - Not currently accepting applications
- Department of Computer Science (<http://cs.illinois.edu>)
- Department of Crop Sciences (<http://www.cropsci.illinois.edu>)
- School of Information Sciences (<http://ischool.illinois.edu>)

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are awarded on a competitive basis by the admitting department. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships (the most common form of financial aid for new graduate students in the department) must submit a score of at least 50 on the Test of Spoken English (TSE) (<http://www.grad.illinois.edu/admissions/taengprof.htm>).

Doctor of Philosophy in Informatics

The Chair of the Governing Committee of the Informatics Ph.D. Program will appoint the supervising committee to approve each student's program of study, which will be called the Advisory Committee (first half of studies) and then the Dissertation Committee (second half of studies). The membership of these committees should remain constant for each half of the student's studies, except in unusual circumstances, but may change when it is constituted for the dissertation. In any case, changes

to the supervising committees must be approved by the Chair of the Governing Committee. The supervising committee must contain faculty with expertise in both the Applications area and the Foundations area chosen by the student, including at least four faculty members affiliated with the Informatics Program. The supervising committee will provide each student with a review of his or her progress at the end of each academic year.

Entering with approved M.S. degree

Code	Title	Hours
INFO 500	Orientation Seminar (taken twice: once for 0 hours, once for 1 hour)	1
Research Practicum		8
INFO 510	Research Practicum (taken twice 4 hrs each)	
Applications Courses (2 courses at the 500 level from approved list)		8
Foundations Courses (2 courses at the 500 level from approved list)		8
Electives		7
INFO 599	Thesis Research (32 min applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the degree requirements (<http://www.informatics.illinois.edu/academics/admission>), the appropriate department's graduate handbook, and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S. degree

Code	Title	Hours
INFO 500	Orientation Seminar (taken twice: once for 0 hours, once for 1 hour)	1
Research Practicum		8
INFO 510	Research Practicum (taken twice 4 hrs each)	
Applications Courses (2 courses at the 500 level from approved list)		8
Foundations Courses (2 courses at the 500 level from approved list)		8
Electives		7
INFO 599	Thesis Research (32 min applied toward degree)	32

Masters Degree - Students entering without a Masters degree approved by their Advisory Committee will be required to take 32 additional credit hours in 400 and 500 level courses approved by their committee.	32
--	----

Total Hours	96
-------------	----

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the degree requirements (<http://www.informatics.illinois.edu/academics/admission>), the appropriate department's graduate handbook, and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Admission

The admissions process will consist of a formal application, specifying experiences, courses, interests, and letters of recommendation. The Informatics PhD Program will admit graduate students who are approved by the Governing committee in conjunction with representatives of the Areas. With the approval of the appropriate committees, students may be admitted to the program with only a Bachelor's degree. They will work with their Advisory Committee to define appropriate courses to fulfill the 32 hours of Masters-level work. If they wish to receive a Masters degree, they will need to apply to a relevant department and meet the department's existing Masters degree requirements. If they already hold a Masters degree approved by the IPP Governing Committee, they will receive graduate credit for 32 hours. All applicants whose native language is not English must submit a minimum TOEFL score of 100 (iBT), 250 (CBT), or 600 (PBT); or minimum International English Language Testing System (IELTS) academic exam scores of 6.5 overall and 6.0 in all subsections. For those taking the TOEFL or IELTS, full admission status is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses based on an ESL Placement Test (EPT) taken upon arrival to campus.

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include tuition and partial fee waivers) are awarded on a competitive basis. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency by achieving a minimum score of 50 on the Test of Spoken English (TSE), 24 on the speaking subsection of the TOEFL iBT, or 8 on the speaking subsection of the IELTS. For students who are unable to take the TSE, iBT, or IELTS, a minimum score of 50 is required on the SPEAK test, offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching conducted prior to the start of the semester.

Industrial and Enterprise Systems Engineering

<http://ise.illinois.edu>

Head of Department: Rakesh Nagi
Associate Head for Graduate Studies: Ramavarapu S. Sreenivas
117 Transportation Building
104 South Mathews Avenue
Urbana, IL 61801
(217) 333-2731
E-mail: ise-grad@illinois.edu

Major: Industrial Engineering
Degrees Offered: M.S., Ph.D.

Concentrations: Advanced Analytics (available to M.S. only),
Computational Science and Engineering (M.S. and Ph.D.)

Major: Systems and Entrepreneurial Engineering
Degrees Offered: M.S., Ph.D.

Concentrations: Computational Science and Engineering (M.S. and Ph.D.)

Joint Degree Program: Master of Science in Industrial Engineering
or Systems and Entrepreneurial Engineering and Master of Business
Administration (p. 694)
Degrees Offered: M.S. and M.B.A.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Industrial
Engineering or Systems and Entrepreneurial Engineering and Doctor
of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Industrial and Enterprise Systems Engineering (ISE) offers graduate study leading to master's and doctoral degrees in Industrial Engineering (IE) and Systems and Entrepreneurial Engineering (SEE). The program offers an approach to industrial engineering and systems engineering, engineering design, and entrepreneurial engineering that crosses disciplinary lines. The IE program is based in advanced studies that focus on operations research, optimization, supply chain management, financial engineering, quality and reliability engineering and production management, with the aim to advance modeling, simulation, analysis and decision making for complex engineering and economic systems. The SEE program is founded on the premise of dual competency in both traditional engineering and systems integration. The SEE program offers flexibility by permitting the student to select from a menu of advanced courses and take a wide range of electives to meet individual career goals. Graduates of these programs are prepared to enter academic and professional engineering positions in universities, industry, government, and private practice. Opportunity also exists for students to complete a(n):

1. Computational Science and Engineering (CSE) Concentration (M.S. and Ph.D.)
2. Energy and Sustainability Engineering (EaSE) Certificate
3. Advanced Analytics in Industrial & Enterprise Systems Engineering Concentration (M.S. students in I.E.).

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with

study for a graduate degree in a second discipline, including Industrial Engineering or Systems and Entrepreneurial Engineering.

The Department is a joint sponsor with the Department of Finance for the M.S. degree in Financial Engineering (p. 765).

Admission

Applicants who have completed degree requirements in an accredited engineering program or its equivalent are eligible to apply for admission. A minimum grade point average of 3.25 (A = 4.00) for the last two years of undergraduate study is required.

Scores on the Graduate Record Examination (GRE) (<http://www.ets.org>) general test are required of all applicants. Based upon the previous preparation of the student for either program, prerequisite courses may be specified by the advisor, but the credit may not be applied toward a degree.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.ets.org/toefl>) score of 103 (iBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Full admission status is granted for those meeting the minimum requirements and having taken the TOEFL or IELTS since the scores required for admission to ISE are above the minimum scores demonstrating an acceptable level of English language proficiency.

Applicants to the joint M.B.A. degree program must meet the admissions standards for both programs and be accepted by both programs.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Industrial and Enterprise Systems Engineering and the College of Medicine. The application to the Medical Scholars Program will also serve as the application to the Industrial and Enterprise Systems Engineering graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217)-333-8146, mospo@illinois.edu).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Industrial or Systems and Entrepreneurial Engineering graduate degree.

Faculty Research Interests

Faculty research by ISE faculty is pursued in the following fields:

- computer-aided design
- data analytics
- optimization
- design systems
- manufacturing systems
- nondestructive testing and evaluation
- system dynamics and simulation

- control
- robotics
- real-time decision making
- reliability
- financial engineering
- operations research/management science
- biomechanics

In ISE, research is conducted in operations research, production engineering, quality and reliability engineering, supply chain and logistics, transportation, financial engineering, and business analytics. Study in the areas of cognitive engineering, computer-aided manufacturing, ergonomics, facilities planning, human-machine interaction, large-scale systems analysis, machine tool systems design, mathematical programming and optimization, production planning and control, and project management is aimed at improving the design and implementation of integrated systems of persons, materials, planning, and equipment.

Facilities and Resources

Members of the ISE Department have access to a wide range of excellent research facilities. These laboratories support a wide range of activity and are described at the department's research laboratories Web site (<http://ise.illinois.edu/research/ise-labs>).

Financial Aid

Qualified students may compete for financial assistance in the form of teaching/graduate/research assistantships, fellowships, grants, and tuition waiver scholarships. Under certain conditions, fellowships may be augmented by part-time assistantships. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the English Proficiency Interview (http://cte.illinois.edu/testing/ora_eng/epi_overview.html) (EPI), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (<http://citl.illinois.edu/professional-development/ta-orientation>) conducted prior to the start of the semester.

- Master of Science in Industrial Engineering (p. 793)
- Master of Science in Systems and Entrepreneurial Engineering (p. 793)
- Doctor of Philosophy in Industrial Engineering (p. 790)
- Doctor of Philosophy in Systems and Entrepreneurial Engineering (p. 791)

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 696) and contact the M.B.A. program and their major department office for more information.

Advanced Analytics in Industrial & Enterprise Systems Engineering

The Advanced Analytics in Industrial & Enterprise Systems Engineering Concentration prepares students to relate the application of engineering approaches and methods to the analysis and management of engineering and business processes which are data-oriented. Students will be able to provide companies and organizations with the ability to convert the massive amounts of data received into useful information that can help shape the decisions companies and organizations make. Students must be enrolled in the Industrial Engineering MS (thesis or non-thesis) degree program.

This concentration requires students to earn a B or better in each concentration course and complete a minimum of 12 credit hours in topics of advanced analytics. The 12 hours may be used toward the major degree requirements. Students in the Advanced Analytics in Industrial & Enterprise Systems Engineering Concentration must complete 8 hours from the Advanced Analytics Core Course List and 4 hours from the Advanced Analytics Secondary Course List or may choose an additional 4 hours from the Core Course List.

Current course options:

Code	Title	Hours
Advanced Analytics Core:		8
IE 528	Computing for Data Analytics	
IE 529	Stats of Big Data & Clustering	
IE 530	Optimization for Data Analytics	
IE 531	Algorithms for Data Analytics	
IE 532	Analysis of Network Data	
IE 533	Big Graphs and Social Networks	
Advanced Analytics Secondary:¹		4
IE 400	Design & Anlys of Experiments	
IE 410	Stochastic Processes & Applic	
IE 411	Optimization of Large Systems	
IE 510	Applied Nonlinear Programming	
IE 511	Integer Programming	
IE 521	Convex Optimization	

¹ Complete 4 hours from the Advanced Analytics Secondary Course List or choose an additional 4 hours from the Advanced Analytics Core Course List.

Doctor of Philosophy in Industrial Engineering

A Master's degree is not required for admission to the Direct Ph.D. program.

The 96 graduate hours of credit may be divided into three stages of 32 hours each, consisting of 32 hours generally represented by an M.S. degree or equivalent (Stage I), 32 hours of course work beyond the M.S. degree (Stage II), and 32 hours of thesis work for the doctoral thesis (Stage III). Stage I requirements are satisfied by completion of an M.S. degree in the Department or in a related engineering or technical discipline from the University of Illinois or other accredited university. A non-technical M.S. or MBA would normally not count toward the completion of Stage I. Such students would be required to enroll in one

of the Master of Science Programs in the Department and satisfy the requirements therein in order to satisfy Stage I of the Ph.D. degree.

To advance to Stage II all students must pass the Qualifying Examination. To advance from Stage II to Stage III the student must pass the Preliminary Exam. Stage III is comprised of a minimum of 32 hours of IE 599 (Thesis Research) credit and a written dissertation followed by a final oral thesis defense.

The Preliminary Examination is taken after the Qualifying Examination. A minimum of six months must elapse between the successful completion of the doctoral preliminary examination and the doctoral final examination (oral dissertation defense).

Entering with approved M.S./M.A. degree

Code	Title	Hours
IE 599	Thesis Research (min-max applied toward the degree)	32
IE 590	Seminar (registration for 0 hours every term while in residence)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		32
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level Hours Required 16
Overall:

A maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.

4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.

A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.

Ph.D. exam and dissertation requirements:

Qualifying exam:² Qualifying examinations should be taken as early as possible

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://ise.illinois.edu/graduate/quals-prelims-final-exams.html>)

Entering with approved B.S./B.A. degree

Code	Title	Hours
IE 599	Thesis Research (min-max applied toward the degree)	40
IE 590	Seminar (registration for 0 hours every term while in residence)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		56
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level Hours Required 24
Overall:

For the thesis option, a maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.

4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.

A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.

Ph.D. exam and dissertation requirements:

Qualifying exam:² Qualifying examinations should be taken no later than the fifth semester for those entering with approved B.S. or B.A. degree.

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://ise.illinois.edu/graduate/quals-prelims-final-exams.html>)

Doctor of Philosophy in Systems and Entrepreneurial Engineering

A Master's degree is not required for admission to the Ph.D. program.

Students in the SEE master's program must take the Qualifying Examination before obtaining the M.S. degree; students entering the program with a master's degree earned elsewhere must pass the Qualifying Examination before or during their third semester in the Ph.D. program.

The 96 graduate hours of credit may be divided into three stages of 32 hours each, consisting of 32 hours generally represented by an M.S.

degree or equivalent (Stage I), 32 hours of course work beyond the M.S. degree (Stage II), and 32 hours of thesis work for the doctoral thesis (Stage III). Stage I requirements are satisfied by completion of an M.S. degree in the Department or in a related engineering or technical discipline from the University of Illinois or other accredited university. A non-technical M.S. or MBA would normally not count toward the completion of Stage I. Such students would be required to enroll in one of the Master of Science Programs in the Department and satisfy the requirements therein in order to satisfy Stage I of the Ph.D. degree.

To advance to Stage II all students must pass the Qualifying Examination. To advance from Stage II to Stage III the student must pass the Preliminary Exam. Stage III is comprised of a minimum of 32 hours of SE 599 credit and a written dissertation followed by a final oral thesis defense.

The Preliminary Examination is taken after the Qualifying Examination. A minimum of six months must elapse between the successful completion of the doctoral preliminary examination and the doctoral final examination (oral dissertation defense).

Entering with approved M.S./M.A. degree

Code	Title	Hours
SE 599	Thesis Research (min-max applied toward the degree)	32
SE 590	Seminar (registration for 0 hours every term while in residence)	0
Approved SE and IE courses		16
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		16
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level credit hours 16 applied toward the degree, all of which must from a College of Engineering department, including ABE and CHBE.

The Elective courses must be at the 500-level and from a College of Engineering department including ABE and CHBE.

A maximum of 8 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.

At least 64 hours of credit, which may include SE 599, must be earned in residence.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://ise.illinois.edu/graduate/quals-prelims-final-exams.html>)

Entering with approved B.S./B.A. degree

Code	Title	Hours
Master's degree equivalent		32
SE 599	Thesis Research (min-max applied toward the degree)	32
SE 590	Seminar (registration for 0 hours every term while in residence)	0
Approved SE and IE courses		16
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		16
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level credit hours 28 applied toward the degree, all of which must from a College of Engineering department, including ABE and CHBE.

The Elective courses must be at the 500- level and from a College of Engineering department including ABE and CHBE.

A maximum of 8 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.

At least 64 hours of credit, which may include SE 599, must be earned in residence.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://ise.illinois.edu/graduate/quals-prelims-final-exams.html>)

Master of Science in Industrial Engineering

Thesis Option

Code	Title	Hours
IE 599	Thesis Research (min-max applied toward the degree)	8
IE 590	Seminar (registration for 0 hours every term while in residence)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		24
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be IE.

A maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs Web site and the Graduate College Handbook.

Non-Thesis Option

Code	Title	Hours
IE 590	Seminar (registration for 0 hours every term while in residence)	0
IE 597	Independent Study (4 hours)	4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		32
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions (may overlap):¹

A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be IE.

Departmental approval is required to pursue the non-thesis option, for students terminating their studies with the M.S. degree.

For students in the non-thesis option, 4 hours of IE 597 are required (4 hours maximum allowed towards the M.S. degree), because each student must show evidence of the ability to do independent research.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs Web site and the Graduate College Handbook.

Master of Science in Systems and Entrepreneurial Engineering

Thesis Option

Code	Title	Hours
SE 599	Thesis Research (min-max applied toward the degree)	4
SE 590	Seminar (registration for 0 hours every term while in residence)	0
SE courses at the 500-level:		12
Technical side of engineering (8 hours)		
Business side of engineering (4 hours)		
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		16
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

For the thesis option, a maximum of 4 hours of SE 597 (or other approved independent study) may be applied toward the elective course work requirement.

4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.

A maximum of 4 CR-graded credit hours in non-SE courses may be applied toward the degree.

Minimum program GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
SE 590	Seminar (registration for 0 hours every term while in residence)	0
SE 594	Project Design	8
SE courses at the 500-level:		12
Technical side of engineering (8 hours)		
Business side of engineering (4 hours)		
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		16
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.

A maximum of 4 CR-graded credit hours in non-SE courses may be applied toward the degree.

Minimum program GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs Web site (<http://ise.illinois.edu/graduate>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Institute of Communications Research

<https://media.illinois.edu/node/58/history>

Interim Director: William Berry
 Director of Graduate Studies: James Hay
 119 Gregory Hall
 810 South Wright Street
 Urbana, IL 61801
 (217) 333-1549
 E-mail: icr@illinois.edu

Major: Communications and Media
 Degrees Offered: Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Communications and Media and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

Please note: The ICR no longer has information regarding our programs of study available in hard copy format. All information can be found via <http://www.media.illinois.edu/icr>. On the graduate level, the Institute of Communications Research only offers a doctoral degree in Communications and Media.

The Institute's faculty and graduate students are also active in the Department of Advertising (<https://media.illinois.edu/degrees/advertising-bs-ms>), the Department of Journalism (<https://media.illinois.edu/degrees/journalism-bs-ms>), the Department of Media & Cinema Studies (<http://media.illinois.edu/macs>) the Department of African American Studies (<http://www.afro.illinois.edu>), the Asian American Studies Program (<http://www.aasp.illinois.edu>), the Unit for Criticism and Interpretive Theory (<http://criticism.english.uiuc.edu>), the Gender and Women's Studies Program (<http://www.gws.uiuc.edu>), the Illinois Program for Research in the Humanities (<http://www.iprh.uiuc.edu>), the Campus Informatics Initiative (<http://www.cii.uiuc.edu/about.php?link=2>), the Latino/a Studies Program (<http://www.las.uiuc.edu>), and the Center for Latin American and Caribbean Studies (<http://www.clacs.uiuc.edu>).

The Institute cooperates with the University of Illinois' College of Medicine in offering the combined M.D. and Ph.D. degrees. The Medical Scholars Program (<http://www.med.illinois.edu/msp>) is the largest and broadest program of its kind in the world, with more than 150 students enrolled in fifty graduate programs. Equipped with an excellent medical education and Ph.D. training, graduates of the Medical Scholars Program

have the credentials to assume leadership roles in academic medicine, medical research, and health policy.

Admission

Any student with a bachelor's or master's degree and with a substantial background in the humanities, social sciences, or physical sciences is eligible to apply to the doctoral program. It is suggested *but not required* that students have or will have a master's degree. All candidates for admission must submit an application for admission along with the application fee, official transcripts of all undergraduate and graduate courses taken and grades earned, three letters of recommendation, and Graduate Record Examination scores.

Our application process is administered through the ApplyYourself (<http://www.grad.illinois.edu/admissions/apply>) system managed by the Graduate College at UIUC. Applicants should consult the instructions on the Grad College's web page and the guidelines to applicants available on the ICR web page.

Applicants from non-English-speaking countries are required to take the Test of English as a Foreign Language (TOEFL) before they come to the University. Depending on the results, they may be required to take further instruction in English after their arrival. Rules for "International Students & Applicants" can be found on the Graduate College website.

Students are normally admitted to start the program only during the fall term. Only under exceptional circumstances are they allowed to begin it in the spring or summer term. All material for fall admission should be submitted by a date designated each year on the ICR website.

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Communications and Media. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Faculty Research Interests

See ICR website: www.media.illinois.edu/faculty/icr.html (<https://media.illinois.edu/degrees/institute-communications-research-phd/faculty>)

Financial Aid

Financial aid is available in the form of assistantships, fellowships, and tuition and fee waivers. Students from populations underrepresented in communications research are eligible for certain University fellowships. Most Institute students receive financial support. The application for admission includes a section to be completed if you wish to be considered for financial aid. Insofar as possible, the Institute makes financial aid and admission decisions simultaneously.

See also UIUC Graduate College Financial Aid (<http://www.grad.illinois.edu/funding-jobs>) and Fellowship Office (<http://www.grad.illinois.edu/fellowships>).

Doctor of Philosophy in Communications and Media

Since its inception, the ICR's doctoral program has encouraged interdisciplinary studies of communications and media. Students are encouraged to design and interdisciplinary course of study.

Coursework: ICR requires 64 credits of coursework, of which 16 may have been earned in previous graduate work. Students are responsible for designing their own programs of coursework, which are submitted for approval by the Institute's Program Evaluation Committee.

Although students are given the broadest latitude in designing interdisciplinary programs, they must include courses that fill certain requirements.

Because students are admitted from diverse backgrounds, the Proseminar first introduces them to the history of communication research. The second semester revolves around the current debates in the field of communications research. While gaining an overview of the central issues and learning a common language, students in the Proseminar are also able to locate their own interests more precisely within the field of communications and media research in their historical and contemporary forms.

Code	Title	Hours
Proseminar		
MDIA 571	Proseminar I	4
MDIA 572	Proseminar II	4
Two research methods courses, 1 quantitative and 1 qualitative		8
MDIA 599	Thesis Research (min/max applied toward degree)	32
Total Hours		96

Other Requirements ¹

Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

Overview Courses

While flexibility is the hallmark of ICR's program, students are strongly urged to take two or more overview courses that augment their area of specialization. Such courses, systematically extending proseminar material, give a broad overview of a significant body of scholarship in established areas of communications research, enable students to locate their own interests within the field as a whole, and provide solid preparation for courses that many students are likely to teach. Overview courses ensure breadth of knowledge within an interdisciplinary program such as the Institute's, where students have great latitude in designing their programs and are encouraged to take courses outside the field of communications research.

A number of currently available courses accomplish these goals. Specific examples are listed below, and the list is periodically updated to reflect developments in the field and available faculty resources. Though these courses are not formal requirements for obtaining the Ph.D., students are expected to include at least two of them in their proposed program of study for the Program Evaluation Committee. In preparing proposals, students should consult with their faculty advisors; they are welcome to seek additional help from other experienced faculty, including members of the Program Evaluation Committee.

Code	Title	Hours
MDIA 560	Feminist Media Studies	4
MDIA 568	Political Economy of Comm	4
MDIA 570	Popular Culture	4
MDIA 573	Freedom of Expression	4
MDIA 575	Cultural Studies and Critical Interpretation	4
MDIA 577	Philosophy of Technology	4
MDIA 578	Communication Ethics	4
MDIA 580	Advanced Interpretive Methods	4
MDIA 590	Special Topics (Many courses listed as MDIA 590 also qualify as overview courses. Recent examples include International Communications, US Media History, and New Media Theory.)	2-8

Research Methods

Students must complete at least 8 hours in research methods. In order to provide a competent background for constructively understanding the field's wide-ranging literature, students are required to take one quantitative and one qualitative course.

In addition to methodology courses taught by the College of Media faculty, students are encouraged to consider relevant courses in quantitative or non-quantitative methods elsewhere on campus. Listings of such courses are available in the ICR office.

Preliminary Exams

Students, in consultation with their chosen advisors, select a committee of four faculty members for their preliminary exams. Upon completion of coursework, students undertake preparing written examinations. Upon completing written answers for each examiner, along with a dissertation proposal, students undergo a 2-hour oral examination. Upon passing the preliminary examination, students proceed with work on their dissertations.

Dissertation

Because the Doctor of Philosophy degree is primarily a research degree, candidates are required to demonstrate a capacity for independent research by producing an original dissertation on a topic within the general area of communications and media research.

Final Examination

After students distribute polished drafts of their dissertations, they take final oral examinations administered by their chosen committees. The student is required to support and interpret the dissertation to the committee's satisfaction, as well as to show an adequate grasp of the selected area of concentration that it represents.

¹ For additional details and requirements students should request an e-mail copy of *ICR Abbreviated Graduate Handbook* for further, detailed information on program requirements, and refer to the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the M.B.A. program and their major department office for more information.

Journalism

Nancy Benson, Department Head

23 Gregory Hall
810 S. Wright Street
PH: 217-333-0709

<https://media.illinois.edu/degrees/journalism-bs-ms>

Brant Houston, Director of Graduate Studies in Journalism
houstonb@illinois.edu

Major: Journalism
Degrees Offered: M.S.

Joint Degree Program: the Master of Science in Journalism can be earned jointly with the following
Degrees Offered:
J.D. in Law (p. 808)
M.B.A. in Business Administration (p. 694)

Graduate Degree Program

The Department of Journalism offers a graduate program leading to the Master of Science degree. The department does not offer a Ph.D. degree. For the program leading to the Doctor of Philosophy in Communications, see Communications and Media (p. 712).

The Department of Journalism offers a 4+1 program leading to the Master of Science in Journalism for undergraduates enrolled in the Bachelor of Science in Journalism program at the University of Illinois. Students can apply for this program in the first semester of their junior year and will be encouraged to select their remaining undergraduate journalism elective courses at the 200- and 300-level from courses listed in the professional option other than the one they elected to follow in completing their undergraduate degree. As graduate students, they will enroll in a minimum of four advanced electives at the 400 and 500 levels, in addition to required graduate courses. Electives may be in areas inside or outside Journalism to allow them to pursue a topical specialization. Those electives would require the approval of the Director of Graduate Studies. Students with approved undergraduate journalism degrees from other institutions also are eligible to apply for this sequence. Those without undergraduate degrees in Journalism – and who do not qualify for the deep knowledge track – will be required to take JOUR 501 as an elective.

The Department of Journalism also offers a deep knowledge track to a limited number of applicants who already possess or are working on advanced degrees in selected fields such as, but not limited to,

the sciences, technology, engineering, health and medical fields, and mathematics. Limited fellowships would be available for applicants in the deep knowledge sequence. Either sequence would be open to mid-career journalists wishing to do advanced work as multimedia, investigative, narrative or immersion journalism.

Admission

Applicants must have a bachelor's degree from an accredited U.S. institution or one of recognized standing abroad. A grade point average of 3.0 (A = 4.0) is the minimum requirement for admission to the Graduate College, with exceptions by petition only. Because the master's program has an enrollment ceiling, some applicants with grade point averages of 3.0 or higher may not be admitted. The program places a strong emphasis on journalism, and candidates who are accepted are most often those with a demonstrated interest in practicing journalism. It is imperative that all applicants supply writing samples. Letters of recommendation are required, and the Graduate Record Examination (GRE) is required of all applicants who do not have either an undergraduate journalism degree from the University of Illinois or an approved post-secondary degree. An interview with the head of the department or director of graduate studies is helpful but not required. A minimum score of 600 is required on the paper-based Test of English as a Foreign Language (TOEFL) (250 on the computer-based test). IELTS scores must be 6.5 and 6 or higher on any/all sub-sections. Students are typically admitted in the fall semester.

Financial Aid

Fellowships are available only for the deep knowledge track and are awarded on a quarter-time basis and carry a waiver of tuition, service fee, AFMFA fee, Library/Technology fee, health service fee, and partial payment of the student health insurance fee. A limited number of merit-based scholarships are available for the other tracks. To be considered for financial aid, applications, including transcripts and three letters of recommendation, must be received no later than January 15. Students with journalism degrees or professional experience may become candidates for part-time positions in other units of the University that require journalistic skills in writing, editing, and/or photography and graphics.

Master of Science in Journalism

Choose one of two sequences:

Sequence 1. The Department of Journalism offers a 4 + 1 program leading to the Master of Science in Journalism for undergraduates enrolled in the Bachelor of Science in Journalism program at the University of Illinois. Students can apply for this program in the first semester of their junior year and will be encouraged to select their remaining undergraduate journalism elective courses at the 200- and 300-level from courses listed in the professional option other than the one they elected to follow in completing their undergraduate degree. As graduate students, they will enroll in a minimum of four advanced electives at the 400- and 500-levels, in addition to required graduate courses. Electives may be in areas inside or outside Journalism to allow them to pursue a topical specialization. Those electives would require the approval of the Director of Graduate Studies. Students with approved undergraduate journalism degrees from other institutions also are eligible to apply for this sequence. Those without undergraduate degrees in Journalism – and who do not qualify for the deep knowledge or Sequence 2 track – will be required to take JOURN 501 as an elective. **Total: 32 hours.**

First Year**Fall Semester**

	Hours
JOUR 505 Journalism Proseminar	4
JOUR 515 Master's Project (Section A)	4
Electives – minimum of two JOUR 4xx courses, or other approved 400- and 500-level courses	8
Semester Hours	16

Spring Semester

JOUR 500 Current Issues in Journalism	4
JOURN 515 B, Master's Project: Part 2	4
Electives – minimum of two JOUR 4xx courses, or other approved 400- and 500-level courses	8
Semester Hours	16
Total Hours:	32

Students cannot repeat journalism electives at the 400-level taken as undergraduates. The Director of Journalism Graduate Studies must approve any non-Journalism courses that are chosen.

Sequence 2: Deep Knowledge. The Department of Journalism offers a 12-month program leading to the Master of Science in Journalism for applicants who possess or are working toward advanced degrees in such fields as, but not limited to, the sciences, engineering, mathematics, health and medical fields, and technology. Mid-career professional journalists interested in advanced journalism courses are also encouraged to apply. **Total: 32 hours.**

First Year**Fall Semester**

	Hours
JOUR 501 Multimedia Storytelling	4
JOUR 505 Journalism Proseminar	4
Electives – minimum of 4 hours at the JOUR 4xx level	4
Semester Hours	12

Spring Semester

JOUR 500 Current Issues in Journalism	4
JOUR 515 Master's Project (Section A)	4
Electives – minimum of two JOUR 4xx courses	8
Semester Hours	16

Summer Semester

JOURN 515 Section B: Master's Project: Part 2	4
Semester Hours	4
Total Hours:	32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

In order to be considered for the joint degree program in Journalism, students must apply to and be accepted by both programs. Students graduate from both programs simultaneously, upon meeting all the requirements.

- Master of Science in Journalism and Master of Business Administration (p. 797)
- Master of Science in Journalism and Juris Doctor in Law (p. 797)

M.S. Journalism and J.D.

Code	Title	Hours
	Requirements for the J.D. in Law (up to 15 hours of which may be fulfilled by Journalism coursework)	90
	Journalism M.S. requirements (4-16 hours may be satisfied with Law coursework depending on Journalism experience)	32
Total Hours		91

Other Requirements¹

Minimum 500-level Hours Required 75

Overall in both programs:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.S. Journalism and M.B.A.

Students in this unit may choose to earn their major degree and simultaneously complete an MBA, with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the MBA program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the MBA program and their major department office for more information.

Kinesiology

Department of Kinesiology & Community Health (<http://kch.illinois.edu>)

Department Head: Amy Woods

Director of Graduate Studies: Steven Petruzzello

Graduate Office: Julie Jenkins

906 South Goodwin Ave

112 Freer Hall MC-052

Urbana, IL 61801

(217) 333-1083

Email: jjenkns@illinois.edu

Major: Kinesiology

Degrees Offered: M.S., Ph.D.

Joint Degree Program: Doctor of Philosophy in Kinesiology and Master of Public Health (p. 715)

Degrees Offered: Ph.D. and M.P.H.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Kinesiology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Kinesiology Program in the Department of Kinesiology and Community Health offers graduate programs leading to the Master of Science and the Doctor of Philosophy degrees. Major areas of specialization at both the master's and doctoral degree levels include:

- Biobehavioral Kinesiology (the study of biomechanics, exercise and sport psychology, kinesmetrics, motor control and learning, and motor development)
- Cultural Pedagogical & Interpretive Studies (the study of the interaction between physical activity and the individual from a variety of cultural, sociological and pedagogical perspectives)
- Exercise Physiology (the study of exercise stress on body systems).

Admission

Students may apply to either the M.S. or the Ph.D. program. Applications for Fall admission are due on **January 15**. Applications for Spring semester are due on **October 1**.

Admission to the M.S. degree program requires a baccalaureate degree from an accredited institution of higher education, a minimum grade point average of 3.0 (A = 4.0) for the last two years of undergraduate study and any graduate work completed, Graduate Record Examination (GRE) test scores, a statement of interest, and three letters of recommendation.

Admission to the Ph.D. degree program requires a minimum of a baccalaureate degree from an accredited institution of higher education with a minimum grade point average of 3.5 (A = 4.0) for the last two years of undergraduate study. Applicants who have a master's degree should have a grade point average of 3.5 for previous graduate-level work. All applicants are required to submit Graduate Record Examination (GRE) test scores, a statement of interest, and three letters of recommendation.

International students whose native language is not English, must also score a minimum of 580 on the paper-based TOEFL test, 237 on the computer-based test, or 92 on the internet-based test (iBT). Applicants whose native language is not English and who are seeking a teaching assistantship must provide evidence of spoken English language proficiency by meeting minimum score requirements specified by the University (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Medical Scholars Program

Please note the Medical Scholars program is not accepting applications at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Kinesiology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at <https://www.med.illinois.edu/mdphd/>.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Faculty Research Interests

Kinesiology faculty conduct research and supervise graduate research in the following areas:

- Physical activity and aging
- immune function
- psychological, physical and cognitive function
- fitness and health
- psychophysiology
- motor development
- teacher education
- teacher effectiveness
- sport in society and culture
- motor control

Facilities and Resources

The department facilities include laboratories for research in biomechanics, bone and body composition, cardiovascular function, exercise immunology, exercise psychology, exercise neuroscience, neurocognitive kinesiology, motor control, gait and balance, kinesmetrics, motor behavior, muscle physiology and pedagogical technology.

Financial Aid

A number of teaching assistantships are available in the department's instructional programs. A limited number of research assistantships are available to support the departmental research activities. Assistantships usually provide a stipend for services performed as well as a tuition and partial fee waiver.

Master of Science in Kinesiology

It is possible for a full-time student to complete this degree program in one academic year plus one summer session.

Thesis Option

Code	Title	Hours
KIN 501	Kinesiology Research Methods (or equivalent)	4
KIN 591	Seminar	4
Major area of study		8
Secondary area within the dept.		4
Research/Project Hours (min/max applied toward degree):		0-8
KIN 599	Thesis Research (min/max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required	20 (not including 599)
Within the Unit:	

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.kch.illinois.edu/kines-grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
KIN 501	Kinesiology Research Methods (or equivalent)	4
KIN 591	Seminar	4
Major area of study		8
Secondary area within the dept.		4
Research/Project Hours (min/max applied toward degree):		4-8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 20 (not including 599)

Within the Unit:

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.kch.illinois.edu/kines-grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Kinesiology

Entering with approved M.S. degree

Code	Title	Hours
KIN 591	Seminar	8
KIN/CHLH/SHS 565/ RST 560	Teaching in the Professoriate	4
Competency in research methods		12
Research/Project Hours (8 max applied toward degree)		0-8
Elective hours to bring total course work hours to 32		
KIN 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within 24 (not including 599)

the Unit:

Minimum Number of 500-level 8

Hours Required Overall in Program:

Qualifying Exam Required: No

Preliminary Exam Required: Yes

Final/Exam Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.kch.illinois.edu/kines-grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S. degree

Code	Title	Hours
KIN 591	Seminar	12
KIN/CHLH/SHS 565/ RST 560	Teaching in the Professoriate	4
Competency in research methods		12
Research/Project Hours (16 max applied toward degree)		0-16
Elective hours to bring total course work hours to 64		
KIN 599	Thesis Research (min/max applied toward degree)	32
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within 40 (not including 599)

the Unit:

Minimum Number of 500-level 12

Hours Required Overall in Program:

Qualifying Exam Required: No

Preliminary Exam Required: Yes

Final/Exam Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.kch.illinois.edu/kines-grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Public Health and Ph.D. in Kinesiology

The M.P.H. can be earned jointly with the Ph.D. in Kinesiology. In the joint program up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH/ENVS 469	Environmental Health	4
CHLH/KIN 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2

Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)

Electives and seminars, min 3 (may be met by Ph.D. core courses)		
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
KIN 591	Seminar	8
KIN/CHLH/SHS 565/ RST 560	Teaching in the Professoriate	4
Competency in Ph.D. research methods		12
Kinesiology Research/Project Hours (8 max applied toward degree)		0-8
KIN 599	Thesis Research (min/max applied toward degree)	32
Total Hours		100

Other Requirements ¹

Other requirements may overlap

Minimum Number of 500-level Hours Required Overall in Program:	12 (8 within M.P.H.)
Minimum Hours Required Within Kinesiology (not including 599)	24
Approved Masters Degree Required for Admission?	No
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final/Exam Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.kch.illinois.edu/kines-grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

KIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KIN>)

Courses

KIN 501 Kinesiology Research Methods credit: 4 Hours.

Review and appraisal of common research procedures; application of statistical procedures, library methods, evaluation procedures, and experimental methods.

KIN 530 Childhood Obesity I credit: 3 Hours.

Same as CHLH 530, FSHN 530, HDFS 551, NUTR 530, SOCW 570. See NUTR 530.

KIN 531 Childhood Obesity II credit: 4 Hours.

Same as CHLH 531, FSHN 531, HDFS 552, NUTR 531, SOCW 571. See NUTR 531.

KIN 540 Health Behavior: Theory credit: 4 Hours.

Same as CHLH 540. See CHLH 540.

KIN 543 Physical Activity & Cognition credit: 4 Hours.

Examines the relationship between physical activity and fitness on brain and cognition across the lifespan. The psychobiology of physical activity effects on cognition is emphasized. Other areas of study include aging, development, and psychosocial factors. Methodological issues as well as human and animal models of research will be studied.

KIN 551 Sci Basis of Phys Performance credit: 4 Hours.

Contemporary trends in the study of human performance and exercise stress; analysis of the research literature, experimental strategies, and research instrumentation. Lecture-discussion and laboratory.

KIN 552 Adv Skeletal Muscle Physiology credit: 4 Hours.

Course provides an in-depth understanding of skeletal muscle anatomy, cell biology, and physiology. Classroom discussions of primary literature and other activities will focus on muscle structure and function. Information will also be provided on the molecular and cellular basis for adaptations that occur with increased use, such as endurance or strength training, or periods of disuse, such as injury and disease.

KIN 553 Circulorespiratory Physiology credit: 4 Hours.

Aerobic performance responses to short-term, intermittent, and prolonged physical activity; special consideration given to endurance training methods and assessment techniques, ergogenic aids, and problems associated with growth, environmental influences, and competitive sport. Prerequisite: KIN 551 or consent of instructor.

KIN 557 Stress Immunology credit: 4 Hours.

This course will examine the role of stress in modulating immune function and the pathobiological mechanisms resulting in disease. An emphasis will be placed upon the reciprocal communication pathways that exist between the central nervous, endocrine and immune systems. Prerequisite: Consent of the instructor. It will be assumed that students will have introductory knowledge in biochemistry, endocrinology, and immunology.

KIN 560 Research on Teacher Education credit: 4 Hours.

Critically examines advanced theories, trends, problems, and implications of research on teacher education in Kinesiology. Students will complete a series of written assignments that are grounded in theory, illustrate critical thinking skills, and demonstrate extensive knowledge of the literature. Prerequisite: Graduate standing.

KIN 564 Qualitative Research Methods credit: 4 Hours.

Introduces students to qualitative methodology in the educational and health-related professions settings. Students will learn to interpret qualitative research, understand its theoretical underpinnings, acquire interviewing and observation skills, design and evaluate a community-based group research project, learn to collaborate with others, and critically assess the contributions to the project of self and peers.

KIN 565 Teaching in the Professoriate credit: 4 Hours.

Provides scholarly knowledge and practical experience necessary for effectively assuming the roles of teaching, mentoring, and presenting in the professoriate. Students will team teach an undergraduate course with an assigned faculty mentor, give a scholarly research presentation, and attend a series of theoretically grounded lectures focusing on instructional design, learner characteristics, and successfully conveying information to others. Same as CHLH 565, RST 560, and SHS 565. Prerequisite: Must be a PhD student in the College of Applied Health Sciences.

KIN 590 Independent Study credit: 2 or 4 Hours.

Independent research on special projects. May be repeated.

KIN 591 Seminar credit: 1 Hour.

Lectures, discussions, and critiques on kinesiology and community health related subjects by faculty members and visiting professional leaders; presentation and criticism of student research. Approved for S/U grading only. May be repeated in subsequent terms as topics vary.

KIN 594 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Schedule. May be repeated.

KIN 599 Thesis Research credit: 0 to 16 Hours.

Preparation of theses in kinesiology. Approved for S/U grading only. May be repeated.

Labor and Employment Relations

<http://ler.illinois.edu>

Dean: Fritz Drasgow
504 East Armory Avenue
Champaign, IL 61820
(217) 333-1482

Contact: Becky Barker, On-campus programs
E-mail: ebarker@illinois.edu

Katherine Eriksen, Online program
E-mail: eriksen3@illinois.edu (ebarker@illinois.edu)

Major: Human Resources and Industrial Relations
Degrees Offered: M.H.R.I.R., Ph.D.

Joint Degree Program: The Master of Human Resources and Industrial Relations can be earned jointly with the following Degrees Offered (on-campus program only):
Law, J.D. (p. 803)
Business Administration, M.B.A. (p. 803)

Graduate Degree Programs

The School of Labor and Employment Relations offers graduate work leading to both a master's and a doctoral degree. Graduate study in Human Resources and Industrial Relations (HRIR) is based on a multidisciplinary approach to human resources/industrial relations problems and a flexible curriculum. To achieve this, the School has joint faculty appointments or course cross-listings with economics, psychology, law, business administration, history, and finance.

Admission

Students must meet the general admission requirements of the Graduate College, as well as the specific requirements of the School. Admission to the master's program in either the fall or spring semester is based on an applicant's undergraduate record, letters of reference, Graduate Record Examination (GRE) or Graduate Management Aptitude Test (GMAT) scores, a resume and a statement of interest and career goals. The minimum requirements for admission are a course in statistics and an average grade of B in the last two years of a four year undergraduate program. A deficiency in statistics may be made up by taking the required course without graduate credit during the first semester of graduate study. International applicants must provide Test of English as Foreign Language (TOEFL) test results with a recommended minimum score of 590 on the paper-based test (243 on the computer-based test and 96 on iBT) or IELTS with minimum overall score of 6.5 with 6.0 minimum in each subsection.

Students applying to the online program will have the same admissions criteria as the on-campus MHRIR program. However, a waiver of the GRE or GMAT requirement may be available to applicants with 3 or more years of direct HR/IR experience or 5 years of related managerial experience. Eligibility of this waiver will be assessed by the Online Program Coordinator. Admission decisions for the online program are made for the fall semester only.

Students with outstanding academic credentials, with or without a master's degree, are encouraged to apply to the Ph.D. program. Applicants to the doctoral program must submit evidence of research ability, such as a master's thesis, an undergraduate thesis, special reports, or published articles. This is in addition to the other required application materials as indicated for the on-campus master's program. Admission to the doctoral program is made for the fall semester only. An exception is made for current HRIR master's degree students at Illinois, who may submit an internal application in the spring.

Graduate Teaching Experience

Although the School has no teaching requirement, doctoral students are encouraged to gain teaching experience in this program.

Financial Aid

The School offers research assistantships, scholarships, and fellowships to graduate students with superior academic credentials in the on-campus MHRIR and Ph.D. programs. A School research/teaching assistant receives a stipend plus waiver of resident or non-resident tuition and some fees (<http://www.grad.illinois.edu/gradhandbook>). The Graduate College also awards minority fellowships that carry stipends plus tuition and service fee waivers. The School seeks reimbursement from appointing units of the value of the tuition waivers associated with assistantship appointments made to HRIR master's students in other campus units. However, this restriction does not apply to students in the doctoral program.

The online program is self-supporting and DOES NOT accept the following tuition and fee waivers (TFWs): Non-Academic waivers (including UIUC employees and employees of other state institutions), Academic waivers from UIUC, UIC and UIS employees, Related Agency waivers, waivers granted through fellowships/assistantships as governed by the Graduate College at UIUC, or Retiree waivers. This program DOES accept statutory waivers (veterans grants, etc.)

Master of Human Resources and Industrial Relations

The master's program can lead to a professional, terminal master's degree, or it can prepare students to continue their graduate study toward a Ph.D. or other doctoral degrees in law and other professional areas.

The master's degree requires 48 graduate hours of courses and usually takes three semesters to complete. The master's degree program has core requirements in human resources/industrial relations systems, and quantitative methods, and a subject distribution requirement.

Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		16
LER 591 & LER 593	Employment Relations Systems and Quantitative Methods in LER	8
Electives		16

LER 599	Thesis Seminar (min/max applied toward degree)	8
Total Hours		48

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 36

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		
LER 591 & LER 593	Employment Relations Systems and Quantitative Methods in LER	8
Electives		24
Total Hours		48

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 36

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Doctor of Philosophy in Human Resources and Industrial Relations

The Ph.D. is an interdisciplinary degree, which typically leads to a career in teaching and research, especially at business schools or industrial relations schools. Research-oriented careers outside the academic world are also available. The program can be completed in five years beyond the baccalaureate degree or four years beyond the master's degree. Doctoral students are required to complete 96 graduate hours of credit beyond the baccalaureate degree. Coursework is usually completed in two years. There is a second year paper requirement, one examination that focuses on the candidate's selected area of specialization, and the preliminary and final exams. Examples of areas of specialization include the effects of technological change on the human resource function; motivation, morale, and job satisfaction; labor-management relations in the public sector; labor markets and employment; and international comparative labor problems. Each student's program of study is chosen in consultation with the Ph.D. Advisory Committee at the School.

Code	Title	Hours
LER 542	Collective Bargaining	4
LER 556	Industrial Relations Theory	4
LER 557	Human Resources Theory	4
LER 558	Faculty-Student Workshop	4
LER 540	Labor Economics I	4
or LER 541	Labor Economics II	
or LER 545	Economics of Human Resources	
One year sequence in statistics		8
Research Methods		8
LER 559	Micro Research Methods	
LER 590	Individual Topics (Macro - Section X)	
Two theory courses in a social science discipline (one macro, one micro)		8
Two related courses outside discipline		8
Electives		0-16
LER 599	Thesis Seminar (min/max applied toward degree)	32-48
Total Hours		64

Other Requirements¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	No, but M.S. equivalent hours are required, in addition. Contact department for details
---	---

Qualifying Exam Required	Yes
--------------------------	-----

Preliminary Exam Required	Yes
---------------------------	-----

Final Exam/Dissertation Defense Required	Yes
--	-----

Dissertation Deposit Required	Yes
-------------------------------	-----

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Master of Human Resources and Industrial Relations

The master's program can lead to a professional, terminal master's degree, or it can prepare students to continue their graduate study toward a Ph.D. or other doctoral degrees in law and other professional areas.

The master's degree requires 48 graduate hours of courses and usually takes six semesters to complete (including summers). The master's degree program has core requirements in human resources/industrial relations systems, and quantitative methods, and a subject distribution requirement.

Non-Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		
LER 591 & LER 593	Employment Relations Systems and Quantitative Methods in LER	8

Electives	24
Total Hours	48

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 36

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

- Juris Doctor in Law and Master of Human Resources and Industrial Relations (p. 803)
- Master of Business Administration and Master of Human Resources and Industrial Relations (p. 803)

J.D. in Law and Master of Human Resources and Industrial Relations

This joint degree program with the College of Law is usually completed in three-and-one-half years. Students must apply to both the College of Law and the School of Labor and Employment Relations, and must be accepted by both units. The degrees are awarded simultaneously upon successful completion of all joint degree requirements. Students must spend five semesters in law and two semesters in LER.

Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		16
LER 591	Employment Relations Systems	4
LER 593	Quantitative Methods in LER	4
Labor and Employment Law is required but can be taken in Law or LER		
Electives		4
LER 599	Thesis Seminar (min/max applied toward degree)	8
Hours in Law		74
Hours in LER		36

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		16
LER 591	Employment Relations Systems	4
LER 593	Quantitative Methods in LER	4
Labor and Employment Law is required but can be taken in Law or LER		
Electives		12
Hours in Law		74
Hours in LER		36

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

M.B.A and Master of Human Resources and Industrial Relations

This joint program with the M.B.A. program is usually completed in two-and-one-half years. Independent admission decisions are made by each unit, and the student must be accepted by both. The degrees are awarded simultaneously upon completion of all joint degree requirements. Students are required to spend three semesters in MBA and two semesters in LER.

Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		16
LER 591	Employment Relations Systems	4
LER 593	Quantitative Methods in LER	4
Electives		4
LER 599	Thesis Seminar (min/max applied toward degree)	8
MBA Hours		60
Hours in LER		36

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall

Registration in MBA for at least three semesters is required

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Student Handbook (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
At least one course in each of four subject areas		16
LER 591	Employment Relations Systems	4
LER 593	Quantitative Methods in LER	4
Electives		12
MBA hours		60
Hours in LER		36

Other Requirements

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall

Registration in MBA for at least three semesters is required

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Student Handbook* (https://ler.illinois.edu/wp-content/uploads/2015/01/CurrentStudents_LERHandbook.pdf) and the *Graduate College Handbook* (<http://www.grad.uiuc.edu/gradhandbook>).

Landscape Architecture

<http://landarch.illinois.edu>

Head of the Department: William C. Sullivan

PhD Coordinator: D. F. Ruggles

101 Temple Hoyne Buell Hall

611 East Lorado Taft Drive

Champaign, IL 61820

(217) 333-0176

E-mail: LAdept@illinois.edu

Major: Landscape Architecture

Degrees Offered: MLA, PhD

Graduate Concentrations: Medieval Studies (p. 837) (available to all degrees)

Joint Degree Program: Master of Landscape Architecture and Master of Urban Planning, Master of Landscape Architecture and Master of Business Administration

Degrees offered: MLA and MUP, MLA and MBA

Graduate Degree Programs

The Department of Landscape Architecture offers work leading to the Master of Landscape Architecture (MLA) degree and the PhD. The programs enable students to gain fresh insights and to conduct new research pertaining to land and its use by people. Courses and faculty research activities range from on-site to regional scales, and include environmental planning and design as well as community design, cultural heritage, and history. The MLA is an accredited first professional degree. Students may pursue specialized areas that reflect their interests and career aspirations. This may include ecological design, community design, and cultural heritage history and design. Joint MLA/MUP and joint MLA/MBA programs are available. The PhD program is jointly administered with the School of Architecture and emphasizes both interdisciplinary study and cross-disciplinary inquiry. Areas of concentration include history and theory; technology and

environment; and behavioral and cultural factors in design. Before submitting an application, students should consult the department website for information regarding the specific areas of study and the time needed to complete the requirements.

Several faculty members in the department also participate in the doctoral program administered by the Department of Urban and Regional Planning. See the program description under the Department of Urban and Regional Planning for more information.

Admission

The Graduate College admission requirements apply, except that higher Test of English as a Foreign Language (TOEFL) scores are required for international students. All students are required to take the Graduate Record Examination (GRE) general test. Students are admitted on an individual basis according to a review of their prior accomplishments with an emphasis on academic achievement. MLA candidates from undergraduate design programs must submit portfolios with applications to the MLA program. Candidates without undergraduate preparation in landscape architecture will be admitted on limited status and must complete undergraduate prerequisite courses in addition to graduate work. The doctoral program prefers candidates with master's degrees: MLA, MArch, or related fields such as art history, ecology, geography, or planning. All graduate students must begin their studies in the fall semester.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in PhD program.

Financial Aid

Students compete for fellowships, tuition and service fee waivers, and assistantships. Selection is based on the academic achievement and qualifications of the student.

Master of Landscape Architecture-Thesis Option

Specific courses to be taken are determined in consultation with an adviser. Some students complete a master's thesis (LA 599), others develop a specialization through additional coursework.

Code	Title	Hours
LA 438	Design Workshop Studio II	3 to 6
LA 470	Social/Cultural Design Issues	3
LA 501	Landscape Arch Theory & Prac	2
LA 597	Research Design & Methods	3
LA 599	Thesis Research	10
Coursework		23
Additional undergraduate coursework will be required of students without a BLA. These prerequisites do not count toward the graduate degree.		
Internship required		0
Total Hours		48

Other Requirements ¹

Internship required

Other requirements may overlap

Minimum Hours Required Within
the Unit: 48

Minimum 500-level Hours Required
Overall: 24

Minimum GPA: 3.0

Master of Landscape Architecture- Specialization Option

Specific courses to be taken are determined in consultation with an adviser. Students develop a specialization through elective coursework and design studios. In their final semester, they prepare a document that describes their specialization.

Code	Title	Hours
Required Coursework		18
Design Studio Coursework		
LA 438	Design Workshop Studio II (taken twice)	
LA 470	Social/Cultural Design Issues	
LA 501	Landscape Arch Theory & Prac	
LA 597	Research Design & Methods	
Coursework, including specialization electives ²		30
Additional undergraduate coursework will be required of students without a BLA. These prerequisites do not count toward the graduate degree. Required internship credit does not count towards the required 48 hours of graduate-level credit.		
Total Hours		48

Other Requirements ¹

Minimum Hours within the Unit 24

Minimum 500-level hours required
overall 18

Internship required 5

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://www.landarch.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

² Specific courses to be taken are determined in consultation with an advisor. Students develop a specialization through elective coursework and design studios. In their final semester, they prepare a document that describes their specialization.

Doctor of Philosophy in Landscape Architecture

Code	Title	Hours
Elective coursework in major field		28
Colloquium coursework		2
ARCH 589	PhD Colloquium (taken twice)	
Outside study (courses outside of Landscape Architecture and Architecture)		8

Language Requirement: Required for all students in the History/Theory option and for some Social and Cultural Factors students

LA 599	Thesis Research (max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

All students are required to enroll in the PhD colloquium during the fall of their first year of course work.

Minimum 500-level Hours Required 24 (not including 599)

Overall:

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (32 hours min)
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Program Curriculum (<http://www.landarch.illinois.edu>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Landscape Architecture and Master of Urban Planning

For the joint program, at least 40 hours must be in Urban Planning, including all core courses and capstone requirements. The two programs must total a minimum of the sum of 40 Urban Planning hours plus the required number of hours for the Master of Landscape Architecture, 48. (However, Landscape Architecture may at its discretion count up to 8 hours of Urban Planning courses as electives in meeting its degree requirements as long as students are required to take no fewer than 40 additional hours in Landscape Architecture.) The MUP capstone requirement may be waived for a thesis completed in Landscape Architecture provided faculty from both programs participate on the thesis committee.

Code	Title	Hours
Urban Planning core capstone and area requirements		40
LA 470	Social/Cultural Design Issues	3
LA 501	Landscape Arch Theory & Prac	2
Specialization area coursework		27-35
Internship		
Additional undergraduate coursework will be required of students without a BLA. These prerequisites do not count toward the graduate degree.		
LA 599	Thesis Research (min/max applied toward degree)	8
Total Hours		80-88

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within
the Unit: 24

Minimum 500-level Hours Required
Overall: 18

Enrollment in each program at least
2 semesters

Up to 8 hours of UP coursework
may be applied to the LA degree at
the department's discretion.

If pursuing the thesis option, the
thesis committee chair must be full-
time in Landscape Architecture and
one committee member must be
from Urban Planning.

Minimum GPA: 3.0

For additional details and requirements contact the department.

¹ For additional details and requirements refer to the department's *Programs of Study* (<http://www.landarch.illinois.edu>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

MBA and Master of Landscape Architecture

Students in this unit may choose to earn their major degree and simultaneously complete an MBA, with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the MBA program for three terms and complete all the requirements of their primary degree. Interested students should see the [joint program requirements](#) (p. 695) and contact the MBA program and their major department office for more information.

Latin American and Caribbean Studies

<http://clacs.illinois.edu>

(including classroom and online courses in Quechua, the most spoken native language in the American continent)

Director: Anna Escobar
Associate Director and Academic Programs Coordinator: Angelina Cotler
201 International Studies Building
910 South Fifth Street
Champaign, IL 61820
E-mail: clacs@illinois.edu

Director of Graduate Studies: Anna Escobar

Major: Latin American Studies
Degrees Offered: M.A.

Graduate Minor: Latin American and Caribbean Studies

Graduate Program

The Center for Latin American and Caribbean Studies administers a program of language and area courses leading to an interdisciplinary Master of Arts degree. The master's program facilitates studies in the languages, cultures, and affairs of the region for three constituencies of students: those seeking to match area expertise with professional training; those proceeding to disciplinary-based doctoral work; and those for whom the degree would stand on its own. The center also administers graduate specializations in Latin American and Caribbean Studies with various departments. The center is a Title VI National Resource Center. The center houses the Lemann Institute for Brazilian Studies.

Language Instruction

The Center offers 3 levels of Quechua, the most spoken language in the American continent, with approximately 13 million of speakers in 6 countries. The Center also offers Quechua online courses and free access to the publication *Correo de Lingüística Andina* and free exercises on Quechua. Visit www.clacs.illinois.edu/quechua/ (<http://www.clacs.illinois.edu/quechua/>).

Other languages in the University that fulfill the M.A. requirements are Spanish and Portuguese, both offered at the School Literatures, Cultures, and Linguistics.

Faculty Research Interests

More than 100 faculty throughout the University are currently affiliated with the Center. The Center's faculty devote all or a portion of their teaching and research to Latin American subjects, from agriculture to politics, culture and linguistics. Their expertise spans every important discipline and sub-region of Latin America and the Caribbean, with particular strength in the Andean countries, the Caribbean, lowland South America, Mexico, and Brazil.

For a complete list of our affiliated faculty and their research and teaching interests check our people page at <http://www.clacs.illinois.edu/about/people/faculty.aspx>.

Facilities and Resources

Latin American Library Collection (LALC)

The Center assist the Latin American Collection (<http://www.library.illinois.edu/lat>) at the University Library in purchasing teaching and research materials to develop a strong collection that supports teaching and research in those programs sponsored and coordinated by the Center as well as interdisciplinary courses with Latin American subject matter offered by other departments.

The LALC collection ranks among the six largest in the country and is the largest collection in the Midwest region in purchasing teaching and research materials to develop a strong collection that supports teaching and research in those programs sponsored and coordinated by the Center as well as interdisciplinary courses with Latin American subject matter offered by other departments. It is located in the third floor of the main UIUC library in room 324 and while the Library itself does not house a circulating collection, our knowledgeable staff is available to help locate relevant materials, answer reference questions, and assist you in developing effective searching strategies.

The Latin American and Caribbean Library collection includes:

- More than 400,000 monograph titles;
- Newspapers and magazines from over 20 Latin American and Caribbean countries;
- A strong collection of journals in the humanities and social sciences, as well as publications of professional associations, government agencies, central banks, and non-governmental organizations;
- Access to HAPI Online (Hispanic American Periodicals Index), the Handbook of Latin American Studies (<http://lcweb2.loc.gov/hlas>), and other online databases;
- An extensive collection of videos available at the Media Center in the Undergraduate Library;
- over 32,000 maps of Latin America (housed in the Map and Geography Library);
- comprehensive holdings of Brazilian and Andean materials;
- Extensive holdings by and about Gabriel Garcia Marquez;
- Publications from the Archivo General de la Nacion de Mexico; and
- A comprehensive Latin American music collection.

List-serv

The Center administers a listserv with more than 500 subscribers. Weekly mass messages "CALCS/Lemann Institute this Week" contain information on activities in campus related to Latin America and the Caribbean region (conferences, workshops, movies), new courses and job positions as well as future conferences in other Universities. To subscribe contact: Angelina Cotler (cotler@illinois.edu).

CLACS Brownbags

Every Thursday at Noon in Room 101 International Studies Building (910 S. Fifth Street in Champaign) CLACS presents a lecture offered by a faculty, graduate student or outside faculty on topics relevant to the region. These are open and free brownbag lectures. For complete list of presentations during the semester visit our website on the events section.

Opportunities and Events

The Center keeps update a complete list of jobs, grants, conferences, and fellowships in the U.S. and abroad for graduate students and faculty. Check it at <http://www.clacs.illinois.edu/news/opportunities.aspx>.

Outreach Program (<http://www.clacs.illinois.edu/outreach/default.aspx>)

One of the goals of our mission is to increase knowledge and awareness of Latin America and the Caribbean in the educational community and the general public by promoting language and area studies in their broadest sense. Outreach at CLACS is a service-oriented program funded through a Title VI Federal Area Studies grant. It is designed to increase public knowledge about Latin America and the Caribbean and Latin American and Caribbean peoples and cultures. All our services are free!

Services include

- Speakers Bureau composed by graduate students and faculty for presentations in schools on Latin American topics.
- Outreach Library for k-14 teachers and instructors that includes books and DVDs.
- Collaborates with the Illinois International Review, the University of Illinois' new international publication; produces CLACS this Week, a weekly Calendar of Events; and an annual newsletter on Quechua instruction, *Correo de Linguistica Andina*.
- Publishes several curriculum development workbooks including: Columbus: Beyond the Myth, A Teacher's Workbook on Tropical Rain Forests, and *Historia Oral: The Latina/o Experience in the United States*.
- Organizes the Latin American Brownbag Colloquium, a weekly series of noon seminars in which faculty, students, and visiting scholars present current research and speak on topics of special interest. Additionally, the Center sponsors many cultural events, such as Latin American music and dance ensembles, and art exhibitions.
- Maintains links to Web based curriculum-related materials on its outreach Web pages as a means of facilitating access to curriculum resources and research materials on Latin America and the Caribbean.

For more information visit <http://www.clacs.illinois.edu/outreach/default.aspx>.

Links

Links to local museums, units and clubs that offer Latin American and Caribbean services as well as external links to institutions abroad and in the U.S. www.clacs.illinois.edu/resources/ (<http://www.clacs.illinois.edu/resources/>).

Financial Aid

The Center is a recipient of Federal Government Title VI Foreign Language and Area Studies (FLAS) Fellowships for Graduate Studies in any discipline that includes a specialization in Latin American Studies and an intensive program of language instruction. Academic year language courses and summer fellowships for intensive language courses abroad or in the United States are available. Information on how to apply, requirements and datelines are posted in <http://publish.illinois.edu/illinoisflas/>.

The Center offers Tinker Summer Fellowship Research Grants for graduate students in any department wishing to do research during the summer in Latin America, the Caribbean and the Iberian Peninsula. Both these programs depend on outside funding and thus cannot be guaranteed in any given year. Information on how to apply, requirements and datelines are posted in <http://www.clacs.illinois.edu/academics/fellowships/tinker.aspx>.

Master of Arts in Latin American Studies

Specializations in Latin American and Caribbean Studies are administered by the director of the Center for Latin American and Caribbean Studies.

Candidates for the master's degree who elect a specialization in Latin American and Caribbean Studies must complete 8 graduate hours from the courses prescribed by the center. Doctoral candidates who elect a specialization in this area must complete 16 graduate hours for one specialization or 8 graduate hours for a split specialization. Courses must be taken in at least two departments; a list of courses fulfilling the specialization is available from the center. A specialization in agricultural economics and foreign areas studies (in this case, Latin American and Caribbean Studies) is also available. A high level of proficiency in one or more languages of the region (Spanish, Portuguese, and Amerindian Indian languages) is required. For course information, requirements, and methods used to establish the level of proficiency, contact the center's academic programs coordinator.

Students in technical and professional colleges and schools of the University of Illinois at Urbana-Champaign who seek knowledge of the Latin American and Caribbean region and languages are invited to consult with the director of the center or with their adviser in order to develop programs suited to their individual needs. Such a program may often be adopted as a specialization under existing regulations if the student so desires. These courses are of particular value to students who intend to undertake technical or professional work in the Latin American and Caribbean area for government, private business, publishing, or religious organizations.

Code	Title	Hours
	Core interdisciplinary seminar (LAST 550 or different if indicated)	4
	Graduate hours in 400-500 level courses in theory or research methods appropriate to the student's objectives and primary discipline	4-8
	Area Courses that focus on Latin America or the Caribbean, of which at least 8 graduate hours must be taken in one (primary) discipline	20-24
	Language Requirement: Demonstration that a communicative competence in Spanish, Portuguese, or other language indigenous to the area (excluding English) equivalent to six semesters' (undergraduate) work has been achieved.	
LAST 599	Thesis Research (min/max applied toward degree)	8
Total Hours		40

Other Requirements

Other requirements may overlap

A thesis is required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's graduate program (<http://www.clacs.illinois.edu/academics/graduate/graduate.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Latin American and Caribbean Studies

The interdisciplinary graduate minor in Latin American and Caribbean Studies promotes training for Master's and Doctoral students in other disciplines interested in complementing their degree program with an interdisciplinary perspective on Latin America and the Caribbean region. There are no prerequisites for the graduate minor. The Center will provide an online admission form to be submitted to the student's advisor for review. The form will require the student's graduate advisor and program director approval. Applicants must be in good standing in a graduate program at the University of Illinois and should demonstrate an interest in Latin American Studies.

Note: Students within the major cannot minor in the same program.

Code	Title	Hours
	Area Courses: 400-/500-level courses from two different departments from a list approved by CLACS every semester and posted in our website and announced through our listserv	8

Language coursework taken on this campus in either Portuguese, Spanish or Native American Language or Haitian Creole, OR the language course could also be selected from the area courses offered in these languages, i.e. literature class taught in any of these languages. 4

The chosen language course must be at the 400-or 500 level to count towards the required 12 hours for Graduate Minor.

Total Hours 12

Other Requirements¹

If the student's master's thesis or doctoral dissertation deals with Latin America and the Caribbean, students are strongly recommended that a faculty member from the Center be a formal member of their committee

¹ For additional details and requirements refer to the department's graduate program information online (<http://www.clacs.illinois.edu/academics/graduate/graduate.aspx>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Law

<https://law.illinois.edu>

Dean of the College: Vikram David Amar

Associate Dean for Graduate and International Programs: Margareth Etienne

Correspondence and Admission Information: Christine Renshaw, Office of Graduate and International Legal Studies

244 Law Building

504 East Pennsylvania Avenue

Champaign, IL 61820

(217) 333-6066

E-mail: law-gradprograms@illinois.edu (law-llm@illinois.edu)

Major: Law

Degrees offered: LL.M., J.S.D., J.D., M.S.L.

Graduate Concentrations: Criminal Law (LL.M. only); Intellectual Property and Technology Law (LL.M. only); International and Comparative Law (LL.M. only); Corporate Law, Commercial Law, and Trade (LL.M. only); Justice, Democracy, and Legal Rights (LL.M. only); Regulation, Sustainability, and Compliance (LL.M. only); U.S. Legal Practice Skills (LL.M. only)

Joint Degree Program: the J.D. in Law can be earned jointly with the following

Graduate Degrees Offered:

Accountancy, M.A.S. (p. 637)

Business Administration, M.B.A. (p. 695)

Chemistry, M.S. (p. 702)

Computer Science, M.C.S. (p. 724)

Human Resources and Industrial Relations, M.H.R.I.R. (p. 803)

Journalism, M.S. (p. 797)

Natural Resources and Environmental Sciences, M.S. (p. 855)

Political Science, Ph.D. (p. 871)

Urban Planning, M.U.P. (p. 912)

Medical Scholars Program: Juris Doctor (J.D.) in Law and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The LL.M. and J.S.D. programs of graduate study in law are designed for foreign law graduates who wish to pursue advanced study and conduct independent research under the direction of the College of Law faculty.

Two advanced degrees are conferred by the College of Law: the Master of Laws (LL.M.) degree and the Doctor of Science of Law (J.S.D.). Overall coordination of the graduate program is the responsibility of the Office of Graduate and International Legal Studies, and individual inquiries should be addressed to this office. The M.S.L. is a one-year, nonprofessional, terminal degree program designed for those who have had no legal training and who do not desire a professional law degree.

Admission

The Graduate College admission requirements (<http://www.grad.illinois.edu/admissions/apply>) and English language proficiency requirements (<http://www.grad.illinois.edu/admissions/instructions/04c>) apply. In addition for the LL.M. program, the Test of English as a Foreign Language (TOEFL) requirement is 80 internet-based. Students are not required to take the general Graduate Record Examination (GRE). Students are admitted on an individual basis according to a review of their prior accomplishments with an emphasis on academic achievement. Admission is generally made for the fall semester only.

Financial Aid

Applicants to the College of Law graduate programs are welcome to apply for scholarship assistance. Scholarships typically are awarded to applicants with a combination of excellent academic and professional credentials and proven financial need. Awards usually provide part of tuition and do not cover living expenses. There are always more qualified applicants than there are funds available. Therefore, applicants are strongly encouraged to explore alternative sources of funding.

- Master of Laws (p. 810)
- Master of Studies in Law (p. 810)

Doctor of the Science of Law

The Doctor of the Science of Law (J.S.D.) degree provides students who primarily intend to pursue an academic career an opportunity for extended study, research, and scholarly writing. Those admitted to the program must have demonstrated analytic and research ability, possess outstanding academic credentials, and have completed the LL.M. or other law degree from the University of Illinois or other accredited American law school. In exceptional cases, consideration will be given to applicants who have completed programs of study in common law countries. All candidates must provide evidence of excellent reading and writing skills in English. The J.S.D. program normally takes a minimum of three years. Two years must be completed in residence at the College of Law and must include two semesters of course work. J.S.D. candidates are assigned a primary faculty advisor with expertise in the student's research area and an additional three faculty members, who form the student's doctoral committee. Each student must pass a qualifying examination demonstrating general proficiency in the student's field of study and a preliminary examination on the research proposal. The student's faculty committee then will assess the student's thesis research and writing progress, make recommendations, and conduct

an oral examination on the final draft of the dissertation. The final dissertation will then be completed and deposited with the Graduate College.

Code	Title	Hours
LAW 599	Thesis Research	0-16 per semester
Total Hours		96

Other Requirements ¹

Other requirements may overlap

A J.D. or LL.M. is required for admission	
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Hours of residence credit	64
Minimum GPA:	2.75

¹ For additional details and requirements refer to the College of Law's graduate degree requirements (<http://www.law.illinois.edu/admissions/llm-program-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

The following four concentrations require students to complete a minimum of 14 credit hours in topics integral to each concentration. Courses taken toward the following four concentrations will count toward the student's LL.M. degree.

- Criminal Law (p. 811)
- Intellectual Property and Technology Law (p. 811)
- International and Comparative Law (p. 811)
- Corporate Law, Commercial Law, and Trade (p. 810)
- Justice, Democracy, and Legal Rights (p. 810)
- Regulation, Sustainability, and Compliance (p. 811)

A fifth concentration, also for the LL.M. only, requires students to complete a minimum of 12 credit hours and spend an extra semester in the program.

- U.S. Legal Practice Skills (p. 812)

These concentrations can be earned with the LL.M. degree only.

The professional J.D. in Law can be earned jointly with the following graduate degrees:

Business Administration, M.B.A. (p. 695)
 Chemistry, M.S. (p. 702)
 Computer Science, M.C.S. (p. 724)
 Human Resources and Industrial Relations, M.H.R.I.R. (p. 803)
 Journalism, M.S. (p. 797)
 Natural Resources and Environmental Sciences, M.S. (p. 855)
 Political Science, M.A. with Civic Leadership Concentration (p. 873)
 Political Science, Ph.D. (p. 873)
 Urban Planning, M.U.P. (p. 914)

Medical Scholars Program: Juris Doctor (J.D.) in Law and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Master of Laws

The Master of Laws (LL.M.) degree is designed to prepare students with or without any prior legal training to enhance their professional development by adding familiarity with U.S. law. Applicants must hold a bachelor's degree (or equivalent degree) from an approved school listed on the International Association of Universities List of Higher education Institutions. Full consideration for admission to the LL.M. program will be given to applicants holding a bachelor's degree in law or a bachelor's degree in a subject outside law.

The LL.M. degree requires the completion of at least 32 graduate hours of credit and is normally completed in one academic year. All candidates are required to pass Professional Responsibility (LAW 501), a four hour graduate course and LL.M. Legal Research and Writing (LAW 500) a two hour graduate course. The remaining graduate hours are selected from any College of Law course.

Code	Title	Hours
LAW 500	LLM Legal Writing and Research	2
LAW 501	Professional Responsibility	3 or 4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level (or higher)	12
Hours Required Overall:	
One academic year in residence	
Minimum GPA:	2.75

¹ For additional details and requirements refer to the *College of Law's graduate degree requirements* (<http://www.law.illinois.edu/admissions/llm-program-overview>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Studies in Law

A bachelor's degree is required for admission, and admission will be granted to a limited number of students on a competitive application basis.

The elective hours can be any graduate-level Law course offered by the College of Law, pursuant to a plan of study formulated in consultation with the college's academic advisors. Law credits earned in the M.S.L. program will not count toward the minimum credit hours required for the J.D. degree.

Code	Title	Hours
LAW 609	Legal Writing & Analysis	2
LAW 627	Legal Research	1
Select two of the following:		8
LAW 601	Contracts	
LAW 602	Property	
LAW 603	Torts	
LAW 604	Criminal Law	
LAW 606	Constitutional Law I	

LAW 607	Civil Procedure	
Completion of the Upper-Level Writing Requirement		2
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A faculty supervised research paper is required	
Minimum GPA:	2.75

¹ For additional details and requirements refer to the *College of Law's graduate degree requirements* (<http://www.law.illinois.edu/admissions/llm-program-overview>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Justice, Democracy, and Legal Rights Concentration

Code	Title	Hours
LAW 606	Constitutional Law I	4
Select at least ten hours of coursework from the courses below:		10
LAW 605	Criminal Proc: Investigation	
LAW 616	Environmental Law and Pol I	
LAW 620	Health Law Policy	
LAW 657	International Human Rights Law	
LAW 660	Individual Employee Rights	
LAW 662	Labor Law I	
LAW 664	Employment Discrimination	
LAW 667	Family Law	
LAW 670	Elder Law	
LAW 685	Dispute Resolution	
LAW 686	Remedies	
LAW 792	Current Legal Problems	
LAW 795	Adv Topics in Criminal Law	
LAW 796	Comparative Law Topics	
LAW 798	Seminars	
Total Hours		14

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

Corporate Law, Commercial Law, and Trade Concentration

Code	Title	Hours
LAW 633	Business Associations I	4
Select at least ten hours of coursework from the courses below:		10
LAW 601	Contracts	
LAW 624	Real Estate Finance	
LAW 629	Bankruptcy	
LAW 631	Secured Transactions	
LAW 634	Securities Regulation	

LAW 642	Antitrust Law	
LAW 647	Income Taxation	
LAW 653	International Business Trans	
LAW 654	International Trade Policy	
LAW 792	Current Legal Problems	
LAW 794	Adv Topics in Business Law	
LAW 796	Comparative Law Topics	
LAW 798	Seminars	
Total Hours		14

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

Criminal Law Concentration

Each Concentration offers a directed, optional program of study for LL.M. students in an increasingly important field of global legal practice. Each Concentration provides (1) specialized training in the Concentration field of law, (2) guidance to students in developing a program of study with the courses deemed most useful and relevant to the Concentration, and (3) a Concentration designation on their transcripts that will better allow them to market their expertise, thus gaining a competitive advantage in the legal employment market. In some instances, a Dual Concentration (i.e., in Intellectual Property and Justice, Democracy and Legal Rights) is available to eligible students. Eligible students must apply to pursue the Dual Concentration and may stay in residence an additional semester so that the 14-credit requirements of the second Concentration can be independently met. In the case of the Dual Concentration, credits used to satisfy one Concentration cannot be used to satisfy the requirements for a second Concentration. Students interested in remaining in residence for a third semester to complete their program of study must apply by the listed deadline at the start of the second semester of the LL.M. degree. The Concentrations require students to complete a minimum of fourteen credit hours in topics integral to each Concentration. Courses taken toward a Concentration will count toward the student's LL.M. degree, and must be selected with the program advisor.

Code	Title	Hours
LAW 604	Criminal Law	4
Select at least ten hours of coursework from the courses below:		10
LAW 605	Criminal Proc: Investigation	
LAW 606	Constitutional Law I	
LAW 679	Criminal Proc: Adjudication	
LAW 682	Evidence	
LAW 792	Current Legal Problems	
LAW 793	Advanced Litigation Topics	
LAW 795	Adv Topics in Criminal Law	
LAW 796	Comparative Law Topics	
LAW 798	Seminars	
Total Hours		14

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

Intellectual Property and Technology Law Concentration

Code	Title	Hours
LAW 797	Intellectual Property Topics	4
Select at least ten hours of coursework from the courses below:		10
LAW 602	Property	
LAW 643	Trademark & Unfair Competition	
LAW 644	Copyright Law	
LAW 645	Patent Law	
LAW 692	Field Placements	
LAW 792	Current Legal Problems	
LAW 797	Intellectual Property Topics	
Total Hours		14

In addition to the Concentration requirements, students must also complete the requirements of the LL.M. degree.

International and Comparative Law Concentration

Code	Title	Hours
Select one course from:		4
LAW 606	Constitutional Law I	
LAW 656	International Law	
Select at least ten hours of coursework from the courses below:		10
LAW 653	International Business Trans	
LAW 654	International Trade Policy	
LAW 657	International Human Rights Law	
LAW 792	Current Legal Problems	
LAW 794	Adv Topics in Business Law	
LAW 795	Adv Topics in Criminal Law	
LAW 796	Comparative Law Topics	
LAW 797	Intellectual Property Topics	
LAW 798	Seminars	
Total Hours		14

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

Regulation, Sustainability, and Compliance Concentration

Code	Title	Hours
LAW 615	Administrative Law	4
Select at least ten hours of coursework from the courses below:		10
LAW 602	Property	
LAW 616	Environmental Law and Pol I	
LAW 618	Natural Resources	
LAW 620	Health Law Policy	
LAW 622	Land Use Planning	

LAW 625	State and Local Government
LAW 633	Business Associations I
LAW 647	Income Taxation
LAW 792	Current Legal Problems
LAW 794	Adv Topics in Business Law
LAW 796	Comparative Law Topics
LAW 798	Seminars

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

U.S. Legal Practice Skills

This concentration requires students to complete a minimum of 12 credit hours in topics integral to U.S. Legal Practice Skills in a third semester. The 12 credit hours for the concentration may not count towards the LL.M. degree or other concentration credit hours and must be completed in addition to the LL.M. or other concentration credit hours.

This concentration will be open to students in the LL.M. degree program at the College of Law. Students are expected to be in good standing and have a minimum overall GPA of 3.0 to be eligible for the concentration. This concentration is only available as a third-semester concentration. Interested students must apply by the listed deadline at the start of the second semester of the LL.M. degree.

Code	Title	Hours
LAW 692	Field Placements	1 to 4
LAW 692	Field Placements (Classroom Instruction, taken concurrently with Field Placement)	1 to 4
Select at least five hours of coursework from the courses below:		5
LAW 603	Torts	
LAW 607	Civil Procedure	
LAW 682	Evidence	
LAW 685	Dispute Resolution	
LAW 695	Fundamentals of Trial Practice	
LAW 793	Advanced Litigation Topics	
Total hours		12

In addition to the concentration requirements, students must also complete the requirements of the LL.M. degree.

Information Sciences

<http://ischool.illinois.edu/>

Dean of the School: Allen Renear
501 East Daniel Street
Champaign, IL 61820-6211
(217) 333-7197, (800) 982-0914 (within the U.S.)
E-mail: ischool-apply@illinois.edu

Major: Information Management
Degree Offered: M.S.

Major: Library and Information Science
Degrees Offered: M.S., C.A.S., Ph.D.

Graduate Concentrations: Digital Libraries (C.A.S. only), Writing Studies (p. 921) (Ph.D. only)

Major: Bioinformatics
Degree Offered: M.S.
Graduate Concentration: Library and Information Science

Online Programs
Degrees Offered: M.S., C.A.S.
Graduate Concentration: Digital Libraries (C.A.S. only)
Information Management: M.S.
Library and Information Science: M.S., C.A.S.

Joint Degree Program: Library and Information Science and African Studies
Degrees offered: M.S. and M.A.

Graduate Degree Programs

The School of Information Sciences (iSchool) offers programs of study leading to the Master of Science (M.S.), the Certificate of Advanced Study (C.A.S), and the Doctor of Philosophy degrees. Three Master of Science (M.S.) degree scheduling options are available. The M.S. in Library and Information Science (L.I.S.) prepares students for professional careers in all types of information organizations, including libraries. The M.S. in Information Management (I.M.) will prepare the students for information-intensive professional roles in a broad range of sectors. The Library and Information Science concentration of the campus-wide M.S. in bioinformatics program emphasizes multidisciplinary skills that are required for a career developing and managing information systems for the biological community. The C.A.S. program provides the opportunity

1. to study an aspect of information sciences in greater depth than is possible in the M.S. programs,
2. to refresh and upgrade one's professional training several years after completing a M.S. program, or
3. to redirect one's career into a different area of library and information science.

K-12 Library Information Specialist Licensure is available in conjunction with both the M.S. in L.I.S. and C.A.S. The Ph.D. is a research degree program.

Admission

Applicants are admitted in the fall, spring, and summer semesters. The general admission requirements of the Graduate College apply. Consideration is also given to language study and computer skills, relevant work experience, letters of reference, and evidence of leadership. International students must score at least 620 on the paper-based Test of English as a Foreign Language (TOEFL) (260 on the computer-based test; 104 on the iBT version); or 7 on each section of the IELTS. The M.S. in bioinformatics requires a strong background in information science including undergraduate-level computing and mathematics. The C.A.S. requires a master's degree in library and information science and a grade point average of at least 3.0 (A = 4.0) in the master's program. K-12 admission requires admissions into the M.S. program and a passing score on the Illinois Test of Academic Proficiency.

K-12 Library Information Specialist Licensure

The K-12 Licensure option allows students to meet the requirements for the M.S. or C.A.S in L.I.S. while also pursuing the courses and training needed for state teacher licensure. Courses in library and

information science as well as education, practicum, and student teaching are required for licensure. The requirements for the Library Information Specialist licensure were approved by the Illinois State Board of Education (ISBE) in 2001. K-12 licensure may be pursued on-campus or via the online scheduling option.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in the Ph.D. program for those interested in faculty careers.

Facilities and Resources

Among the major areas of faculty research are:

- community informatics
- data analytics
- data curation
- digital libraries
- information retrieval
- information organization
- information history and policy
- librarianship and literature for youth
- privacy, security, and trust
- ethics and values for information

The iSchool's Center for Informatics Research in Science and Scholarship (CIRSS) conducts research on information problems that impact scientific and scholarly inquiry. The Center for Children's Books (CCB) provides a review and research collection of the newest literature for children and young adults. The Center for Digital Inclusion (CDI) fosters inclusive and sustainable societies through research, teaching, and public engagement about information and communication technologies (ICT) and their impacts on communities, organizations, and governments. The Communications Office produces two high-quality publications, *Library Trends* and *The Bulletin of the Center for Children's Books*. The staff of each of these units is available to students and faculty for consultation and guidance. A computer network with Internet connectivity is integral to teaching and learning activities. The University Library provides a vast reservoir of resources for all types of study and research in library and information science.

The School maintains an ongoing commitment to continuing education through conferences, institutes, workshops, and course offerings.

Financial Aid

Financial aid may be available from the iSchool, the University Library, and elsewhere in the University in the form of graduate assistantships, teaching assistantships, research assistantships, and hourly paid work. Area libraries may provide pre-professional or hourly positions. Also, the iSchool offers a limited number of fellowships for which doctoral students tend to be favored over C.A.S. and master's degree students. Students in the joint program that do not hold a FLAS fellowship are eligible for, but not guaranteed, fellowship or assistantship support in the semesters in which they are enrolled in the iSchool. Any assistantship awarded to these students provides a waiver of the base in-state tuition and service fee as well as a stipend. Non-Illinois residents must pay the difference between in- and out-of-state tuition.

- Master of Science in Information Management (p. 815)
- Master of Science in Library and Information Science (p. 816)
- Master of Science in Bioinformatics, Library and Information Science Concentration (p. 816)

Doctor of Philosophy in Library and Information Science

The Ph.D. program consists of the following components:

1. a history and foundation of LIS seminar (4 graduate hours);
2. research methods (8 or more graduate hours);
3. electives (36 graduate hours);
4. field exam; and
5. thesis (32 or more graduate hours).

Thus, a minimum of 48 graduate hours of coursework plus 32 graduate hours of thesis credit are required.

Entering with approved M.S./M.A. degree

Code	Title	Hours
	A history and foundation of LIS seminar	4
	Research methods (min 8)	8
	Electives	20-36
	Research/Project/Independent Study Hours (16 max applied toward degree)	0-16
IS 599	Thesis Research	0 to 16
Total Hours		48-64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	20 hours of electives
---	-----------------------

A minimum of two years in residence is required to complete the necessary coursework; an additional year or more, preferably in residence, is required for the thesis.

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.25

¹ For additional details and requirements refer to the unit's *Graduate Programs of Study* (<http://www.lis.illinois.edu/programs>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
	A history and foundation of LIS seminar	4
	Research methods (min 8)	8
	M.S. equivalent	32
	Electives	20-36

Research/Project/Independent Study Hours (16 max applied toward degree)	0-16
IS 599 Thesis Research	0 to 16
Total Hours	80-96

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	20 hours of electives
---	-----------------------

A minimum of two years in residence is required to complete the necessary coursework; an additional year or more, preferably in residence, is required for the thesis.

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.25

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

- Certificate of Advanced Study in Library and Information Science (p. 815)
- Certificate of Advanced Study in Library and Information Science, Digital Libraries Concentration (p. 815)

M.S. Library and Information Science and M.A. African Studies

This joint master's degree includes a program of language and area studies courses leading to an interdisciplinary Master of Arts degree in African Studies as well as a program of study leading to the Master of Science in Library and Information Science. The joint degree matches area expertise with professional education, and prepares students for professional careers in all types of information organizations, including libraries. Students should enroll in LIS first and then contact the African Studies program for their application instructions.

Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 502	Libraries, Information and Society	2 or 4
IS 530	Information Needs of Particular Communities	2 or 4
IS 590	Advanced Problems in Information Sciences	1 to 4
LIS elective courses selected in consultation with an advisor who is a member of the iSchool faculty. (IS 591, 2 hours and IS 592, up to 4 hours, may be included)		12-14
AFST 522	Development of African Studies	4

African language proficiency at level of 6 semesters of course work (includes Arabic) NOTE: Hours for language can't be applied toward degree requirements, but is included in the calculation of the GPA.

Elective courses from the approved African Studies course list selected in consultation with an advisor who is a member of the African Studies faculty (coursework must be from 3 different disciplines; 8 hours must be at the 500-level, excluding AFST 550 and AFST 599; Maximum 4 hours of AFST 550 may be used) Electives and thesis must total at least 24 hours.	16-24
AFST 599 Thesis Research	8
Total Hours	49-56

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.25

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 502	Libraries, Information and Society	2 or 4
IS 530	Information Needs of Particular Communities	2 or 4
IS 590	Advanced Problems in Information Sciences	1 to 4

LIS elective courses selected in consultation with an advisor who is a member of the iSchool faculty. (IS 591, 2 hours and IS 592, up to 4 hours, may be included)

AFST 522	Development of African Studies	4
----------	--------------------------------	---

African language proficiency at level of 6 semesters of course work (includes Arabic) NOTE: Hours for language can't be applied toward degree requirements, but is included in the calculation of the GPA.

Elective courses from the approved African Studies course list selected in consultation with an advisor who is a member of the African Studies faculty (coursework must be from 3 different disciplines; 8 hours must be at the 500-level, excluding AFST 550 and AFST 599; Maximum 4 hours of AFST 550 may be used) Electives and thesis must total at least 24 hours.	24
Total Hours	49-56

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.25

¹ For additional details and requirements refer to the unit's *Graduate Programs of Study* (<http://www.lis.illinois.edu/programs>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

The M.S. and C.A.S. online requirements are the same as the on campus requirements.

Masters of Science in Information Management

Master of Science in Information Management

The Master of Science (M.S.) in Information Management prepares students for professional roles in the design and management of information systems and services in organizations in a range of sectors. Areas of specialization include data science and analytics; privacy, trust, security and ethics; information architecture and design; knowledge management and information consulting. Two scheduling options are available to students pursuing the M.S. in Information Management. The on-campus option serves students who are in residence at Urbana-Champaign, as well as part-time, commuting students. The online scheduling option is an online education option that uses the Internet and other information technologies for delivery.

Degree Requirements

Code	Title	Hours
IS 542	Data, Statistical Models and Information	4
IS 543	Sociotechnical Information Systems	4
IS 561	Information Modeling	4
Research/Project/Independent Study		max 4
Total Hours		40

Other Requirements may overlap ¹

Minimum Hours Required within the 28 Unit

Minimum 500-level Hours Required 12
Overall

Competency in at least one programming language

Minimum GPA: 2.75

The M.S. may be completed on-campus or online

¹For additional details and requirements refer to the unit's *Graduate Programs of Study* and the *Graduate College Handbook*.

Certificate of Advanced Study in Library and Information Science

The University of Illinois at Urbana-Champaign's School of Information Sciences complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required

information can be found here (http://archives.provost.illinois.edu/certificates/CAS_LIS/25.0101-Gedt.html).

Students and faculty advisers work closely together in selecting appropriate courses of study to meet individual needs. Possible areas of focus include digital libraries, management, and youth services. The C.A.S. may be completed on-campus or through the Leep online scheduling option.

Students admitted to the C.A.S. program may optionally pursue a Concentration in Digital Libraries.

Code	Title	Hours
IS 593	CAS Project	0 to 8
Elective hours (max. of 8 hours of Independent Study)		32
Total Hours		32-40

Other Requirements ¹

Other requirements may overlap

Masters Degree in Library and Information Science is required for admission

A concentration is not required.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12
Overall:

The credit-no credit option can only be applied to courses taken outside the library and information science curriculum and courses taken with this option can not be applied to the degree.

Minimum GPA: 3.25

¹ For additional details and requirements refer to the unit's *Graduate Programs of Study* (<http://www.lis.illinois.edu/programs>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Certificate of Advanced Study in Library and Information Science, Digital Libraries Concentration

The University of Illinois at Urbana-Champaign's School of Information Sciences complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be found here (http://creativeservices.illinois.edu/provost/CAS_LIS/25.0101-Gedt.html).

Students and faculty advisers work closely together in selecting appropriate courses of study to meet individual needs. Possible areas of emphasis include digital libraries, management, and youth services. The C.A.S. may be completed on-campus or through the Leep online scheduling option.

Students admitted to the C.A.S. program may optionally pursue a Concentration in Digital Libraries.

Code	Title	Hours
IS 593	CAS Project	0 to 8
CAS-DL Core courses		
IS 453	Systems Analysis and Management	3 or 4
IS 560	Digital Libraries	4
IS 561	Information Modeling	4
IS 562	Metadata in Theory & Practice	4
Four elective courses from the CAS Digital Library Electives		16
Total Hours		31-40

Other Requirements ¹

Other requirements may overlap

Masters Degree in Library and Information Science is required for admission

A concentration is not required.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required Overall: 12

Overall:

The credit-no credit option can only be applied to courses taken outside the library and information science curriculum and courses taken with this option can not be applied to the degree.

Minimum GPA: 3.25

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Bioinformatics, Library and Information Science Concentration

A typical student will thus take 6 required courses (24 hours) 1 Biology, 1 Computer Science, 1 Fundamental Bioinformatics, and 3 Information Sciences. The student must then choose 3 courses (12 hours) of electives to complete the degree. It is strongly encouraged that up to 2 courses of these electives (8 hours) are thesis. Our expectation is that each student will arrange a custom program of study, suitable for the information management of their particular biological informatics application. Currently, this program requires students to be in residence in Champaign-Urbana.

Thesis Option

Code	Title	Hours
One course in three of the following areas from the department approved list: Information Organization and Knowledge Representation; Information Resources, Uses and Users; Information Systems; and Disciplinary Focus		12
CS 411	Database Systems	3-4
Select one of the following:		4
CHBE 571	Bioinformatics	

Code	Title	Hours
ANSC 542	Applied Bioinformatics	
IB 467	Principles of Systematics	
One course from the approved biology list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
IS 599	Thesis Research	8
Total Hours		36

Other Requirements ¹

Other Requirements may overlap

A concentration is required.

Minimum 500-level Hours Required Overall: 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
One course in three of the following areas from the department approved list: Information Organization and Knowledge Representation; Information Resources, Uses and Users; Information Systems; and Disciplinary Focus		12
CS 411	Database Systems	3-4
Select one of the following:		4
CHBE 571	Bioinformatics	
ANSC 542	Applied Bioinformatics	
IB 467	Principles of Systematics	
One course from the approved biology list (http://www.informatics.illinois.edu/academics/bioinformatics-ms/bioinformatics-ms-core-courses)		4
Total Hours		36

Other Requirements ¹

Other Requirements may overlap

A concentration is required.

Minimum 500-level Hours Required Overall: 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Library and Information Science

The M.S. in L.I.S. is accredited by the American Library Association (ALA). Two scheduling options are available to students pursuing the M.S. degree. The on-campus option serves students who are in residence at Urbana-Champaign, as well as part-time, commuting students. The online scheduling option is an online education option that uses the Internet

and other information technologies for delivery. A thesis is not required but is available as an option. Students prepare for careers in all types of information organizations. Examples of the professional positions graduates hold include: Internet trainer, webmaster, and knowledge manager, as well as work in reference, automated systems, cataloging, youth services, school media, and other positions in public, academic, school, and special libraries.

Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 502	Libraries, Information and Society	4
Research/Project/Independent Study Hours (4 max applied toward degree)		4
IS 599	Thesis Research	8
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 28

Minimum 500-level Hours Required Overall: 12

The credit-no credit option can only be applied to courses taken outside the library and information science curriculum and courses taken with this option can't be applied to the degree.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
IS 501	Information Organization and Access	4
IS 502	Libraries, Information and Society	4
Research/Project/Independent Study Hours (4 max applied toward degree)		4
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 28

Minimum 500-level Hours Required Overall: 12

Overall:

The credit-no credit option can only be applied to courses taken outside the library and information science curriculum and courses taken with this option can't be applied to the degree.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the unit's Graduate Programs of Study (<http://www.lis.illinois.edu/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Linguistics

<http://www.linguistics.illinois.edu/>

(Including African Languages [Bamana, Lingala, Swahili, Wolof, and Zulu], Arabic, Hindi-Urdu, Modern Greek, Persian, Sanskrit, and Turkish)

Head of the Department: Hye Suk James Yoon

Director of Graduate Studies: Tania Ionin

Director of Admissions Committee: Rakesh Bhatt

4080 Foreign Languages Building

707 South Mathews Avenue

Urbana, IL 61801

(217) 333-3563

Fax: (217) 244-8430

E-mail: deptling@illinois.edu

Major: Linguistics

Degrees Offered: M.A., Ph.D.

Graduate Concentration: Romance Linguistics (p. 882) (Ph.D.), Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Major: Teaching of English as a Second Language

Degrees Offered: M.A.

Dual Degree Program: Doctor of Philosophy (Ph.D.) in Linguistics and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Department of Linguistics offers graduate programs leading to the Master of Arts in Linguistics, Master of Arts in Teaching English as a Second Language, and Doctor of Philosophy in Linguistics. More detailed information on departmental programs, offerings, admission, degree requirements, and financial aid, may be found at: www.linguistics.illinois.edu (<http://www.linguistics.illinois.edu>).

The Master of Arts in the Teaching of English as a Second Language (MATESL) formerly offered by the Division of English as an International Language is now offered through the Department of Linguistics.

Admission

Applicants to the M.A. in Linguistics, MATESL, and Ph.D. programs in Linguistics must have completed a bachelor's degree.

For the M.A. and Ph.D. programs in Linguistics, undergraduate preparation should include the study of at least one foreign language; courses equivalent to LING 400 on this campus; and a broad background in the humanities, social sciences, or mathematics.

For the MATESL program, an undergraduate major in linguistics, English, a foreign language, or education is generally recommended, though other majors are also acceptable. Applicants must present a grade point average of at least 3.0 (A = 4.0) for the last 60 hours of undergraduate work. Two years of coursework in a foreign language or the equivalent are also required.

Student intending to pursue a Ph.D. in Linguistics should apply to the M.A. program in Linguistics unless they expect to have already completed a master's degree in Linguistics, Teaching English in a Second Language, or a related field by the time of entry into the program. Students who will have completed a master's degree in one of these fields may be considered for direct admission to the Ph.D. program. Applicants for direct admission must have a GPA of 3.5 or better in the required courses for the M.A. in Linguistics or MATESL at the University of Illinois, or comparable evidence of achievement in a master's program at another university. Recommended preparation includes courses comparable to LING 501, 502, either 425 or 450, and at least one of 507, 509, 551. Students admitted without such preparation are required to take these courses immediately on entry into the program; the courses will not count toward the 64 hours required for the PhD.

Applicants to all Linguistics graduate programs should apply online (www.grad.illinois.edu/admissions/apply/ (<http://www.grad.illinois.edu/admissions/apply/>)) and submit a statement of purpose, three letters of recommendation and a writing sample of 10-20 pages in length. Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should be sent to:

SLCL Graduate Student Services
3070 Foreign Languages Bldg.
707 S. Mathews Ave.
Urbana, IL 61801

Graduate Record Examination (GRE) scores are required. The applicant should ask the ETS to submit scores to institution 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 88 (100 preferred) on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)). Applications are accepted for fall admission only. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu.

Medical Scholars Program

Applications are not currently being accepted.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including the Department of Linguistics. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the [name of department] and the College of Medicine. Students in the combined program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Financial Aid

The Linguistics department aims to provide financial aid for all graduate students in the M.A. and Ph.D. programs in Linguistics for up to five years, in the form of fellowships, teaching assistantships, research assistantships, or departmental assistantships. To hold a teaching assistantship non-native English speakers must first pass a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm) (<http://www.grad.illinois.edu/admissions/taengprof.htm>). Some students receive aid through other units in the University. New applicants receive automatic consideration for financial aid within the department, including teaching assistantships for the non-Western languages taught in its programs. For details and applications, write to the above address.

For students in the MATESL program, financial assistance is offered to as many qualified applicants as possible, but cannot be awarded to all. A record of extensive experience in teaching English as a second language enhances a candidate's chance of receiving financial assistance during one's first semester. A limited number of University fellowships are available for exceptionally qualified candidates. Teaching assistants (www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)) teach students in the Division's ESL program and in the Intensive English Institute.

- Master of Arts in Linguistics (p. 819)
- Master of Arts in the Teaching of English as a Second Language (p. 819)

Admission to candidacy for the Ph.D. requires a grade point average of 3.5 or better in the required M.A. courses (not counting the electives) a minimum grade point average of 2.75 over all graduate work in linguistics, and distinction in passing the qualifying examination. In deciding whether students will be admitted to the Ph.D. program, the Student Examination and Evaluation Committee considers their performance in meeting these requirements, as well as their general potential for successfully conducting advanced linguistic research.

Students are encouraged to attend at least one summer session of the Linguistic Institute of the Linguistic Society of America. Up to 8 graduate hours of credit granted under this program may be transferred, with Graduate College approval. Candidates are required to take the preliminary examinations (written and oral) after completion of 32 graduate hours beyond the master's level and to present a research paper at a meeting of the Linguistics Seminar.

Doctor of Philosophy in Linguistics

Code	Title	Hours
LING 504	Practicum (and at least 2 hours of LING 590)	4
	Courses as required in the area of specialization, or a combination of such courses across specializations upon the approval of the advisor	varies
	First-year exam: Students must submit a substantial research paper, and present and defend it in an oral examination	
	Research/Project/Independent Study Hours:	12
	Language Requirement: Students must demonstrate knowledge of the structure of a language that is neither their native tongue nor the same language that satisfied the foreign language requirement for the M.A. degree	

LING 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Master's Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.linguistics.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Linguistics

The aim of the master's program is to instruct students in the major areas of linguistic theory and the methods of linguistic analysis. Candidates for this degree must earn at least 40 graduate hours with a minimum grade point average of 3.0 (A = 4.0) and satisfy other department and Graduate College requirements.

Thesis Option

Code	Title	Hours
Four elective courses		16
LING 425	Intro to Psycholinguistics	4
LING 450	Sociolinguistics I	4
LING 501	Syntax I	4
LING 502	Phonology I	4
LING 541	Syntax II	4
or LING 542	Phonology II	4
Select one of the following:		4
LING 507	Formal Semantics I	
LING 551	Pragmatics	
LING 590	Special Topics in Linguistics (4 max applied toward degree)	4
Language Requirement: Students must have proficiency in one language (other than their native tongue) that has a significant body of linguistic literature		
LING 599	Thesis Research (4 min applied toward degree)	4
Total Hours		44

Other Requirements ¹

Other requirements may overlap

Writing of an acceptable M.A. thesis is required.

Minimum 500-level Hours Required 20
Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.linguistics.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Four elective courses (Non-thesis students may apply LING 590 to this requirement, to a maximum of 4 hours.)		16
LING 425	Intro to Psycholinguistics	4
LING 450	Sociolinguistics I	4
LING 501	Syntax I	4
LING 502	Phonology I	4
LING 541	Syntax II	4
or LING 542	Phonology II	4
Select one of the following:		4
LING 507	Formal Semantics I	
LING 551	Pragmatics	
LING 590	Special Topics in Linguistics (4 max applied toward degree)	4
Language Requirement: Students must have proficiency in one language (other than their native tongue) that has a significant body of linguistic literature		
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

M.A. Qualifying Examination

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.linguistics.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in the Teaching of English as a Second Language

The MATESL program offers two separate curricula or tracks. One track is designed for candidates whose principal interests are in language pedagogy and related research. The other track encourages candidates to concentrate more heavily on applied research in various aspects of English studies. A detailed description of the two tracks is available at www.linguistics.illinois.edu/students/grad/matesl/documents/2009-curriculum_and_cohort_system.pdf (http://www.linguistics.illinois.edu/students/grad/matesl/documents/2009-curriculum_and_cohort_system.pdf). Usually candidates can meet all degree requirements in two years.

Thesis Option

Code	Title	Hours
Thesis option is required for students in the research track, optional for students in the pedagogical track.		
Track Coursework: Students must select between the pedagogical track and the research track, and complete course requirements specified for the selected track		40
Language Requirement: Students who have not completed the equivalent of at least two years of study in a language other than their native language as an undergraduate must do so in order to complete the MATESL degree. These courses do not count toward the 40-hour total		
EIL 599	Thesis Research (min/max applied toward degree)	4-8
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Courses that satisfy curriculum prerequisites may be taken, but do not count toward graduation requirements.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.linguistics.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Non-thesis option is available only to students in the pedagogical track.		
Track Coursework: Students must complete course requirements specified for the pedagogical track		40
Language Requirement: Students who have not completed the equivalent of at least two years of study in a language other than their native language as an undergraduate must do so in order to complete the MATESL degree. These courses do not count toward the 40-hour total		
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Courses that satisfy curriculum prerequisites may be taken, but do not count toward graduation requirements.

Minimum 500-level Hours Required 12

Overall:

Comprehensive Examination is required for the non-thesis option.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.linguistics.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Materials Science and Engineering

<http://matse.illinois.edu>

Head of the Department: David G. Cahill
 Director of Graduate Studies: Moonsub Shim
 201 Materials Science and Engineering Building
 1304 West Green Street
 Urbana, Illinois 61801
 (217) 333-1441
 Fax: (217) 333-2736
 E-mail: matse@illinois.edu

Major: Materials Science and Engineering
 Degrees Offered: M.S., Ph.D.

Major: Materials Engineering
 Degrees Offered: M.Eng.

Joint Degree Program: Master of Science or Doctor of Philosophy in Materials Science and Engineering and the Master of Business Administration (p. 694)
 Degrees Offered: M.S. and M.B.A. or Ph.D. and M.B.A.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Materials Science and Engineering and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Materials Science and Engineering (MatSE) offers graduate study leading to master's and doctoral degrees. The department is consistently ranked in the top three programs in the nation (undergraduate and graduate) by U.S. News and World Report. It offers opportunities to specialize in ceramics, electronic materials, metals, polymers, biomaterials, and/or computational materials science, with strong research programs in all of the areas. The M.Eng degree in Materials Engineering is designed for students having obtained a B.S. degree in MatSE or a related field to enhance their experience in the engineering aspects of materials and broaden their knowledge of various types of materials beyond that possible in the standard four year curriculum. The department offers two combined degree programs, a B.S./M.S. and a B.S./M.Eng that permits current undergraduate students to broaden their materials knowledge base. The B.S./M.Eng., in addition, gives the students the opportunity to improve their communication skills, obtain a foundation in business, technology management, and/or entrepreneurship, and gain practical engineering experience.

Opportunity also exists for specializing in:

1. computational science and engineering
2. energy and sustainability engineering within the department's graduate programs via the Computational Science and Engineering (CSE) (<http://cse.illinois.edu/education/minor-and-concentration/graduate-concentration>) transcriptable Concentration and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>).

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Materials Science and Engineering.

Admission

Students with bachelor's or master's degrees in the natural sciences or engineering will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. The general test of the Graduate Record Examination (GRE) (<http://www.ets.org>) is required. Admission is possible for the spring semester, but most admissions are for the fall semester. Full details of admission requirements are on the department's graduate admissions Web site (<http://www.matse.illinois.edu/admissions/graduate.html>).

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 104 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for those taking the TOEFL or IELTS since the scores required for admission to MatSE are above the minimum scores demonstrating an acceptable level of English language proficiency.

For the M.Eng. degree program students must have had a B.S. degree in MatSE or a related field (e.g., B.S. degrees in Metallurgy, Polymers or Ceramics, or with concentrations in Materials Chemistry, Condensed Matter Physics, etc.). Students in the program are not expected to continue in and do not have automatic admission to the Ph.D. program in MatSE. The M.Eng. degree is a professional degree.

Applicants to the joint M.B.A. degree program must meet the admissions standards for both programs and be accepted by both programs.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both MatSE and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the MatSE graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217)-333-8146, mspo@illinois.edu).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Materials Science and Engineering graduate degree.

Faculty Research Interests

The backgrounds of faculty members vary widely within the broad areas of ceramics, electronic materials, metals, polymers, biomaterials, and computational materials science. In addition, research collaborations with other faculty outside the department are frequent. For a detailed list of faculty research interests and publications, view the MatSE

department's faculty biographies (<http://www.matse.illinois.edu/faculty.html>).

Facilities and Resources

The MatSE department has an outstanding array of facilities available for materials research. These facilities, in addition to laboratories in the department's buildings, include, among others, the Materials Research Laboratory, Center for Microanalysis of Materials, Beckman Institute for Advanced Science and Technology, and Micro and Nanotechnology Laboratory. The National Center for Supercomputing Applications and the MRL Center for Computation are readily available. Information about these facilities may be found at the MatSE department's facilities information Web site (<http://www.matse.illinois.edu/research/facilities.html>).

Financial Aid

Financial aid is available in the form of research assistantships, teaching assistantships, and partial fellowships for students in the M.S. and Ph.D. programs. Students in the M.Eng. program are eligible for teaching assistantships, and partial fellowships in MatSE (only). All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 50 on the Test of Spoken English (TSE), 24 on the speaking subsection of the TOEFL iBT, or 8 on the speaking subsection of the IELTS. For students who are unable to take the TSE, iBT, or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Science in Materials Science and Engineering (p. 823)
- Master of Engineering in Materials Engineering (p. 822)

Doctor of Philosophy in Materials Science and Engineering

Entering with approved M.S. degree

Code	Title	Hours
MSE 599	Thesis Research (min-max applied toward the degree)	44
	One of CHEM 544, MSE 500, PHYS 504 with a grade of B or higher	4
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-2
	Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)	0-4
	Elective courses (subject to Other Requirements and Conditions below)	10-16
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

MSE course work hours	10
-----------------------	----

500-level credit hours applied toward the degree 10

MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.

MSE 529 or MSE 559 (0 or 1 hours) must be taken every semester. A maximum of 4 hours may be applied toward the degree.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements, please refer to the department's *Graduate Degree Requirements Handbook* (<http://mse.illinois.edu/academics/grad/handbook.html>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

² *Qualifying Exam Information* (<http://www.matse.illinois.edu/qualexams/qualexams.html>)

Entering with approved B.S. degree

Code	Title	Hours
MSE 599	Thesis Research (min-max applied toward the degree)	52
	One of CHEM 544, MSE 500, PHYS 504 with a grade of B or higher	4
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-4
	Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)	0-8
	Elective courses (subject to Other Requirements and Conditions below) (28-40 hours)	28-40
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

MSE course work hours 10

500-level credit hours applied toward the degree 10

MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 4 hours may be applied toward the degree.

MSE 529 or MSE 559 (0 or 1 hours) must be taken every semester. A maximum of 8 hours may be applied toward the degree.

These students may earn a Master of Science degree during the Ph.D. program.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements, please refer to the department's *Graduate Degree Requirements Handbook* (<http://mse.illinois.edu/academics/grad/handbook.html>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

² *Qualifying Exam Information* (<http://www.matse.illinois.edu/qualexams/qualexams.html>)

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 696) and contact the M.B.A. program and their major department office for more information.

Master of Engineering in Materials Engineering

Code	Title	Hours
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 585	Materials Engrg Practicum (The equivalent of two semesters of industrial internships or co-ops (30 weeks total; one of the semesters can be during the B.S. program or prior to enrollment).) ¹	2
	Two MSE area specialty courses in the student's chosen area of specialization.	6
	MSE area specialty courses in one area outside the student's chosen area of specialization (subject to Other Requirements and Conditions below)	3-6
	Technical elective course - Chosen from list appropriate for the student's area of specialization	3
	Elective courses – At least 10 hours of these elective courses shall be College of Engineering courses in one or more of the areas of business, technology management, and entrepreneurship as listed on an approved list available from the department. There is the possibility of obtaining one of the Technology Entrepreneur Center Certificates.	13-20
Total Hours		36

Other Requirements and Conditions ²

Other Requirements and Conditions may overlap

Minimum hours of MSE course work	11
Minimum of 500-level credit hours overall applied toward the degree.	12
MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.	
A maximum of 2 hours of MSE 529 or MSE 559 in combination may be applied toward the degree: ³	Ceramics, Electronic Materials, and Metallurgy area majors take MSE 529 every semester in residence; Polymer and Biomaterials area majors take MSE 559 every semester in residence
One or two MSE area specialty courses in one area outside the student's chosen area of specialization are required (two if one was not taken as part of the B.S. program)	
Minimum GPA:	3.0

¹ Students who are admitted to the M. Eng. program are responsible for finding a suitable internship. Department or college staff may be able to help students in their search for a suitable placement suitable internship but the department does not guarantee a placement. The MSE 585 internship requires approval by the departmental Director of Graduate Studies to insure that it matches the student's individual career objectives and meets the learning goals of the program. Students taking an internship as part of their undergraduate B.S program should also check with the Director of Graduate Studies; his/her approval is required if the student is already accepted in the combined B.S./M.Eng. Program. Students returning to the university after having had materials engineering employment experience, if it is deemed appropriate, may use that as their internship and base their report on that experience

² For additional details and requirements, please refer to the department's Graduate Degree Requirements Handbook (<http://mse.illinois.edu/academics/grad/handbook.html>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

³ Students will be expected to present an oral report on their internship in either MSE 529 or MSE 559, as appropriate, the semester following completion of the internship.

Master of Science in Materials Science and Engineering

Thesis Option

Code	Title	Hours
MSE 599	Thesis Research (min-max applied toward the degree)	8
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-2
Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)		0-4

Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	18-24
Total Hours	32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum hours of MSE course work	10
Minimum of 500-level credit hours overall applied toward the degree.	14
MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.	
MSE 529 or MSE 559 (0 or 1 hour) must be taken every semester. A maximum of 4 hours may be applied toward the degree.	
The completed master's thesis must be approved by the advisor and the department head.	
Minimum GPA:	3.0

¹ For additional details and requirements, please refer to the department's Graduate Degree Requirements Handbook (<http://mse.illinois.edu/academics/grad/handbook.html>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
MSE 595	Materials Colloquium	0-2
Advisor group meetings (MSE 590) and area seminars (MSE 529, MSE 559) (subject to Other Requirements and Conditions below)		0-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		30-36
Total Hours		36

Other Requirements

Other Requirements and Conditions may overlap

Minimum hours of MSE course work	10
Minimum of 500-level credit hours overall applied toward the degree	14
MSE 595 (0 or 1 hour) must be taken every semester in the first two years of residence. A maximum of 2 hours may be applied toward the degree.	

MSE 529 or MSE 559 (0 or 1 hour) must be taken every semester. A maximum of 4 hours may be applied toward the degree.

Generally, students on a research assistantship will not be allowed in the non-thesis option.

Minimum GPA: 3.0

¹ For additional details and requirements, please refer to the department's *Graduate Degree Requirements Handbook* (<http://mse.illinois.edu/academics/grad/handbook.html>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Mathematics

<http://www.math.illinois.edu>

Interim Chair of the Department: Sheldon Katz
 Director of Graduate Studies: Lee DeVille
 273 Altgeld Hall
 1409 West Green Street
 Urbana, IL 61801
 (217) 333-5749
 E-mail: math-grad@illinois.edu

Major: Applied Mathematics
 Degrees Offered: M.S.
 Graduate Concentration: Actuarial Science (in Applied Mathematics only)

Major: Mathematics
 Degrees Offered: M.S., Ph.D.
 Graduate Concentration: Actuarial Science and Risk Analytics (Ph.D. only)

Major: Teaching of Mathematics
 Degrees Offered: M.S.

Graduate Degree Programs

The department offers graduate study leading to the Master of Science in Mathematics, the Doctor of Philosophy in Mathematics, the Master of Science in Applied Mathematics, and the Master of Science in the Teaching of Mathematics. Opportunity also exists for specializing in computational science and engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Concentration (<http://cse.illinois.edu>), and for specializing in financial mathematics via the Actuarial Science and Risk Analytics Concentration within the Mathematics Ph.D.

Admission

See the Mathematics Ph.D. information page (<http://www.math.illinois.edu/GraduateProgram/apply-phd.html>) or the Mathematics Masters information page (<http://www.math.illinois.edu/GraduateProgram/apply-ms.html>) for application deadlines, admission requirements including English requirements for non-native speakers, and for funding information.

The master's degree programs can be completed in one-and-one-half years of full-time study by students entering without deficiencies.

- Master of Science in Applied Mathematics, Actuarial Science Concentration (p. 825)

- Master of Science in Applied Mathematics, Applications to the Sciences option (p. 825)
- Master of Science in Applied Mathematics, Computational Science and Engineering option (p. 826)
- Master of Science in Applied Mathematics, Optimization and Algorithms option (p. 827)
- Master of Science in Mathematics (p. 828)
- Master of Science in Teaching of Mathematics (p. 827)

Doctor of Philosophy in Mathematics

Students working toward a Ph.D. degree usually require from four to six years to complete the requirements. Each student must pass the comprehensive examinations (testing the student's knowledge of basic graduate-level mathematics in algebra, analysis, and other areas) and the preliminary examination (testing the student's ability to begin or continue research in a chosen field). Students must also write and defend a research thesis in their field of mathematics.

Code	Title	Hours
Students must demonstrate competence in five core courses. Two of these are required to be MATH 500 (Abstract Algebra) and MATH 540 (Real Analysis). Students must also demonstrate proficiency in undergraduate complex analysis.		
¹		
Master's equivalency		32
MATH 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

¹ Students in the Actuarial Science and Risk Analytics concentration are not required to take MATH 500.

Other Requirements ¹

Other requirements may overlap
 MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

64 hours in residence

Masters Degree Required for Admission to PhD?	No
Comprehensive Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.25

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Mathematics - Actuarial Science and Risk Analytics Concentration

Students working toward a Ph.D. degree usually require four to six years to complete the requirements. Each student must pass the comprehensive examinations (testing the student's knowledge of basic graduate-level mathematics in algebra, analysis, and other areas) and the preliminary examination (testing the student's ability to begin or continue research in a chosen field). Students must also write and defend a research thesis in their field of mathematics.

Code	Title	Hours
Students must demonstrate competence in five core courses including the following:		
MATH 540	Real Analysis	4
MATH 561	Theory of Probability I	4
MATH 563	Risk Modeling and Analysis	4
STAT 510	Mathematical Statistics I	4
Students must also demonstrate proficiency in undergraduate complex analysis.		
Students must demonstrate competence in the following:		
MATH 564	Applied Stochastic Processes	4
STAT 425	Applied Regression and Design	3 or 4
FIN 591	Theory of Finance	4
Students must demonstrate competence in two of the following:		
MATH 565	Actuarial Models for Life Contingencies	8
MATH 567	Actuarial Models for Financial Economics	
MATH 568	Actuarial Loss Models	
Master's equivalency		32
MATH 599	Thesis Research (0 min applied toward degree)	0
Total Hours required for the degree		96

Other requirements ¹

Other requirements may overlap.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

64 hours in residence

Masters Degree Required for Admission to PhD	No
Comprehensive Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA	3.25

¹ For additional details and requirements refer to the department's Guide to Graduate Studies (<http://www.math.illinois.edu/GraduateProgram>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Applied Mathematics, Actuarial Science Concentration

Code	Title	Hours
Select two courses from:		8
MATH 565	Actuarial Models for Life Contingencies	
MATH 567	Actuarial Models for Financial Economics	
MATH 568	Actuarial Loss Models	
MATH 569	Casualty Actuarial Science	
Electives chosen through consultation with the faculty advisors		24
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (8 in Math)

Overall:

¹ For additional details and requirements refer to the department's Guide to Graduate Studies (<http://www.math.illinois.edu/GraduateProgram>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Applied Mathematics, Applications to the Sciences option

Thesis Option

Code	Title	Hours
Select three of the following:		9-16
MATH 489	Dynamics & Differential Eqns	
MATH 550	Dynamical Systems I	
MATH 553	Partial Differential Equations	
MATH 558	Methods of Applied Mathematics	
Select one of the following:		3-4
MATH 446	Applied Complex Variables	
MATH 448	Complex Variables	
MATH 542	Complex Variables I	

Credit hours in a department other than Mathematics, providing substantive applications of differential equations and applied mathematics.	8
MATH 599 Thesis Research (min/max applied toward degree)	4
Total Hours	32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Guide to Graduate Studies (<http://www.math.illinois.edu/GraduateProgram>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Select three of the following:		9-16
MATH 489	Dynamics & Differential Eqns	
MATH 550	Dynamical Systems I	
MATH 553	Partial Differential Equations	
MATH 558	Methods of Applied Mathematics	
Select one of the following:		3-4
MATH 446	Applied Complex Variables	
MATH 448	Complex Variables	
MATH 542	Complex Variables I	
Credit hours in a department other than Mathematics, providing substantive applications of differential equations and applied mathematics.		8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required Overall: 12

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Guide to Graduate Studies (<http://www.math.illinois.edu/GraduateProgram>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Applied Mathematics, Computational Science and Engineering option

Thesis Option

Code	Title	Hours
MATH 550	Dynamical Systems I	4
or MATH 553	Partial Differential Equations	
Select one of the following:		3-4
MATH 418	Intro to Abstract Algebra II	
MATH 448	Complex Variables	
MATH 500	Abstract Algebra I	
MATH 540	Real Analysis	
MATH 542	Complex Variables I	
12 hours from CSE courses (at least 4 in MATH, 4 not in MATH) (http://cse.illinois.edu/education/certificate-programs/graduate-certificate-option/grad-certificate-and-concentration)		12
MATH 599	Thesis Research (0 min applied toward degree)	0
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required Overall: 12 (8 in MATH)

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Guide to Graduate Studies (<http://www.math.illinois.edu/GraduateProgram>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
MATH 550	Dynamical Systems I	4
or MATH 553	Partial Differential Equations	
Select one of the following:		3-4
MATH 418	Intro to Abstract Algebra II	
MATH 448	Complex Variables	
MATH 500	Abstract Algebra I	
MATH 540	Real Analysis	

MATH 542	Complex Variables I	
12 hours from CSE courses (at least 4 in MATH, 4 not in MATH)		12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required 12 (8 in MATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Applied Mathematics, Optimization and Algorithms option

Thesis Option

Code	Title	Hours
Courses from at least three of the following areas: Optimization, Control Theory and Coding Theory, Combinatorics and Graph Theory, Algorithms and Theory of Computation, Statistics (including core courses listed below)		
Select four of the following:		12-16
MATH 412	Graph Theory	
MATH 413	Intro to Combinatorics	
MATH 450	Numerical Analysis	
MATH 469	Methods of Applied Statistics	
MATH 473	Algorithms	
MATH 482	Linear Programming	
MATH 484	Nonlinear Programming	
MATH 599	Thesis Research (min/max applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (8 in MATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Courses from at least three of the following areas: Optimization, Control Theory and Coding Theory, Combinatorics and Graph Theory, Algorithms and Theory of Computation, Statistics (including core courses listed below)		
Select four of the following:		12-16
MATH 412	Graph Theory	
MATH 413	Intro to Combinatorics	
MATH 450	Numerical Analysis	
MATH 469	Methods of Applied Statistics	
MATH 473	Algorithms	
MATH 482	Linear Programming	
MATH 484	Nonlinear Programming	
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (8 in MATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Teaching of Mathematics

Code	Title	Hours
A rigorous course in algebra at the level of MATH 417 or above		
		3 or 4
A rigorous course in analysis at the level of MATH 447 or above		
		3 or 4

Coursework from the College of Education in courses related to the teaching of mathematics at the secondary or college level, subject to the approval of the Director of Graduate Studies in Mathematics.

7-8

Total hours 32

Other Requirements ¹

Other requirements may overlap

Specific course and sequence requirements must be met.

Two semesters of teaching under the supervision of a mentor in two categories

MATH 405, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (8 in Math)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science, Mathematics

Thesis Option

Code	Title	Hours
Select one of the following:		3-4
MATH 448	Complex Variables	
MATH 540	Real Analysis	
MATH 542	Complex Variables I	
Select one of the following:		3-4
MATH 418	Intro to Abstract Algebra II	
MATH 500	Abstract Algebra I	
MATH 501	Abstract Algebra II	
MATH 599	Thesis Research (min/max applied toward degree)	4

Total Hours Required: 32

Other Requirements ¹

Other requirements may overlap

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (in MATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Select one of the following:		3-4
MATH 448	Complex Variables	
MATH 540	Real Analysis	
MATH 542	Complex Variables I	
Select one of the following:		3-4
MATH 418	Intro to Abstract Algebra II	
MATH 500	Abstract Algebra I	
MATH 501	Abstract Algebra II	

Total Hours Required: 32

Other Requirements ¹

Other requirements may overlap

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required 12 (in MATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Guide to Graduate Studies* (<http://www.math.illinois.edu/GraduateProgram>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Mechanical Science and Engineering

<http://mechse.illinois.edu>

Head of the Department: Anthony Jacobi

Associate Head for Graduate Programs: Taher Saif

168 Mechanical Engineering Building

1206 West Green Street

Urbana, IL 61801

(217) 244-3416

E-mail: mechse-grad@illinois.edu

Associate Head for Mechanics Programs: Ken Christensen

154 Mechanical Engineering Building

1206 West Green Street

Urbana, IL 61801

(217) 333-4388

E-mail: mechse-mechanics@illinois.edu

Major: Engineering

Degrees Offered: M.Eng.

Graduate Concentration: Computational Engineering

Major: Mechanical Engineering

Degrees Offered: M.Eng., M.S., Ph.D.

Major: Theoretical and Applied Mechanics
Degrees Offered: M.S., Ph.D.

Off-Campus Program: Mechanical Engineering
Degree offered: M.S.

Concentrations: Biomechanics, Computational Engineering (M.Eng.)

Graduate Degree Programs

Building upon the longstanding strengths of programs in mechanical engineering and in mechanics, the Department of Mechanical Science and Engineering (MechSE) at the University of Illinois at Urbana-Champaign is taking a bold, new approach to research and education that will enable it to address some of the most pressing problems facing the nation and the world. A new paradigm in research is being created in the department by integrating basic sciences such as biology, chemistry, applied mathematics, and applied physics with the traditional mechanical engineering and engineering mechanics disciplines of fluid mechanics-thermal science, solid mechanics-materials, and controls-dynamics. This integration is fostering new directions and discoveries in nanomechanics, nanomanufacturing, biomechanics and computational science and engineering.

The goal of all research in the department is to address critical societal problems in the areas of health, security-defense, energy-environment, manufacturing, and transportation. While the basic function of departmental research is generation of new knowledge, a growing number of projects are prompted by current needs of the State of Illinois and of the nation.

The department offers graduate programs leading to master's and doctoral degrees with exciting research opportunities as described in the Faculty Research Interests section below. Opportunity also exists for specializing in:

1. computational science and engineering and
2. energy and sustainability engineering within the department's graduate programs

via the Computational Science and Engineering (CSE) t (<http://cse.illinois.edu/education-programs/graduate-program>)ranscriptable concentration and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>).

The M.Eng. is a professional master's degree program for students whose primary intent is a career in industry or government. This degree differs from the Master of Science degree in that it is a terminal degree and not a pathway to a doctoral program.

Admission

An applicant for admission to the Department of Mechanical Science and Engineering must:

1. Be a graduate of an institution awarding a baccalaureate degree equivalent to that granted by the University of Illinois at Urbana-Champaign;
2. be adequately prepared for advanced study as demonstrated by his or her previous program of study and scholastic record; and
3. be recommended for admission by the Department of Mechanical Science and Engineering. A minimum grade point average of 3.25 (A = 4.00) for the last two years of undergraduate study is required and a 3.50 for any previous graduate work completed.

Scores on the Graduate Record Examination (GRE) (<http://www.ets.org>) general test are required of all applicants. Based upon the previous preparation of the student, prerequisite courses may be specified by the advisor, but the credit may not be applied toward a degree.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 103 (iBT), 257 (CBT), or 613 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 7.0 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. Full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for those meeting the minimum requirements and having taken the TOEFL or IELTS since the scores required for admission to MechSE are above the minimum scores demonstrating an acceptable level of English language proficiency.

Applicants to the M.Eng. must have a bachelor's or master's degree in engineering or a related field and will be considered for admission if they have a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate study. Admission is possible for the spring term, but most admissions are for the fall term. The same requirements as listed above apply for all applicants whose native language is not English.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Mechanical Science and Engineering and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Mechanical Science and Engineering graduate programs. Further information on this program is available by contacting the Medical Scholars Program, (125 Medical Sciences Building, (217)-333-8146, mospo@illinois.edu).

Students interested in the joint M.S.M.E.-M.B.A. degree program must apply initially to the M.B.A. program. In the term in which 60 hours of the M.B.A. course work prescribed for the joint-degree program is expected to be completed, they become eligible to petition to transfer to the M.S.M.E. degree program and with MechSE approval, may be admitted under the joint M.S.M.E.-M.B.A. program code.

Off-Campus Programs

The department offers the M.S. in Mechanical Engineering with both a thesis and a non-thesis option as described above.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in both the ME and TAM Ph.D. programs. The TAM Ph.D. requires that one semester of teaching assistantship be completed during the program.

Faculty Research Interests

A new paradigm in research is being created in the department by integrating basic sciences such as biology, chemistry, applied mathematics, and applied physics with the traditional mechanical engineering and engineering mechanics disciplines of fluid mechanics/thermal science, solid mechanics/materials and controls/dynamics. This integration is fostering new directions and discoveries in nanomechanics, nanomanufacturing, biomechanics and computational science and engineering.

The goal of all research in the department is to address critical societal problems in the areas of health, security/defense, energy/environment, manufacturing, and transportation. While the basic function of departmental research is generation of new knowledge, a growing number of projects are prompted by current needs of the state of Illinois and of the nation.

Faculty research interests include the following:

- Biomechanics – cell adhesion and motility, biological machines, bio-fluid mechanics, orthopedic biomechanics, musculoskeletal biomechanics, rehabilitation engineering, bone mechanics, composite biological nanomaterials, single-cell mechanics, synthetic biomaterials, failure mechanics of biomaterials, cytoskeletal biomechanics, mechanotransduction, bio-imaging of cytoskeletal structures and stress distribution in living cells, human motion analysis, human-machine systems.
- Nanomechanics/nanomanufacturing – micro/nano-fluidics, NEMS and MEMS, photonic metamaterials and devices, 3D micro/nanofabrication, process planning, programmable machines, nanotubes, nano-materials, electronic and photonic materials, metal cutting, micro/meso-machining, agile fixturing, scanning probe microscopy, micro/nano heat and mass transfer, feature-based cost analysis, rapid prototyping, interface surface science and technology, tribology, magnetic storage, friction/vibration characterization, microscale transport, electrokinetic phenomena, nano-positioning, atomic force microscopy, nanoscale actuation and robotics.
- Controls/dynamics – autonomous networked vehicle control, nonlinear mechanical systems and phenomena, distributed-parameter systems, wavelet methods, stability theory, piecewise smooth dynamics, multi-body dynamics, control of multi-rate and asynchronous systems, equi-variant (symmetric) dynamical systems, control using methods of stochastic dynamics, experimental and analytical modal analysis, and control theory (non-linear, adaptive, robust, optimal, and distributed) with application to mechanical and electromechanical systems.
- Fluid mechanics/thermal sciences – bio-fluids, combustion, propulsion, energy systems and the environment, IC engines, gas turbines, laser diagnostics, energetic materials, combustion synthesis of materials, micro- and nano-scale heat transfer, kinetics of chemical processes, two-phase flow, liquid atomization and spray, air-conditioning and refrigeration systems, micro-fluidics, computational fluid dynamics, compressible flow, fluid-structure interactions, meshless methods, detonation, deflagration-to-detonation transition, shock propagation, reacting flows, internal ballistics of rockets and guns, continual eddies, turbulent boundary layers, turbulent wakes, stratified turbulence, turbulence simulation, instability modes, vortex dynamics, coating flows, flow separation, three-dimensional foams, direct numerical simulation, large-eddy simulation, and particle-image velocimetry.
- Solid mechanics/materials – bio-materials, composite biological nanomaterials, electronic and photonic materials, stochastic mechanics, mechanics and transport in random media, thermomechanics, composite materials, creep, fatigue, fracture, high-temperature material behavior, polymer processing, ceramic-matrix composites, thin films, deformation processes, crystal plasticity, micro-scale phenomena, non-linear dynamics, continuum mechanics, ferroelectric ceramics, shape-memory alloys, composite interfaces, woven laminates, electronic packaging, energetic materials, carbon-based composites, orientable elastomers, thermoelasticity, dynamic plasticity, residual stresses, martensitic microstructure, surface crack growth, brittle-to-ductile transition, pure shear failure, shear-

band measurements, damage evolution, creep resistance, hydrogen embrittlement, powder consolidation, solidification, strain-gradient plasticity, nanotubes, composite interfaces, continuum-atomistic coupling, surface waves, wave scattering, crack detection, vibration transport, diffuse waves, stochastic waves, reverberant ultrasound and casting processes.

Centers, Programs, and Institutes

The following research centers and programs are integral to the MechSE graduate program:

- Air Conditioning and Refrigeration Center (ACRC)
- Center for Intracellular Mechanics
- Center for Nanoscale Chemical-Electrical-Mechanical Manufacturing systems (Nano-CEMMS)
- Continuous Casting Consortium (CCC)
- Cooperative Networked Control of Dynamical Peer-to-Peer Vehicle Systems
- Fracture Control Program
- Manufacturing Research Center
- Midwest Structural Sciences Center
- The Center for Advanced Automotive Bio-Fuel Combustion Engines
- The Center for Process Simulation and Design
- The Center of Advanced Materials for Purification of Water with Systems (The WaterCAMPWS)
- The Global Enterprise for Micro-Mechanics and Molecular Medicine (GEM4)

To learn more about the research centers and programs within the MechSE department, please visit the department's research center Web site (<http://mechanical.illinois.edu/research>).

Facilities and Resources

Research facilities include laboratories for advanced automation, air conditioning and refrigeration, combustion, computer-integrated manufacturing, control systems, design for manufacturing, gas dynamics, heat transfer, high-temperature materials, human factors and simulation of human-machine interaction, human dynamics and controls, intracellular mechanics, cell and molecular mechanics, internal-combustion engines, laser diagnostics for combustion, opto-electronic materials, machining and machine tool systems, mechanical behavior of materials, metrology, micromachining, microtribodynamics, polymer and composite materials processing, propulsion, rapid prototyping, robotics, short-pulse laser-ablation technology, thermal processing of materials, thermal radiation, tribology, and vehicle dynamics. Special facilities include a micro-fabrication facility with its own clean room (Class 10 and 1000) for silicon and CMOS-based micro-fabrication, test facilities for refrigeration and air-conditioning systems and components, low- and high-speed wind tunnels, and laboratories for study of combustion, quantitative visualization, complete specimen-scale mechanical testing equipment including an environmental testing chamber, thermomechanical and multiaxial loading capabilities. The department has a machine shop staffed with skilled instrument makers.

Financial Aid

Financial assistance is available to students who are admitted and includes fellowships, research and teaching assistantships, and/or waivers of tuition and fees. Assistantship stipends vary with one's entry level into the program. All applicants, regardless of U.S. citizenship,

whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Engineering, Concentration in Computational Engineering (p. 833)
- Master of Engineering in Mechanical Engineering (p. 833)
- Master of Science in Mechanical Engineering (p. 833)
- Master of Science in Theoretical and Applied Mechanics (p. 836)
- Doctor of Philosophy in Mechanical Engineering (p. 831)
- Doctor of Philosophy in Theoretical and Applied Mechanics (p. 832)

The online MSME degree program offers both a thesis (32 credit hours) and non-thesis (36 credit hours) option. (p. 833) Online students have five years to complete the degree requirements. The degree awarded through our online program is the exact same degree awarded to on-campus MSME students. The application process is very similar to our other programs which is described at our Applying to MechSE (<http://mechanical.illinois.edu/graduate/applying-mechse>) page. Applications for the online program are not required to submit GRE scores; after the application is submitted, our administrators will waive the requirement of the GRE for students applying to the online program.

- Graduate Concentration in Biomechanics (p. 836)
- Graduate Concentration in Computational Engineering, available for M.Eng. degree only (p. 833)

Doctor of Philosophy, Mechanical Engineering

For the Ph.D. program, a preliminary examination is taken after the qualifying examination. A minimum of six months should elapse between the successful completion of the doctoral preliminary examination and the doctoral final examination (oral dissertation defense).

For more details of the degree requirements for both Ph.D. programs, visit the department's Graduate Program Website (<http://mechse.illinois.edu/graduate/graduate-program-overview>).

Entering with approved M.S. or M.A. degree

Code	Title	Hours
ME 599	Thesis Research (min-max applied toward the degree)	44
MSE 492	Lab Safety Fundamentals (1 hour if not taken while completing the Master's degree; credit does not apply toward the degree)	0
ME 590	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0

Advanced math requirement from an approved list ³	3-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	16-17
Total Hours	64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level credit hours applied toward the degree	16
--	----

Maximum hours of ME 597 or TAM 597 (or other approved independent study) which may be applied only toward the elective course work requirement

A maximum of 4 hours of ME 597 or TAM 597 (or other approved independent study) may be applied toward the elective course work requirement.

No ME 599 credit may be applied toward the elective course work requirement.

Minimum GPA:	3.0
--------------	-----

Continuous registration is required after the preliminary exam and until dissertation deposit, while on campus and during semester of final defense.

Ph.D. exam and dissertation requirements:

Qualifying Exam:² Qualifying examinations should be taken no later than the second calendar semester after initial enrollment.

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees/phd-mechanical-engineering>)

³ Advanced math requirement approved list (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees/phd-mechanical-engineering>)

Entering with approved B.S. or B.A. degree

A student entering with a bachelor's degree has the option of a direct Ph.D. program. It does not award an M.S. degree.

Code	Title	Hours
ME 599	Thesis Research (min-max applied toward the degree)	52

MSE 492	Lab Safety Fundamentals (1 hour if not taken while completing the Master's degree; credit does not apply toward the degree)	0
ME 590	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0
Advanced math requirement from an approved list		3-4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		40-41
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Minimum 500-level credit hours applied toward the degree 24

Maximum hours of ME 597 or TAM 597 (or other approved independent study) which may be applied only toward the elective course work requirement 8

A maximum of 4 hours of ME 597 or TAM 597 (or other approved independent study) may be applied toward the elective course work requirement.

No ME 599 credit may be applied toward the elective course work requirement.

Continuous registration is required after the preliminary exam and until dissertation deposit, while on campus and during semester of final defense.

Ph.D. exam and dissertation requirements:

Qualifying Exam:² Qualifying examinations should be taken as early as possible, generally no later than the third semester.

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees/phd-mechanical-engineering>)

Doctor of Philosophy, Theoretical and Applied Mechanics

Candidates for the Doctor of Philosophy degree are required to complete a minimum of 32 graduate hours of course work beyond the bachelor's

degree with a minimum grade point average of 3.0. The course work must include 16 hours of core courses, or equivalent as evaluated by the Associate Head for Mechanics in applied mathematics, fluid mechanics, and solid mechanics taken at the University of Illinois at Urbana-Champaign or elsewhere. In addition, course work is required from each of the following major areas, totaling 16 hrs: 2 courses total from applied mathematics, fluid mechanics, and solid mechanics, 1 course in mechanics of materials, and at least 1 course in either computational mechanics or experimental mechanics.

Acceptance into the doctoral program requires good academic standing and successful completion of a Qualifying Examination, which is the defense of a scholarly work, such as a master's thesis. A student must also pass an oral preliminary examination based on the proposed thesis work.

For more details of the degree requirements for both Ph.D. programs, visit the department's Graduate Program Website (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>).

Code	Title	Hours
TAM 599	Thesis Research (min-max applied toward the degree)	32-64
TAM 500	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0
Elective courses beyond core and breadth – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		0-32
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Credit for TAM 531 or 532, 541, 542, 551 or equivalent as evaluated by the Associate Head for Mechanics

Credit for minimum of 16 hours of TAM breadth courses from a departmental list, or equivalent as evaluated by the Associate Head for Mechanics.

A 25% or more teaching assistantship for at least one semester.

Continuous registration is required after the preliminary exam and until thesis deposit, while on campus and during semester of final defense.

MSE 492 Lab Safety Fundamentals

Ph.D. exam and dissertation requirements:

Qualifying exam²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees/phd-theoretical-and-applied-mechanics>)

Master of Engineering in Engineering with a Concentration in Computational Engineering

Requirements

Code	Title	Hours
Core Courses, complete minimum one course from each of the following:		16
Applied math course chosen from approved list ¹		
Computational Methods course chosen from approved list ¹		
Parallel/Ubiquitous Computing course chosen from approved list ¹		
Area of Specialization courses from approved list ¹		12
Professional development courses from approved list ¹		4
Total credit hours for the degree:		32

¹ Approved lists are available on the M.Eng. in Computational Engineering website (<http://computationalmeng.engineering.illinois.edu/degree-requirements>).

Other Requirements and Conditions ¹

Other requirements and conditions may overlap.

A minimum of 20 credit hours must be taken from the University of Illinois at Urbana-Champaign campus.

A minimum of 12 500-level credit hours in the concentration, with at least 8 credit hours in the core concentration.

No courses used to fulfill any degree requirement may be taken using the "Credit/No Credit" option.

The minimum program GPA is 3.0.

¹ For additional details and requirements, please refer to the web page of the concentration's home unit (<http://computationalmeng.engineering.illinois.edu/program-administration>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Master of Engineering in Mechanical Engineering

Degree Requirements

*For additional details and requirements, please refer to the department's Graduate Studies Web site (<http://mechse.illinois.edu/>)

graduate) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Code	Title	Hours
ME or TAM course work		12-20
Applied math/computational science requirement ¹		3-4
Elective courses chosen in consultation with advisor		4-8
Professional development ²		4-8
Total required hours		32

¹ Choose from approved list; consult the program's website (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees/master-engineering-mechanical-engineering>) for more information.

² Choice or combination of (a) graduate-level capstone project (e.g., ME 597 Independent Study), or (b) course in leadership, entrepreneurship, or other business-related course.

A minimum of 4 elective hours must be completed outside of the major department.

A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be in ME or TAM.

A maximum of 4 hours of independent study may be applied toward degree requirements.

Elective course category may include a maximum of 4 hours of special topics credit.

Professional development category may include a maximum of 4 hours of special topics credit.

The minimum program GPA is 3.0.

Requirements and conditions may overlap.

Financial Aid

Students in the Mechanical Engineering major for the M.Eng. degree are not eligible for tuition waivers through research assistantships or teaching assistantships.

Master of Science, Mechanical Engineering

<http://mechse.illinois.edu>

For more details of the degree requirements for both M.S. programs, visit the department's Graduate Program Web site (p. 833).

Thesis Option

Code	Title	Hours
ME 599	Thesis Research (min-max applied toward the degree)	4-8
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
ME 590	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0

Elective courses (formal graded coursework) – chosen in consultation with advisor (subject to Other Requirements and Conditions below)	24-28
Total Hours	32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 8 ME or TAM credit hours with 4 at the 500 level.

A minimum of 12 500-level credit hours applied toward the degree.

For the thesis option, a maximum of 4 hours of ME 597 or TAM 597 (or other approved independent study) may be applied toward the elective course work requirement.

No ME 599 credit may be applied toward the elective course work requirement (599 is not formal graded coursework).

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
MSE 492	Lab Safety Fundamentals (credit does not apply toward the degree)	0
ME 590	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0
ME 597 or TAM 597	Independent Study Advanced Independent Study	4
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		32
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 8 ME or TAM credit hours with 4 at the 500 level.

A minimum of 12 500-level credit hours applied toward the degree.

Departmental approval is required to pursue the non-thesis option.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

ME Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ME>)

Courses

ME 501 Combustion Fundamentals credit: 4 Hours.

Fundamentals of kinetic theory, transport phenomena, chemical equilibria, and reaction kinetics; flames, their gross properties, structure, and gas dynamics including oscillatory and turbulent burning; solid and liquid propellant combustion; one-dimensional detonation theory including structure and initiation; three-dimensional and other complex detonation waves; supersonic burning. Same as AE 538. Prerequisite: AE 311 or ME 410.

ME 502 Thermal Systems credit: 4 Hours.

Steady-state simulation and optimization of thermal systems, dynamic performance, and probabilities in system design. Prerequisite: ME 402.

ME 503 Design of IC Engines credit: 4 Hours.

Design of internal combustion engines, including gas forces, inertia loads, bearing analysis, torsional vibration, balance, lubrication, valve and cam design, and stress analysis of major engine components. Prerequisite: ME 403.

ME 504 Multiphase Systems & Processes credit: 4 Hours.

Dynamics and thermodynamics of multiphase and multicomponent systems with special relevance to air-pollution control and energy conversion; relaxation phenomena; general motion of systems of disparate elemental masses; diffusion in gravitational and electric fields, and boundary-layer motion with mass transport; dispersion and collection of particulate matter; transport with surface reactions. Prerequisite: ME 404.

ME 510 Advanced Gas Dynamics credit: 4 Hours.

Theoretical gas dynamics; fundamental laws and basic equations for subsonic, transonic, and supersonic steady and unsteady flow processes. Same as AE 510. Prerequisite: ME 410.

ME 520 Heat Conduction credit: 4 Hours.

Fundamentals of heat conduction in isotropic and anisotropic materials; methods of solution to steady and transient heat conduction problems in one, two, and three dimensions; internal heat sources; periodic flow of heat; problems involving phase change; approximate analytical techniques; numerical methods; study of current articles on the subject. Prerequisite: ME 420.

ME 521 Convective Heat Transfer credit: 4 Hours.

Fundamentals of convective heat transfer; calculation of heat transfer within ducts and over submerged objects for laminar and turbulent flow; natural convection; film condensation and boiling; liquid metals. Prerequisite: ME 411.

ME 522 Thermal Radiation credit: 4 Hours.

Fundamentals of radiant-energy transport in absorbing and nonabsorbing media; pyrometry; applications to selected problems involving combined energy-transport mechanisms. Prerequisite: ME 420.

ME 523 Nanoscale Energy Transport credit: 4 Hours.

An advanced treatment of diverse transport phenomena at the nanometer scale involving solids, liquids and gases emphasizing common features in transport by molecules, electrons, phonons, photons, and other quasi-particles of interest, oriented toward applied research in the areas of nanoscale heat transfer and nanoscale energy conversion. Topics include intermolecular forces at surfaces and in the bulk, momentum and species transport in microfluidics, linear response theory, free molecular flow in gases, electron and phonon transport in crystals, Boltzmann equation and its moments, ballistic and diffusive transport, thermoelectric energy conversion, interfacial transport, energy transport in nanostructures and radiative transport in the near-field. Approved for letter and S/U grading.

ME 530 Fatigue Analysis credit: 4 Hours.

Fatigue analysis methods for the design of structures and components: stress-life, strain-life, and crack-propagation approaches; multiaxial and high-temperature fatigue; interrelationship among material properties, geometry, and design methodology appropriate for a wide range of mechanical engineering components. Prerequisite: ME 430.

ME 531 Inelastic Design Methods credit: 4 Hours.

Material deformation under combined mechanical and thermal loading; constitutive equations and their application in engineering design and in inelastic finite element methods; material and structural degradation under fatigue and creep conditions. Prerequisite: ME 471 and ME 430.

ME 532 Fracture Resistant Design credit: 4 Hours.

Application of fracture mechanics and microstructural behavior to materials selection for design; practical approximation of linear and inelastic fracture parameters for evaluation of complex components; destructive and nondestructive tests for control of toughness in manufacture; residual life assessment involving time-dependent fracture (creep, fatigue, stress, corrosion); case studies; design project. Prerequisite: ME 430.

ME 533 Physical Basis for Plasticity credit: 4 Hours.

Physical and mathematical foundation for plasticity in crystalline materials, with application to deformation processes. Metal forming; deformation processes in other materials, such as slip in geological materials and polymers; rate dependence of plastic flow, with underlying physical mechanisms; kinetics of dislocation motion, mechanisms of work hardening, and crystallographic texture; theoretical framework for modeling the constitutive response of rate-dependent materials undergoing crystallographic slip, and allied computational procedures. Prerequisite: TAM 445.

ME 540 Control System Theory & Design credit: 4 Hours.

Same as ECE 515. See ECE 515.

ME 541 Control of Machine Systems credit: 4 Hours.

Modeling machining processes and machine tools. Mechanistic modeling of machining processes, machine-tool errors, characterization of machined surfaces, machine-tool system dynamics and stability, and topics in motion control. 4 graduate hours. No professional credit. Prerequisite: ME 340 and ME 270.

ME 544 Dynamic System Reliability credit: 4 Hours.

Same as ECE 554. See ECE 554.

ME 546 Analysis of Nonlinear Systems credit: 4 Hours.

Same as ECE 528 and SE 520. See ECE 528.

ME 550 Solidification Processing credit: 4 Hours.

Principles of control of structure, properties, and shape in processes involving liquid-solid transformations; stresses, heat flow, mass transport, solute redistribution, and nucleation and growth kinetics; relationship between process variables and structures and properties in the resultant material; examples are drawn from existing commercial and new developing processes. Prerequisite: ME 450.

ME 554 Computational Process Modeling credit: 4 Hours.

Development and application of computer models to solve practical problems involving fluid flow, heat transfer, and deformation phenomena. Advanced topics in computational methods for materials process modeling; case studies. Same as CSE 561. Prerequisite: ME 412 or ME 471; ME 450.

ME 561 Convex Methods in Control credit: 4 Hours.

Use of convex optimization in analysis and control of dynamical systems; robust control methods and the use of semidefinite programming; linear matrix inequalities, operator theory, model reduction, H-2 and H-infinity optimal control, S-procedure and integral quadratic constraints, structured singular value and mu-synthesis, and Markovian jump systems; applications in control design. Prerequisite: ECE 515.

ME 562 Robust Adaptive Control credit: 4 Hours.

Mathematical foundation for synthesis and analysis of adaptive control systems: Lyapunov stability theory; methods of direct and indirect model reference adaptive control; recent methods, such as L1 adaptive control, that enable adaptive control with desired transient and steady-state performance specifications. Prerequisite: Any of ECE 486, ECE 515, ECE 528, GE 424, ME 460.

ME 570 Nonlinear Solid Mech Design credit: 4 Hours.

Optimality conditions; finite element methods; design sensitivity analysis; nonlinear analysis; transient analysis; thermo-mechanical solid mechanics. Prerequisite: One of AE 420, CEE 470, ME 471, TAM 470; TAM 445, TAM 551.

ME 586 Mechanics of MEMS credit: 4 Hours.

Mechanics and dynamics of microelectromechanical systems (MEMS); scaling laws in electrostatics, magnetics, and fluidics; analytical models for thin-film growth and etching; effect of surface tension in small dimensions in relations to stability of MEMS during web fabrication; size effects on mechanical properties of MEMS materials; equations of motion for MEMS, involving coupled elastic and electric fields that give rise to nonlinear dynamical behavior; Mathieu behavior and chaotic systems. Prerequisite: ME 485.

ME 590 Seminar credit: 1 Hour.

Presentation and discussion of significant developments in mechanical engineering. Approved for S/U grading only. May be repeated.

ME 591 Interest Group Seminar credit: 1 Hour.

Seminars on current topics in mechanical science and engineering. May be repeated in the same term if topics vary. May be repeated in separate terms.

ME 597 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to mechanical engineering. May be repeated in the same term or in separate terms if topics vary to a maximum of 12 hours. Prerequisite: Consent of instructor.

ME 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in mechanical engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

ME 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Master of Science, Theoretical and Applied Mechanics

A full-time student can usually complete the program requirements in one academic year of study. A student who has an assistantship can usually complete the requirements in one calendar year.

For more details of the degree requirements for both M.S. programs, visit the department's Graduate Program Web site (<http://mechanical.illinois.edu/graduate/graduate-program-overview>).

Thesis Option

Code	Title	Hours
TAM 599	Thesis Research (min-max applied toward the degree)	4-8
TAM 500	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		24-28
Total Hours		32

Other Requirements and Conditions ¹

MSE 492 Lab Safety Fundamentals

A minimum of 16 TAM credit hours, with 8 at the 500 level.

A minimum of 12 500-level credit hours applied toward the degree

No TAM 599 credit may be applied toward the elective course work requirement.

A maximum of 4 hours of TAM 597 or ME 597 (or other approved independent study) may be applied toward the elective course work requirement.

Other Requirements and Conditions may overlap

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
TAM 500	Seminar (registration for 1 hour every term while in residence; credit does not apply toward the degree)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		36
Total Hours		36

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 16 TAM credit hours, with 8 at the 500 level.

A minimum of 12 500-level credit hours applied toward the degree

A maximum of 4 hours of TAM 597 or ME 597 (or other approved independent study) may be applied toward the elective course work requirement.

Departmental approval is required to pursue the non-thesis option.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate program requirements (<http://mechanical.illinois.edu/graduate/mechse-graduate-degrees>) and the *Graduate College Handbook* (<http://grad.illinois.edu/gradhandbook>).

Graduate Concentration in Biomechanics

The Biomechanics Concentration prepares students for collaborative research across the disciplines of engineering, biology, and the sciences. Students must be enrolled in a graduate degree program from one of the participating Departments (Bioengineering, Electrical and Computer Engineering, Materials Science and Engineering, and Mechanical Science and Engineering). The Biomechanics Concentration requires students to earn a B or better in each concentration course and complete at least 12 hours. Fulfillment of these requirements will be monitored jointly by the graduate coordinators in Bioengineering and in Mechanical Science and Engineering.

Code	Title	Hours
Current course options include:		
ABE 446	Biological Nanoengineering	
BIOE 482	Musculoskel Tissue Mechanics	
ME 483	Mechanobiology	
MSE 474	Biomaterials and Nanomedicine	
PHYS 550	Biomolecular Physics	
TAM 461	Cellular Biomechanics	

Alternate courses may be applicable to the Biomechanics Concentration pending joint approval by the Bioengineering and Mechanical Science and Engineering Graduate Programs.

Total hours required for the concentration:

12

Courses taken toward this concentration will count toward the student's graduate degree.

Students must notify their department of their plan to pursue this concentration.

When choosing courses, students must work directly with their department to ensure that all degree requirements will be met.

Note that students who intend to complete both a Biomechanics Concentration and a Cancer Nanotechnology Concentration may only overlap one course between the two concentrations.

Medieval Studies

<http://medieval.illinois.edu>

Director: Eleonora Stoppino
4080 Foreign Languages Building
707 S. Mathews Avenue
Urbana, Illinois 61801
phone: (217) 265-6254
fax: (217) 244-8430
e-mail: medievalstudies@illinois.edu

Graduate Concentration: Medieval Studies
Participating Programs: Architecture (MARC and PhD only), Art History (all), Classical Philology (Ph.D.), Classics (M.A.), Communication (all), Comparative Literature (all), East Asian Languages and Cultures (Ph.D.), English (all), French (all), German (all), History (all), Landscape Architecture (all), Musicology (Ph.D.), Philosophy (all), Spanish, Italian and Portuguese (all)

Graduate Degree Program

The Program in Medieval Studies offers a graduate concentration in Medieval Studies. Students who are admitted to graduate programs in departments with medieval studies faculty may apply to the concentration by meeting to express interest and to discuss the concentration with the Director of the Program in Medieval Studies. The program offers a flexible curriculum requiring a minimum of 24 hours of graduate-level coursework including advanced training both in the various disciplines of medieval studies and in foundational languages and technical skills appropriate to the field. For complete information about the program and its offerings, see the program's web site: <http://medieval.illinois.edu>.

Admission

Students who are admitted to graduate programs in departments with medieval studies faculty are eligible to enroll in the graduate concentration in Medieval Studies after meeting to express interest and

to discuss the concentration with the Director of the Program in Medieval Studies.

Faculty Research Interests

The research interests of our faculty often overlap disciplinary boundaries. Thus faculty in English and History share interest in medieval drama, performance practices, and the emergence of regional and national identities. Faculty in English, History, and Art History work on the development of historical consciousness and the representation of history in illuminated manuscripts. Faculty in Italian, History, English and French share an interest in gender studies: the history of women and gender; gender and nationalism; the development of gendered subjectivities; conduct literature and mirrors for princes. Another focus is manuscript studies (Art History, Classics, French, English, History, Library Science): history of the book; illuminated manuscripts of the 13th-15th centuries; late medieval manuscript culture; and reading practices. The program has a strength in Late Antiquity and Early Medieval, which draws together faculty in History, Classics, Religious Studies, Speech Communication; themes of particular interest are the society, culture and religion of this period; the social and cultural history of the Roman and Byzantine empires; Byzantine rhetoric; the impact of Barbarian settlements on Medieval Europe; and the survival of the Classical tradition. There is also a growing interest in Mediterranean studies shared by faculty in the History of Architecture, History, Italian, and Classics): art and built environment of the Islamic Mediterranean; the Italian baptistry; and medieval civic squares. Illinois has the strongest program in medieval English in the Big Ten, with particular strengths in Old English; Old and Middle Irish; the theory, practice and teaching of rhetoric; the oral tradition. In addition, our faculty edit the following major journals: *Early Medieval Europe*, *Illinois Classical Studies*, and the *Journal of English and Germanic Philology*. For more information, visit our faculty listings: <http://www.medieval.illinois.edu/people/faculty/>.

Centers, Programs, and Institutes

Each Spring we offer an interdisciplinary graduate seminar (one of the requirements of the Certificate) on a topic of broad interest. These seminars are led by one faculty medievalist but are collaborative, drawing on the expertise of faculty in the Program and also visiting scholars from around the world.

Facilities and Resources

The Program is affiliated with the Worldwide Universities Network (www.wun.ac.uk (<http://www.wun.ac.uk>)), which connects us to Medieval Studies programs at six UK universities (Bristol, Leeds, Manchester, Southampton, Sheffield, York), three on the continent (Bergen, Oslo, Utrecht), and three American universities (Wisconsin-Madison, Penn State, UC-San Diego). The Program has established partnerships with the Università degli Studi di Milano (Italy) and with Stockholm University (Sweden).

The library at the University of Illinois contains world class research collections in Medieval Studies. It is the largest academic library at a public university with more than 10 million volumes.

Financial Aid

The Program awards fellowships to help affiliated units recruit top ranked applicants. In addition, financial aid in the form of fellowships and teaching assistantships are available through the individual units cooperating in the Program in Medieval Studies.

Graduate Concentration in Medieval Studies

Code	Title	Hours
	Two graduate courses at the 400- or 500-level in Medieval Studies selected by the student and approved by the Advisory Board of Medieval Studies	6-8
MDVL 500	Seminar in Medieval Studies	4
	Reading knowledge of a major international medieval language essential to the student's field of specialization, as determined by the student in consultation with a faculty supervisor and with the approval of the Director, as demonstrated by completion of a college-level course with a grade of B or better. Note: Students who fulfill this requirement by taking courses at the 200- or 300-level may be required to take additional coursework at the 400- and 500-level to meet the requirement of 24 hours of graduate-level coursework.	3-4
	Reading knowledge of another medieval language with a minimum grade of B, or completion of a one-semester introductory course in a medieval language (such as FR 531 or ENGL 507) with a minimum grade of B, or an equivalent approved by the Medieval Studies Advisory Committee.	4
	Thesis Hours Required (min/max applied toward degree)	6-8
	Total Hours	24

Other Requirements ¹

Other requirements may overlap

A dissertation or thesis in the area of Medieval Studies.

A member of one of the cooperating departments external to the student's home department will be a member of the student's dissertation or thesis committee.

In addition to the graduate concentration requirements, students must also complete the requirements of their major degree.

¹ For additional details and requirements refer to the department's graduate concentration program (<http://www.medieval.illinois.edu/education/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Microbiology

<https://mcb.illinois.edu/departments/microbiology/>

Head of the Department: John E. Cronan, Jr.

Directors of Graduate Studies: Peter Orlean, Joanna Shisler, and Rachel Whitaker

B103 Chemical and Life Sciences Laboratory

601 South Goodwin Avenue

Urbana, IL 61801

(217) 333-1736

E-mail: gradinfo@mcb.illinois.edu

Major: Microbiology

Degrees Offered: M.S., Ph.D.

Graduate Degree Programs

The Department of Microbiology at Illinois offers unique opportunities for graduate students to become skilled and creative microbiologists. Our graduate program of study leads to the doctor of philosophy degree (Ph.D.). We have outstanding resources in our internationally recognized faculty, graduate students, and research facilities. This exposes our students to the latest research techniques and fosters their development as independent scientists. The program has particular strengths in the areas of microbial physiology, metabolism, genetics, evolution, and pathogenesis. For an application and departmental materials that provide greater detail on programs, offerings, admission, degree requirements, and financial aid, visit our website at www.mcb.illinois.edu/departments/microbiology/.

Graduates from the Department of Microbiology are employed in colleges and universities, industry, and government. Scientific advances in genetic engineering and biotechnology provide many opportunities in pharmaceutical, chemical, and genetic engineering companies.

The Department of Microbiology is a part of the School of Molecular and Cellular Biology (MCB), which also includes the Departments of Biochemistry, Cell and Developmental Biology, and Molecular and Integrative Physiology. The Department is part of an umbrella program in MCB that encompasses over 70 different research laboratories. Students admitted into any of these departmental graduate programs can select faculty thesis advisors from these active research laboratories in the School. Close ties are also maintained with the School of Integrative Biology, the School of Chemical Sciences, the College of Medicine, and the College of Veterinary Medicine.

Admission

Students interested in this program must apply directly to the School of Molecular and Cellular Biology (mcb.illinois.edu/graduate/gradprospect (<http://mcb.illinois.edu/graduate/gradprospect.html>)). During the first semester, students perform three laboratory rotations, choosing from any laboratory in the School. Students select a laboratory for their thesis research in December and formally join the appropriate graduate program/department at that time.

Students electing microbiology as a major for an advanced degree should have had a total of at least 15 credit hours of physical or biological sciences, including general biology or microbiology, chemistry through organic chemistry and biochemistry, and mathematics through calculus. Admission requirements include: a bachelor's degree with course work in biological sciences, chemistry, and physics; Graduate Record Examination (GRE) scores. In addition to the above requirements, international students must attain a minimum Test of English as a Foreign Language (TOEFL) score of 96 on the internet-based test (iBT), with a score of 24 on the speaking section, is also accepted. The department does not admit students into the M.S. program.

Graduate Teaching Experience

Experience in teaching is considered to be a vital part of the graduate program and is required as part of the academic work of all Ph.D. degree candidates. For the Department of Microbiology, a minimum of two semesters of teaching experience is a degree requirement.

Faculty Research Interests

Major areas of research interest include gene expression and regulation in bacteria, archaea, and eukaryotes; virus pathogenesis and host-cell interactions; viruses of bacteria and archaea; membrane biogenesis; lipid and polysaccharide synthesis in bacteria and yeast; cell wall biogenesis; bacterial pathogenesis and bacteria-host interactions; immunology; DNA replication, recombination, and repair; anaerobic microbiology; the biochemistry and physiology of methane formation; mechanisms of oxygen toxicity; bacterial and archaeal genomics, ecology, and evolution. For further details, please consult the Department of Microbiology's website (www.mcb.illinois.edu/departments/microbiology/).

Facilities and Resources

The Microbiology Department is located in the modern Chemical and Life Sciences Laboratory (CLSL). Central to main campus, the CLSL houses all of the major equipment and expertise necessary for research in microbiology, cell biology, molecular biology, genomics, and biochemistry.

The University of Illinois has excellent core facilities to aid in scientific research, many of which are located in buildings adjacent to CLSL. Each core facility has full-time salaried support staff for training and support. The Roy J. Carver Biotechnology Center (<http://biotech.illinois.edu>) includes core research facilities supporting genomics, proteomics, metabolomics, flow cytometry, bioinformatics and translational medical research (<http://biotech.illinois.edu>). The Center for Microscopic Imaging is a campus-wide service center for electron, confocal, and light microscopy.

Several services are available to graduate students for support outside of the classroom and laboratory. The University of Illinois library is the nation's third largest university library, allowing access to reference books and on-line scientific journals. The Writers Workshop offers free, personal writing assistance for class assignments, scientific manuscripts, and theses. Please visit the [School of Molecular and Cellular Biology](http://www.mcb.illinois.edu) (<http://mcb.illinois.edu>) to learn about these and other resources available to graduate students.

Financial Aid

All students admitted into the Ph.D. program receive financial support throughout their graduate training. Incoming graduate students are supported by the School of Molecular and Cellular Biology. Several University Fellowships are awarded to outstanding applicants on a competitive basis. Financial support is usually in the form of a research assistantship, teaching assistantship, and/or fellowship. In addition to this stipend, we offer a tuition and service fee waiver. A health insurance fee and other miscellaneous fees, must be paid by the student.

Master of Science in Microbiology

Students are not admitted to the M.S. program; these requirements are completed as part of the Ph.D. program.

Thesis Option

Code	Title	Hours
	Coursework (not including MICR 590)	8
	Research/Project Hours (4 min applied toward degree)	4

MICR 599	Thesis Research (0 min applied toward degree)	0
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8 (500 level)
Minimum Number of 500-level Hours Required Overall in Program:	12
Completion of one of the following and approval by the research advisor and head of the department: a research thesis; submission of a manuscript with the candidate as first author and to which the candidate has made the major contribution; the successful passing of the departmental preliminary exam.	
Minimum GPA:	3.0

¹ For specific information, visit our Web site at mcb.illinois.edu/departments/microbiology/gradcurrent.html and refer to the department's Graduate Student Handbook and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Coursework (not including MICR 590)	8
	Research/Project Hours (4 min applied toward degree)	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8 (500 level)
Minimum Number of 500-level Hours Required Overall in Program:	12
Completion of one of the following and approval by the research advisor and head of the department: a research thesis; submission of a manuscript with the candidate as first author and to which the candidate has made the major contribution; the successful passing of the departmental preliminary exam.	
Minimum GPA:	3.0

¹ For specific information, visit our Web site at mcb.illinois.edu/departments/microbiology/gradcurrent.html and refer to the department's Graduate Student Handbook and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Microbiology

The requirements for a Ph.D. from the Department of Microbiology include successful completion of course work, teaching, two first-

author manuscripts in peer-reviewed journals, passing a preliminary examination and annual assessments of progress thereafter, and writing and depositing a research thesis.

Code	Title	Hours
Master's level requirements		32
Core coursework:		19
MCB 501	Advanced Biochemistry	
MCB 502	Advanced Molecular Genetics	
MCB 580	Res Ethics & Responsibilities	
MCB 581	Laboratory Rotation I	
MCB 582	Laboratory Rotation II	
MCB 583	Laboratory Rotation III	
MCB 585	Current Topics in Microbiology	
Registration in MICR 595 every semester of enrollment (9 min)		9
400- or 500-level discussion-based courses (3 min)		3
400- or 500-level lecture-based courses (12 min)		12
Research/Project Hours (min/max applied toward degree):		before prelim
MICR 599	Thesis Research (min/max applied toward degree)	after prelim
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Two first-author manuscripts in peer-reviewed journals. At the time of graduation at least one of these manuscripts must be accepted.

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met.
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For specific information, visit our Web site at mcb.illinois.edu/departments/microbiology/gradcurrent.html (<http://mcb.illinois.edu/departments/microbiology/gradcurrent.html>) and refer to the department's *Graduate Student Handbook* and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Molecular and Integrative Physiology

<https://mcb.illinois.edu/departments/mip/>

Head of the Department: Claudio Grosman
524 Burrill Hall
407 South Goodwin Avenue
Urbana, IL 61801
(217) 333-1735
E-mail: mcbinfo@life.uiuc.edu

Major: Molecular and Integrative Physiology

Degrees Offered: M.S., Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Molecular and Integrative Physiology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Program

The graduate program in molecular and integrative physiology is designed to provide individualized training in preparation for research and teaching careers in molecular, cellular, and integrative physiology. The objective of the training is to produce scientists who are technically competent and broadly educated. The program offers a Ph.D. in Molecular and Integrative Physiology and a joint M.D./Ph.D. degree in conjunction with the College of Medicine. Please note: Students interested in this program must apply directly to the School of Molecular and Cellular Biology (<http://mcb.illinois.edu>). The Department of Molecular & Integrative Physiology does not accept applications for the master's degree. During the first semester, students perform three laboratory rotations, choosing from any laboratory in the School. Students select a laboratory for their thesis research in December and formally join the appropriate graduate program at that time.

Admission

Candidates for admission must meet the minimum standards established by the Graduate College for graduate study at the University of Illinois at Urbana-Champaign, but final selection of students who enter the molecular and integrative physiology program each fall is determined by an admissions committee. Admission beginning in the spring semester is rarely allowed except under extraordinary circumstances. Students should have strong undergraduate training in science. To be admitted, students should have a grade point average between an A and a B and three letters of recommendation that indicate ability to perform graduate work. All applicants are required to submit scores of the Graduate Record Examination (GRE) or similar examinations. Applicants whose native language is not English are required to submit the results of the Test of English as a Foreign Language (TOEFL). The department requires a minimum score of 590 on the paper-based TOEFL (243 on the computer-based test), the Graduate College requirement. For admission purposes, TOEFL scores are valid for only two years before the proposed term of entry.

Medical Scholars Program

Please note applications are not being accepted at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Molecular and Integrative Physiology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates in this program. Minimum teaching requirement is 50% for one semester. However, it is strongly recommended that students gain experience equivalent to 50% for at least two semesters.

Financial Aid

Financial support is guaranteed for all students who remain in good academic standing.

Master of Science in Molecular and Integrative Physiology

The M.S. is earned in route to the Ph.D. degree. Students are not admitted to the M.S. program.

Code	Title	Hours
MCB 401 & MCB 402	Cell & Membrane Physiology and Sys & Integrative Physiology (College of Medicine M1 Physiology, both semesters, or equivalent, or proficiency exam.)	6
MCB 501	Advanced Biochemistry	4
MCB 502	Advanced Molecular Genetics	4
MCB 509	Curr Topics Mol & Int Physiol	2
MCB 580	Res Ethics & Responsibilities	1
Six credit hours taken from courses listed on the department's Course Menu		6
Required registration in MIP 595 each semester until passing the qualifying exam		0-8
MCB 581 & MCB 582 & MCB 583	Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III	9
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum Number of 500-level 12

Hours Required Overall in Program:

Students whose native language is other than English are required to have passed the SPEAK test before taking the Qualifying Examination.

Passing the qualifying exam is required.

All core courses must be completed with grades of B or above.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *Student Guide* (<http://mcb.illinois.edu/departments/mip/gradstudentguide.html>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Molecular and Integrative Physiology

The doctoral program uses a flexible approach to curriculum requirements. Students are required to take two core courses, three laboratory rotations (five weeks each), and electives. The students in consultation with a faculty advisory committee choose additional courses in chemistry, biochemistry, immunology, molecular biology, mathematics, and cell biology. Students are encouraged to begin research as soon as they identify an area of research interest. The department has a particularly strong focus in cell physiology, comparative physiology, computational biology, neurophysiology, and endocrinology. Courses and lab research are supplemented by a weekly seminar series. Toward the end of the second year, students must submit a report describing their initial research and pass an oral qualifying examination in order to continue in the Ph.D. program. One year after their qualifying examinations, and no later than the end of their eighth semester in the program, students are expected to take their preliminary examinations in which they present their thesis topic and preliminary research to a faculty committee. Finally, a thesis, which is based on original work in one area of physiology and which demonstrates a thorough knowledge of underlying theories and experimental approaches, must be defended at the final examination. Most students complete their Ph.D. training in four to five years.

Entering with approved M.S. degree

Code	Title	Hours
MCB 401 & MCB 402	Cell & Membrane Physiology and Sys & Integrative Physiology (College of Medicine M1 Physiology, both semesters, or equivalent, or proficiency exam.)	6
MCB 501	Advanced Biochemistry	4
MCB 502	Advanced Molecular Genetics	4
MCB 509	Curr Topics Mol & Int Physiol	2
MCB 580	Res Ethics & Responsibilities	1
MCB 581 & MCB 582 & MCB 583	Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III	9
Six credit hours taken from courses listed on the department's Course Menu.		6
Required registration in MIP 590 each semester until passing the qualifying exam		0-8
Thesis Hours Required (0 min applied toward degree)		0
Total Hours		64

Other Requirements¹

Other requirements may overlap

All graduate students in the Program are required to teach during their graduate training. The minimum teaching requirement is 50% for one semester.

Successful completion of 96 hours of study (including the Core Courses with a grade A or B).

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes

Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Student Guide (<http://mcb.illinois.edu/departments/mip/gradstudentguide.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S. degree

Code	Title	Hours
MCB 401 & MCB 402	Cell & Membrane Physiology and Sys & Integrative Physiology (College of Medicine M1 Physiology, both semesters, or equivalent, or proficiency exam.)	6
MCB 501	Advanced Biochemistry	4
MCB 502	Advanced Molecular Genetics	4
MCB 509	Curr Topics Mol & Int Physiol	2
MCB 580	Res Ethics & Responsibilities	1
MCB 581 & MCB 582 & MCB 583	Laboratory Rotation I and Laboratory Rotation II and Laboratory Rotation III	9
Six credit hours taken from courses listed on the department's Course Menu.		6
Required registration in MIP 590 each semester until passing the qualifying exam		0-8
Thesis Hours Required (0 min/max applied toward degree)		0
Total Hours		96

Other Requirements ¹

Other requirements may overlap

All graduate students in the Program are required to teach during their graduate training. The minimum teaching requirement is 50% for one semester.

Successful completion of 96 hours of study (including the Core Courses with a grade A or B).

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Student Guide (<http://mcb.illinois.edu/departments/mip/gradstudentguide.html>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Music

<http://www.music.illinois.edu>

(Including Music Education and Musicology)

Director of the School: Dr. Jeffrey Magee

School of Music

2040 Music Building

1114 West Nevada Street

Urbana, IL 61801

Program Contact: Jenny Phillips

(217) 244-8385

Associate Director for Graduate Studies: Dr. Christina Bashford

Admissions Questions: musicadmissions@illinois.edu | (217) 244-7899

Major: Music

Degrees Offered: M.Mus., A.D., A.Mus.D.

Graduate Concentrations: Choral Music (M.Mus. and A.Mus.D.), Instrumental Conducting - Band (M.Mus.), Instrumental Conducting - Orchestra (M.Mus. and A.Mus.D.), Instrumental Conducting - Wind Band (A.Mus.D.), Jazz Performance (M.Mus. and A.Mus.D.), Music Composition (M.Mus. and A.Mus.D.), Music Theory (M.Mus.), Musicology (M.Mus.), Performance and Literature (M.Mus. and A.Mus.D.), Piano Pedagogy (M.Mus.), Vocal Coaching & Accompanying (M.Mus. and A.Mus.D.)

Major: Music Education

Degrees Offered: M.M.E., Ph.D.

Major: Musicology

Degrees Offered: Ph.D.

Graduate Concentration: Medieval Studies (p. 837)

Graduate Degree Programs

The School of Music offers graduate study leading to the Master of Music, Artist Diploma in Music, Doctor of Musical Arts, Doctor of Philosophy in Musicology, Master of Music in Music Education, Doctor of Philosophy in Music Education. Complete details of these programs may be found on the School of Music's website: www.music.illinois.edu (<http://www.music.illinois.edu>). The School of Music has been an accredited member of the National Association of Schools of Music since 1933.

Admission

For all degree programs, consult the admission requirements stated on the School of Music's website: <http://music.illinois.edu/prospective-students>.

Requirements for admission to the **Master of Music (MM)** programs are a Bachelor of Music degree from the University of Illinois at Urbana-Champaign or an equivalent degree from another accredited institution. Students holding other degrees may be admitted but will be expected to make up any deficiencies in addition to fulfilling all requirements for the graduate degree.

Applicants to the MM in musicology are generally expected to have a minimum grade point average of 3.25 (A = 4.0).

Applicants to instrumental conducting (band or orchestra), jazz performance, piano pedagogy, performance and literature, and vocal accompanying and coaching must pass a qualifying audition for their major division or submit satisfactory recordings. Applicants in musicology, theory, and composition must present writings or other evidence of their ability to pursue work at the graduate level. The Graduate Record Examination (GRE) is not required but is strongly recommended for MM applicants in musicology.

The School of Music requires all new MM students to complete entrance examinations in music theory and aural skills; all new MM students, except those in musicology, complete a musicology entrance exam as well. These exams take place the week before the fall term begins. See the School of Music's Graduate Resources (<http://publish.illinois.edu/musicresources/graduate-students>) page for more information.

Prerequisite for admission to the **Artist Diploma** is a master's degree in music performance.

International applicants to the **MM and the Artist Diploma (AD)** whose native language is not English must present an iBT score of 79 for admission to the Artist Diploma (AD), 90 for the Master of Music (MM), excluding Musicology; MM in Musicology requires an iBT score of 96. A TOEFL iBT of 102 or higher is required for Full Status Admission to the University of Illinois Graduate College and School of Music. Fall admission only; other terms of entry by departmental petition approval only.

Requirements for admission to the **Master of Music in Education (MME)** are:

1. Undergraduate degree in music education from an accredited institution;
2. An overall grade average for the last 60 credit hours of undergraduate work of at least 3.0 (on a 4.0 scale). The grade average for Music Education and Education courses, when averaged separately, must also be at least 3.0 (on a 4.0 scale);
3. Recommendations from three individuals who can discuss the applicant's musicianship, ability to undertake graduate level study, and teaching ability/potential.
4. The Graduate Record Exam (GRE) is not required for application to the MME, nor do MME students take placement tests in music theory or music history.

For MME applicants with public school experience:

1. recommendation from a principal or supervisor who speaks primarily to the quality of the applicants teaching experience;
2. recommendation from an individual who speaks primarily to the quality of the applicants musicianship;
3. recommendation from an individual who speaks primarily to the applicants potential for completion of graduate level study;
4. applicants who wish to be considered for a Teaching Assistantship should ensure that at least one of their references provides specific comments on their potential to engage in university level teaching duties associated with such an appointment.

For MME applicants without public school experience:

1. recommendation from a music education professor;
2. recommendation from an applied or ensemble music professor;
3. recommendation from an individual who can speak to the applicants potential for completion of graduate study.

Applicants seeking admission to the MME + Certification program, should review the requirements found online at: http://music.illinois.edu/auditions/12?audition_type=graduate

International applicants to the **MME** whose native language is not English must present an iBT score of 96 for the Master of Music Education

(MME). A TOEFL iBT of 102 or higher is required for Full Status Admission to the University of Illinois Graduate College and School of Music.

The School of Music offers an academic year program and a Summers-only MME. For academic year applications, the School of Music offers Fall admission only; spring term of entry by departmental petition approval only.

Requirements for admission to the **Doctor of Musical Arts** and the **Doctor of Philosophy** in Musicology programs are the Master of Music degree from the University of Illinois at Urbana-Champaign or an equivalent degree from another accredited institution.

Applicants to the **Doctor of Musical Arts** programs must have:

1. a high level of proficiency in composition, conducting, or performance - candidates in composition must submit original scores for review, and candidates in performance and literature must pass a qualifying audition or submit satisfactory recordings; and
2. appropriate experience in ensemble performance and/or score reading. Candidates in voice and vocal accompanying and coaching must have fulfilled all foreign language requirements considered prerequisites for the Master of Music degree, including 1 year of college-level study in Italian, French, and German.

The School of Music requires all new **DMA** students to complete entrance examinations in musicology, music theory, aural skills, and score reading. These exams take place the week before the fall term begins. See the School of Music's Graduate Resources (<http://publish.illinois.edu/musicresources/graduate-students>) page for more information.

International applicants to the **DMA or PhD** whose native language is not English must submit an iBT score of 96. A TOEFL iBT of 102 or higher is required for Full Status Admission to the University of Illinois Graduate College and School of Music.

Fall admission only; other terms of entry by departmental petition approval only.

Admission to the **PhD in Music Education** requires the following:

The quality and clarity of all application materials are important aspects of the application process. Please be sure materials represent your readiness in the best way possible.

1. Three letters of recommendation from professors familiar with the applicant's academic and professional suitability to engage in PhD study. Recommendations written by colleagues (i.e. fellow teachers and school principals) are not considered suitable for evaluating the applicant's fitness for the academic rigors of a research-oriented doctoral program.
2. Digital recording of one complete teaching and learning sequence (lesson or rehearsal) in your music education area of specialization (winds/percussion, choral, general, or strings) at the elementary, middle, or secondary level along with written documentation (plan and reflection). Recordings must be uploaded to the **School of Music Dropbox** by December 1.
3. Official scores for the Graduate Record Examination [GRE], obtained within the last five years, must be mailed from Educational Testing Service [ETS] to the University of Illinois at the time of application. The University of Illinois at Urbana-Champaign Institution code is 1836.
4. A completed master's degree of at least 24 graduate credits with a GPA of at least 3.25 [on a 4.0 grading system] is generally

required, however, it is possible to be admitted under extraordinary circumstances for the doctoral program without entering or finishing a master's degree in music education. Contact the Music Education graduate program coordinator, Dr. Janet Barrett, if you have questions about your academic background.

5. An undergraduate grade-point average of at least 3.00 [on a 4.0 grading system] on the last 60 semester credits of baccalaureate music education study is required.
6. Applicants are required to submit a resume or CV that includes educational background, accomplishments and an employment record that includes a minimum of three years of full-time music teaching experience, preferably two consecutive years in the same setting and school.
7. Each applicant is required to submit a detailed essay for doctoral study in music education. This statement of 3-5 paragraphs in length should identify the applicant's primary area of interest, professional activities, career goals, and why the applicant is interested in pursuing a Ph.D. in Music Education at the University of Illinois. This information will be used to determine the compatibility and suitability of the applicant's program goals in relation to the music education division's mission and to identify a faculty member potentially to serve as an academic advisor. It is important that this statement be detailed, well-written, and composed with cognizance of the specific areas of specialization held by music education faculty members.
If an applicant was encouraged by a specific professor to apply as a prospective doctoral advisee of that professor, this should be acknowledged in the letter.
8. Completion of an interview, on campus or by phone, with the music education faculty to be scheduled by the graduate program coordinator upon review of application materials.
9. Completion of a Master's Thesis or Research Project from an accredited institution, or evidence of sufficient background to undertake a research project that is significant and substantial (e.g., domain research project/s, action research study, or field research study). It is up to each applicant to provide evidence with the initial application of prior research experience and potential for undertaking a major PhD dissertation.

For more information on the Music Education program, please refer to the Music Education Graduate Programs Advising site (<http://camil.music.illinois.edu/%7Ebergonzi/gradadvising>).

International applicants to PhD in Music Education whose native language is not English must submit an iBT score of 96. A TOEFL iBT of 102 or higher is required for Full Status Admission to the University of Illinois Graduate College and School of Music.

Fall admission only; other terms of entry by departmental petition approval only.

Language Requirements

For the Master of Music program, applicants in voice and vocal accompanying and coaching are required to have had at least one year each of college-level French, German, and Italian or the equivalent. Applicants in other applied music areas, composition, conducting, musicology, and theory are required to have had one year of any language at the college level or the equivalent.

All Doctor of Musical Arts candidates will be required to demonstrate proficiency in at least one language other than English. Each division may specify which language is required or may require proficiency in more than one language. Please review the current Graduate Music Handbook

(<http://publish.illinois.edu/musicresources/academic-handbooks>) for more details.

Proficiency is required in two languages, depending on the proposed field of specialization, for candidates in the Doctor of Philosophy in Musicology program. This may be demonstrated through two years of undergraduate study in each language.

For all Graduate Degrees:

For those students who do not meet the language requirement at the time of entrance, it may be satisfied by evidence of two years of undergraduate study or the equivalent, or by completion of a two-semester, 500-level reading course sequence at UIUC with a grade of at least B-, or by satisfactory test scores. For up-to-date information regarding language requirements of the School of Music, please see the Graduate Music Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience.

Financial Aid

Fellowships, teaching, graduate, and research assistantships are awarded on a one-year basis with continuation dependent upon success in the program. Specific information on application procedures is available from the Music Admissions Office, (217) 244-7899; musicadmissions@illinois.edu.

Master of Music in Music

The fields of concentration for the Master of Music degree are choral music, instrumental conducting (band), instrumental conducting (orchestra), jazz performance, music composition, musicology, music theory, performance and literature, piano pedagogy, and vocal coaching and accompanying.

- Choral Music Concentration (p. 850)
- Instrumental Conducting - Band Concentration (p. 850)
- Instrumental Conducting - Orchestra Concentration (p. 850)
- Jazz Performance Concentration (p. 850)
- Music Composition Concentration (p. 851)
- Music Theory Concentration (p. 851)
- Musicology Concentration (p. 851)
- Performance and Literature Concentration (p. 852)
- Piano Pedagogy Concentration (p. 852)
- Vocal Coaching and Accompanying Concentration (p. 852)

Master of Music Education in Music Education

- Master of Music Education (p. 849)
- Doctor of Musical Arts in Music (p. 845)
- Doctor of Philosophy in Music Education (p. 848)
- Doctor of Philosophy in Musicology (p. 849)

Artist Diploma in Music

The fields of specialization for the Artist Diploma are keyboard, voice, and orchestra/band instruments. The degree is intended only for musicians at the highest level of artistic accomplishment and potential, and the entrance audition must reflect this exceptional standard. Upon completion of the Artist Diploma, students are expected to be ready for entrance into the music profession as a solo artist, member of an orchestra or chamber or jazz ensemble, or as an apprentice in an opera company, and should be prepared to compete effectively in international competition.

The University of Illinois at Urbana-Champaign's School of Music complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Artist Diploma program. Required information can be found here (<http://archives.provost.illinois.edu/certificates/ArtistsDiplomaMusic/50.0901-Gedt.html>).

Code	Title	Hours
MUS 578- MUS 598,	Applied music/ performance studies	20
MUS 450/ MUS 499,	ensemble participation, both in large and chamber/small groups	8
MUS 500,	performances, including solo and chamber music	4
Total Hours		32

Other Requirements: ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Joint M.B.A. Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the M.B.A. program and their major department office for more information.

Doctor of Musical Arts Concentration in Vocal Coaching and Accompanying

Code	Title	Hours
MUS 577	Advanced Accompanying	12-16
MUS 528	Res & Bibliography in Music (DMA students complete two sections, A & B; each section is 2 credit hours.)	4
Advanced Musicology, select 8 hours from the following:		8
MUS 418	Regional Studies in Musicology (must enroll for 4 credits)	
MUS 511	Fdns/Methods of Musicology I ¹	
MUS 512	Fdns/Methods of Musicology II ¹	

MUS 516	Fieldwork and Ethnography ¹	
MUS 517	Topics in Instrumental Music	
MUS 518	Topics in Opera History	
MUS 519	Analytical Methods: Musicology ¹	
MUS 520	Soc Theory in Ethnomusicology ¹	
MUS 521	Hist Studies in 20thC Music	
MUS 523	Seminar in Musicology ¹	
MUS 524	Sem in Wrks of Select Composer	
Advanced Music Theory, select one from each of the following groups		6
MUS 408 or MUS 400	Analysis of Musical Form (section A-C) Counterpoint and Fugue	
MUS 408	Analysis of Musical Form (section D-E)	
Cognate field or minor area		8-16
Electives (min/max applied toward degree): ²		6-10
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Thesis Hours or Doctoral Project Hours Required – MUS 576/ MUS 599 (min/max applied toward degree):		16
Total Hours		64

Other Requirements: ³

Other requirements may overlap

Concentration Yes

Masters Degree Required for Admission to DMA? Yes

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required: No

Graduate Recital Yes

Minimum GPA: 3.0

¹ Particularly appropriate for DMA students pursuing the Musicology cognate.

² To be selected in consultation with the student's advisor.

³ For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts in Music

The School of Music offers comprehensive musical training for students who seek to combine their artistic and academic interests through pursuit of the Doctoral of Musical Arts.

The fields of concentration for the Doctoral of Musical Arts degree are choral music, instrumental conducting (wind band), instrumental conducting (orchestra), jazz performance, music composition, performance and literature, and vocal coaching and accompanying.

Details for each concentration are linked below:

- Choral Music Concentration (p. 846)
- Instrumental Conducting Orchestra Concentration (p. 846)
- Instrumental Conducting Wind Band Concentration (p. 846)
- Jazz Performance Concentration (p. 847)
- Music Composition Concentration (p. 847)
- Performance and Literature Concentration (p. 848)
- Vocal Coaching and Accompanying Concentration (p. 845)

Doctor of Musical Arts, Choral Music Concentration

Code	Title	Hours
MUS 563 & MUS 565 & MUS 553	Hist of Voc Ens and Chor Music and Adv Choral Perform Techniques and Graduate Orchestral Conducting	16
MUS 528	Res & Bibliography in Music	4
	Advanced Music Literature	6-8
	Cognate field or minor area	8
Ensemble and Electives		4-10
MUS 481 & MUS 450	Voice and Advanced Ensemble Music (section F)	
and electives ¹		

Language Requirements:

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.

Thesis Hours or Doctoral Project Hours	Hours
MUS 576	4
MUS 599	20
Total Hours	64

Other Requirements: ²

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required:	Yes
Graduate Recital	Yes
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts, Instrumental Conducting Orchestra Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	4
MUS 546 & MUS 547	Orchestral Literature I and Orchestral Literature II	12
MUS 572	Doctoral Orchestral Conducting	16
	Advanced Music History or Performance Practice	4
	Advanced Music Theory	4
	Cognate field or minor area	8
	Electives ¹	8
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Thesis Hours or Doctoral Project Hours Required – MUS 576/ MUS 599 (min/max applied toward degree):		8
Total Hours		64

Other Requirements: ²

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	No
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts, Instrumental Conducting Wind Band Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	4
MUS 554		4
MUS 568		4
MUS 573	Doctoral Wind Band Conducting	16
	Advanced Music History or Performance Practice	4
	Advanced Music Theory	4
	Cognate field or minor area	8
	Electives ¹	12
Language Requirements:		

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.	
Thesis Hours or Doctoral Project Hours Required – MUS 576/MUS 599 (min/max applied toward degree):	8
Total Hours	64

Other Requirements:²

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Dissertation Deposit Required:	No
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts, Jazz Performance Concentration

Code	Title	Hours
	500 level major applied music	12-16
MUS 528	Res & Bibliography in Music	4
	Jazz Core Curriculum ¹	10-12
	Advanced Music Theory - Select one from the following options:	3
	MUS 408 Analysis of Musical Form (D-E) or MUS 400 Counterpoint and Fugue	
	Cognate field or minor area	8-16
	Electives (min/max applied toward degree): ¹	7
	Ensembles	0-4
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
	Thesis Hours or Doctoral Project Hours Required – MUS 576/MUS 599 (min/max applied toward degree):	16
Total Hours		64

Other Requirements:²

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes

Preliminary Exam Required:	Yes
Dissertation Deposit Required:	No
Graduate Recital	Yes
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts, Music Composition Concentration

Code	Title	Hours
MUS 506	Graduate Level Composition	12-16
MUS 528	Res & Bibliography in Music	4
Advanced Musicology - select 8 hours from the following:		8
MUS 418	Regional Studies in Musicology (must enroll for 4 credits)	
MUS 511	Fdns/Methods of Musicology I ¹	
MUS 512	Fdns/Methods of Musicology II ¹	
MUS 516	Fieldwork and Ethnography ¹	
MUS 517	Topics in Instrumental Music	
MUS 518	Topics in Opera History	
MUS 519	Analytical Methods: Musicology ¹	
MUS 520	Soc Theory in Ethnomusicology ¹	
MUS 521	Hist Studies in 20thC Music	
MUS 523	Seminar in Musicology ¹	
MUS 524	Sem in Wrks of Select Composer	
Advanced Music Theory - select one course from each of the following two groups		6
MUS 408	Analysis of Musical Form (Section A-C) or MUS 400 Counterpoint and Fugue	
MUS 408	Analysis of Musical Form (Sections D-E)	
	Cognate field or minor area	8-16
	Electives (min/max applied toward degree): ³	6-10
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
	Thesis Hours or Doctoral Project Hours Required – MUS 576/MUS 599 (min/max applied toward degree):	16
Total Hours		64

Other Requirements:⁴

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes

Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required:	No
Graduate Recital	No
Minimum GPA:	3.0

¹ Particularly appropriate for those DMA students pursuing a cognate in Musicology.

² To be selected in consultation with the student's advisor.

³ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Musical Arts, Performance and Literature Concentration

Code	Title	Hours
500 level major applied music		12-16
MUS 528	Res & Bibliography in Music	4
Advanced Musicology, select 8 hours from the following:		8
MUS 418	Regional Studies in Musicology (must enroll 4 four credits)	
MUS 511	Fdns/Methods of Musicology I ¹	
MUS 512	Fdns/Methods of Musicology II ¹	
MUS 516	Fieldwork and Ethnography ¹	
MUS 517	Topics in Instrumental Music	
MUS 518	Topics in Opera History	
MUS 519	Analytical Methods: Musicology ¹	
MUS 520	Soc Theory in Ethnomusicology ¹	
MUS 521	Hist Studies in 20thC Music	
MUS 523	Seminar in Musicology ¹	
MUS 524	Sem in Wrks of Select Composer	
Advanced Music Theory, select one from each of the following groups		6
MUS 408	Analysis of Musical Form (section A-C)	
or MUS 400	Counterpoint and Fugue	
MUS 408	Analysis of Musical Form (section D-E)	
Cognate field or minor area		8-16
Electives (min/max applied toward degree): ²		6-10
Ensembles ³		0-4
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Thesis Hours or Doctoral Project Hours Required – MUS 576/MUS 599 (min/max applied toward degree):		16
Total Hours		64

Other Requirements: ⁴

Other requirements may overlap

Concentration	Yes
---------------	-----

Minimum 500-level Hours Required 12

Overall:

Masters Degree Required for Admission to DMA?	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required:	No
Minimum GPA:	3.0

¹ Particularly appropriate for those DMA students pursuing a cognate in Musicology.

² To be selected in consultation with the student's advisor.

³ Students pursuing the Doctor of Musical Arts in Performance and Literature whose primary instruments are woodwinds, brass, percussion, or strings will have a curricular requirement of four semesters of approved ensemble participation.

⁴ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Music Education

The doctoral program in music education consists of the Doctor of Philosophy in Music Education. The Ph.D. is tailored to meet the varying needs and interests of individuals seeking a terminal degree in Music Education. The Ph.D. is appropriate for those students who possess a strong background and interest in research. The Ph.D. places emphasis on research and research methodology training. Students entering the Ph.D. must have already completed a substantial thesis or research project as part of their master's degree. For more information about this degree, please visit the Music Education Advising website (<http://camil.music.illinois.edu/%7Ebergonzi/gradadvising>).

Code	Title	Hours
MUS 535	Philosophic Inquiry in Mus Ed	4
MUS 536	Soc-Cultur Inquiry Music Learn	4
MUS 544	Doctoral Seminar in Music Education (enrollment every semester) ¹	0-2
Music Education Electives ²		6
Educational Psychology (EPSY) (8 hrs. required, minimum of 4 in the College of Education) ³		8
Educational Policy (EPS or C&I) (8 hrs. required, minimum of 4 in the College of Education) ⁴		8
Research methodology courses in College of Education ⁵		16
MUS 599	Thesis Research (min/max applied toward degree)	16-32
Total Hours		64

Other Requirements: ⁶

Other requirements may overlap

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	Yes

Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

- ¹ Local students must register every semester. Credit is earned only for one semester.
- ² Minimum of 6 hours of electives from music education; or, with approval of the Music Education Graduate Coordinator, courses in other Colleges. (e.g., MUS 529, MUS 530, MUS 531, MUS 532, MUS 533, MUS 537, MUS 538, MUS 539, MUS 541, MUS 542)
- ³ MUS 531 may be counted as one EPSY course.
- ⁴ To partially fulfill the EPS requirement, a student may take courses in the College of Education or one of the following: MUS 537 or MUS 539.
- ⁵ A student must take 12 hours of College of Education Research Specialization Methodology courses, unless exceptions are approved by the Music Education Graduate Coordinator. In addition, MUS 534 earns four credits, bringing the total Research Methodology credits to 16.
- ⁶ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Musicology

The Ph.D. in Musicology is intended for those whose interests lie in research in the history of music, systematic musicology, or ethnomusicology.

Code	Title	Hours
Minimum of 8 hours selected from:		8
MUS 516	Fieldwork and Ethnography	
MUS 519	Analytical Methods: Musicology	
MUS 520	Soc Theory in Ethnomusicology	
MUS 523	Seminar in Musicology	
Supporting Coursework		24
MUS 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements: ¹

Other requirements may overlap
Students are expected to take courses in fields outside music that are appropriate to the proposed area of thesis research

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	No
Preliminary Exam Required (taken after all coursework is completed):	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

- ¹ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music Education

The Master of Music Education degree program is designed to meet the needs and interests of individuals who are already certified to teach music and who seek to continue their careers as public school music educators or music administrators. It is also possible to structure a program that will enable individuals interested in seeking careers in education-related fields or as a step in preparation for eventual college teaching.

Although prior teaching experience is not a requirement for entrance into this degree program, graduate study will be more meaningful if teaching experience in the field has first been gained. Therefore, individuals considering pursuit of the MME are urged to plan to teach one to three years prior to initial enrollment or before completing the degree. Students interested in gaining certification to teach music as part of the MME should refer to the MME+certification website for information about the MME+Certification Program.

Code	Title	Hours
MUS 532	Global Perspectives on Mus Ed	4
MUS 533	Research in Music Education	4
Music Education Electives (any 400 or 500-level music education course)		6-8
EPSY, EPS or C&I (Educational Psychology, Educational Policy or Curriculum & Instruction)		4
Music (Music Theory, Musicology/Ethnomusicology, Conducting and Literature, Applied Study (4 cr. max), Ensemble (1 cr. max)		10
Choose 1 Capstone Option:		2-4
Capstone Option I: MUS 569 - Capstone Project Synthesis (2 credits)		
Capstone Option II: MUS 599 - Thesis (4 credits)		
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	14
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

- ¹ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Choral Music Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
MUS 564	Choral Conducting Project	2
MUS 450	Advanced Ensemble Music (section F)	4
Major Area Coursework		8
Electives ¹		16
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Total Hours		32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive Examination	Yes
Graduate Recital	Yes
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Instrumental Conducting Band Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
MUS 540	Graduate Wind Band Conducting	8
MUS 554		4
Electives ¹		8
Advanced Music History, Music Theory, or Performance Practice		8
Total Hours		32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive Examination	Yes
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://music.illinois.edu/prospective-students/graduate>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Instrumental Conducting Orchestra Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
MUS 553	Graduate Orchestral Conducting	12
MUS 546 & MUS 547	Orchestral Literature I and Orchestral Literature II	8
Electives ¹		6
Advanced Music History, Music Theory, or Performance Practice		4
Total Hours		32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive examination	Required
Minimum 500-level Hours Required Overall:	12
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Jazz Performance Concentration

<http://www.music.illinois.edu>

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
500-level Applied Music Major		8-12
Music literature course in major applied area ¹		8
Electives (including ensembles) ²		6
Advanced jazz courses ³		4-8
Total Hours		32

Other Requirements ⁴

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required Overall:	12
Master's Comprehensive Examination	Yes
Minimum GPA:	3.0

- ¹ To be selected in consultation with the student's advisor.
- ² May be selected from additional jazz courses, musicology, music theory, and non-music major courses; to be chosen in consultation with student's advisor.
- ³ To be selected from the Jazz Core Curriculum in consultation with the student's advisor.
- ⁴ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Music Composition Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
Courses in Theory of Music		8
MUS 506	Graduate Level Composition	12
Electives ¹		10
Language Requirements:		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Total Hours		32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive Examination	Yes
Must present a portfolio of their works for approval by the composition faculty	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Music Theory Concentration

Code	Title	Hours
MUS 505	Individ Topics in Music Theory	8
To be selected from the following courses:		4
MUS 528	Res & Bibliography in Music	
MUS 511	Fdns/Methods of Musicology I	
MUS 512	Fdns/Methods of Musicology II	
Courses in Theory, Composition and Musicology		6
Electives (including ensemble)		8
Language Requirements		

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.

MUS 599	Thesis Research (min/max applied toward degree)	6
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Musicology Concentration Thesis Option

Code	Title	Hours
8 hours selected from:		8
MUS 516	Fieldwork and Ethnography	
MUS 519	Analytical Methods: Musicology	
MUS 520	Soc Theory in Ethnomusicology	
MUS 523	Seminar in Musicology	
MUS 511	Fdns/Methods of Musicology I	4
MUS 512	Fdns/Methods of Musicology II	4
Electives to include 2 semesters of ensemble participation		8
MUS 599	Thesis Research ((min/max applied toward degree))	8

Language Requirements

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.

Total Hours		32
-------------	--	----

Other Requirements ¹

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
12 hours selected from:		12
MUS 516	Fieldwork and Ethnography	
MUS 519	Analytical Methods: Musicology	
MUS 520	Soc Theory in Ethnomusicology	
MUS 523	Seminar in Musicology	
MUS 525	Rdgs in Musical and Mus Theory	4
MUS 511	Fdns/Methods of Musicology I	4
MUS 512	Fdns/Methods of Musicology II	4
Electives to include 2 semesters of ensemble participation		8
Language Requirements		
Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.		
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Performance and Literature Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
500 level Applied Music Major		8-12
Music literature course in major applied area		8
Electives ¹		10-14
Ensembles ²		0-4
Total Hours		32

Other Requirements ³

Other requirements may overlap

Concentration	Yes
Minimum 500-level Hours Required	12
Overall:	
Graduate Recital	Yes
Master's Comprehension Examination	Yes
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² Students pursuing a Master of Music in Performance and Literature whose primary instruments are woodwinds, brass, percussion, or strings will be enrolled in an approved ensemble for every semester of full-time study. Students seeking exemption from the requirement must petition the Performance Studies and Activities Committee following two semesters of ensemble membership. Requests for exemption should be made within the first six weeks of the semester prior to the term for which the exemption is being requested.

³ For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Piano Pedagogy Concentration

Code	Title	Hours
MUS 480	Piano	4
MUS 528	Res & Bibliography in Music	2
MUS 557	Piano Literature	8
MUS 570	Prac Pno Tchg Child and Teens	4
MUS 571	Practicum in Piano Tchg Adults	4
Electives ¹		10

Language Requirements:

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.

Total Hours 32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive Examination	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's *Graduate Handbook* (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Music, Vocal Coaching and Accompanying Concentration

Code	Title	Hours
MUS 528	Res & Bibliography in Music	2
MUS 577	Advanced Accompanying	12
MUS 558	Vocal Literature	8
Electives ¹		10

Language Requirements:

Courses taken to meet language requirements do not count toward the degree. See the departmental handbook for details.

Total Hours 32

Other Requirements ²

Other requirements may overlap

Concentration	Yes
Master's Comprehensive Examination	Yes
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ To be selected in consultation with the student's advisor.

² For additional details and requirements refer to the department's Graduate Handbook (<http://publish.illinois.edu/musicresources/academic-handbooks>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Natural Resources and Environmental Sciences

<http://nres.illinois.edu>

Head of Department: Jeffrey Brawn
W-503 Turner Hall
1102 South Goodwin Avenue
Urbana, IL 61801
(217) 333-2770
Fax: (217) 244-3219
E-mail: nres-ssc@illinois.edu

Major: Natural Resources and Environmental Sciences
Degrees Offered: M.S., Ph.D.

Online Program: Natural Resources and Environmental Sciences
Degrees Offered: M.S.

Joint Degree Program: Master of Science in Natural Resources and Environmental Sciences and Juris Doctor in Law
Degrees Offered: M.S. and J.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Natural Resources and Environmental Sciences and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Program

The Department of Natural Resources and Environmental Sciences is a broad and diverse department offering flexible M.S. and Ph.D. degrees. The mission of the department is to establish and implement research and educational programs that enhance environmental stewardship in the management and use of natural, agricultural, and urban systems in a socially responsible manner. The department is composed of approximately 24 faculty, 60 affiliates, and 160 graduate students. Offering education and research in a variety of disciplines, the department provides a systems-level perspective that few other departments can offer. Further illustrating the breadth of natural

resources and environmental sciences, research areas include but are not limited to:

- agronomy/agroecology
- aquatic chemistry
- conservation ecology
- ecosystem science
- environmental education
- fish and wildlife ecology and management
- forest ecology
- humans dimensions of the environment
- landscape ecology
- microbial ecology
- natural resource economics
- natural resource policy
- plant ecology
- physiology and genetics
- restoration ecology
- quantitative and spatial analysis
- soil science and conservation
- sustainability

Admission

NRES graduate advisers are seeking students with strong letters of reference, evident motivation to undertake graduate study, relevant experience, and good preparation in prerequisite courses. Graduate applicants must have an undergraduate grade point average (GPA) of 3.0 (A = 4.0) calculated on the last 2 years of undergraduate coursework to be admitted with full status. Ph.D. applicants must have earned an M.S. (or expect to be awarded the degree before beginning the NRES program) with a grade point average of at least 3.5. Applicants should have adequate preparation in the fundamental sciences and courses appropriate to their proposed field of study (applicants should talk with prospective advisers about the background they expect). Those without the necessary prerequisites may be accepted conditionally, and the undergraduate courses must be completed before the degree will be awarded. The Graduate Record Examination (GRE) is required of all students applying to the campus M.S. or Ph.D. program. There is no minimum score for admission, and the results will be examined along with GPA, letters of recommendation, statement of purpose, research experience, and other information in the application package. However, successful applicants typically have a combined quantitative/verbal/analytical GRE percentile of at least 70%. Students whose native language is not English are required to submit the results of the TOEFL or IELTS as evidence of English proficiency. Official scores are required to be submitted directly from TOEFL/ETS or IELTS to the University.

Minimum English test scores and other information for international applicants can be found at: www.grad.illinois.edu/admissions/apply/begin/international (<http://www.grad.illinois.edu/admissions/apply/begin/international>). Applicants who are not U.S. citizens must also submit evidence that they have sufficient financial support for their program of study. Prospective graduate students are urged to apply for admission to the degree program as early as possible, preferably six to ten months before the beginning of the semester in which they expect to enroll. Prospective students must review important application information available at <http://nres.illinois.edu/graduate/prospective>. Applicants to the campus programs wishing to be considered for a fellowship must apply for admission to the fall semester by January 15th.

Medical Scholars Program

Please note applications are not being accepted at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Natural Resources and Environmental Sciences. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a Graduate College requirement, experience in teaching is considered an important part of this graduate program, particularly for Ph.D. students.

Faculty Research Interests

Graduate degree programs in NRES are informed by the major areas of faculty research, which include:

- agronomy/agroecology
- conservation ecology
- ecosystem science
- fish and wildlife ecology and management
- forest ecology
- global environmental change
- human dimensions of natural resources and ecology
- landscape ecology
- microbial ecosystems
- natural resource policy
- plant ecology
- physiology and genetics
- quantitative and spatial methods
- restoration ecology
- soil science and conservation
- sustainability
- water/biogeochemistry
- wetland ecology

Students in NRES can participate in affiliated programs like those listed below.

Program in Environmental and Resource Economics: Students involved in the program in Environmental and Resource Economics (pERE) explore the complex relationships between natural resource allocation, environmental quality and economic prosperity. Students and faculty from five other University departments in addition to NRES are using economics to analyze policy toward some of today's most critical environmental and natural resource issues.

Human Dimensions of Environmental Systems: NRES graduate students may participate in HDES, an interdisciplinary program comprised of

faculty from six colleges at Illinois. Participants are united in the study of connections between humans and the environment. The program is built on the premise that the best insights are not limited to the domain of a single discipline and is interdisciplinary in all its pursuits.

Financial Aid

Several sources of financial aid are available within the department:

- research assistantships, supported by federal and grant funds made available to the natural resources and environmental sciences faculty
- teaching assistantships
- departmental fellowships
- University fellowships
- College of Agricultural, Consumer and Environmental Sciences Jonathan Baldwin Turner Fellowships
- waivers of tuition and fees

Most NRES graduate students with financial support have a research assistantship provided by the adviser. Appointments as research and teaching assistants and fellows provide a stipend and waive tuition and some fees.

Financial aid is granted on a competitive basis. Applicants are judged for academic potential based on past performance, experience, motivation, dedication to the designated area of interest and, where applicable, the potential to satisfy the objectives of a donor. Fellowships have minimum GPA and GRE score requirements. Information about the current availability of financial aid can be obtained from the graduate coordinator or, in the case of research assistantships, directly from faculty members working in the area of interest.

Master of Science in Natural Resources and Environmental Sciences

Two options are open to students who wish to pursue a Master of Science degree in the Department of Natural Resources and Environmental Sciences. The M.S. Thesis Option program helps students develop into researchers. Coursework is no longer the primary focus, and students learn how to create, plan, and carry out independent research. The M.S. Non-Thesis Option program guides students in the acquisition of professional expertise beyond the undergraduate degree. The program requires a culminating/capstone experience, which may be satisfied in one of three ways: an individual investigative project, a collaborative, possibly interdisciplinary, group project, or a professional internship experience. The Non-Thesis Option may also be appropriate in special cases where a student executes a major special project which is equivalent to a M.S. thesis, but which does not lend itself to the thesis format. Students on campus are admitted into the thesis option and, under certain conditions, may be allowed to transfer into the non-thesis option by petitioning the Department. In contrast, all students in the online M.S. program are admitted into the non-thesis option unless they have identified a thesis advisor before being admitted.

The thesis option requires that the student satisfactorily complete a minimum of 32 hours of graduate coursework, of which a minimum of 12 graduate hours are 500- level courses. This coursework shall include NRES Seminar (500) each semester, minus one, that the student is enrolled, Professional Orientation (594) and 4 to 12 graduate hours of Thesis Research (599), which culminates in the completion and oral defense of a thesis.

A non-thesis option student must satisfactorily complete a minimum of 32 hours of graduate coursework, of which a minimum of 12 graduate hours are 500-level courses, Professional Orientation (594), and 3 to 8 hours of capstone experience in the form of a Capstone Research Project (503), Capstone Internship Experience (505), or Capstone Group Research Project (507). The student must prepare and submit a report analyzing the capstone learning experience and perform satisfactorily on written and oral final examinations.

Thesis Option

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
Electives		19-27
NRES 599	Thesis Research (min/max applied toward degree)	4-12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Completion, defense and deposit of thesis

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://nres.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
Select one of the following		3-8
NRES 503	Capstone Research Project	
NRES 505	Capstone Internship Experience	
NRES 507	Capstone Group Res Project	
Electives		23-28
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Written final examination; preparation, presentation, oral exam, and approval of a capstone project report.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://nres.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Natural Resources and Environmental Sciences

The Ph.D. program prepares students to be an expert in their fields. Earning a Ph.D. involves mastering a field of study and increasing the knowledge and understanding in that field through the completion of a dissertation that makes a contribution to existing research. Students working toward the Ph.D. degree are required demonstrate competency in at least three content areas by passing a general examination (the preliminary examination) before admission to candidacy for the doctoral degree. Students consult with their advisers to identify their competency content areas and the courses they will take, which are recorded on the Doctoral Plan of Study. The NRES Ph.D. program requires students to register for NRES Seminar (500) each semester, minus two, that the student is enrolled. To earn the doctorate, students must successfully complete a final oral examination (thesis defense). In most cases, students earn a M.S. before starting work on a Ph.D. However, in certain cases, it is possible to take the coursework required for the M.S. as part of a Ph.D. program. Details of the B.S. to Ph.D. program are available from the graduate coordinator.

Code	Title	Hours
NRES 594	NRES Professional Orientation (need not be repeated if taken as an NRES M.S. student)	1
Graded Coursework (not including NRES 501, 512 or other independent study or readings course)		12
Electives		0-51
NRES 599	Thesis Research (max applied toward degree)	0-51
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum GPA: 3.0

Masters Degree Required for Admission to PhD? Yes

Qualifying Exam Required No

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://nres.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.S. in Natural Resources and Environmental Sciences and J.D. in Law

Prospective students interested in specializing in environmental or natural resource law are invited to explore our joint degree program. This unique program is offered through collaboration between the College of Law and the Department of Natural Resources and Environmental Sciences. Many law schools have responded to public concern about the environment by offering more courses in natural resources and environmental law. The University of Illinois at Urbana-Champaign

goes one step further, however, allowing students to supplement a law program with training in a related scientific field.

Thesis Option

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
LAW 616	Environmental Law and Pol I	3-4
LAW 618	Natural Resources	2-4
LAW 622	Land Use Planning	2-4
Research/Project/Independent Study Hours (Optional - min/max applied toward degree):		4-8
NRES 599	Thesis Research (min/max applied toward degree)	4-12
Requirements for the JD in Law		90
Total Hours		102

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Completion, defense and deposit of thesis.

Students may count up to 12 hours of NRES course work toward the required 90 hours of Law course work. They may also count 8 hours of Law credit toward the 32 hours required for the M.S. degree

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://nres.illinois.edu/graduate/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
NRES 594	NRES Professional Orientation	1
LAW 616	Environmental Law and Pol I	3-4
LAW 618	Natural Resources	2-4
LAW 622	Land Use Planning	2-4
Electives		11-21
Select one of the following:		3-8
NRES 503	Capstone Research Project	
NRES 505	Capstone Internship Experience	
NRES 507	Capstone Group Res Project	
Requirements for the JD in Law		90
Total Hours		102

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Written final examination; preparation, presentation, oral exam, and approval of a capstone project report.

Students may count up to 12 hours of NRES course work toward the required 90 hours of Law course work. They may also count 8 hours of Law credit toward the 32 hours required for the M.S. degree

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://nres.illinois.edu/graduate/programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Online M. S. Program

The online M. S. graduate program in NRES enables students to continue their education in disciplines related to natural resources and environmental sciences through part-time study at locations away from the Urbana-Champaign campus. This program meets the needs of persons currently working or wanting to work in the areas of conservation, ecology, restoration ecology, soil science, sustainable development, urban ecology, urban forestry, urban wildlife management, and water resources management. Students can enroll in individual courses for professional and/or academic advancement, or apply for admission to the M.S. degree program. Application deadlines and other important information are available at <http://nres.illinois.edu/graduate/future/apply>.

The thesis option requires that the student satisfactorily complete a minimum of 32 hours of graduate coursework, of which a minimum of 12 graduate hours are 500-level courses. This coursework shall include Professional Orientation (594) and 4 to 12 graduate hours of Thesis Research (599), which culminates in the completion and oral defense of a thesis.

A non-thesis option student must satisfactorily complete a minimum of 32 hours of graduate coursework, of which a minimum of 12 graduate hours are 500-level courses, Professional Orientation (594), and 3 to 8 hours of capstone experience in the form of a Capstone Research Project (503), Capstone Internship Experience (505), or Capstone Group Research Project (507). The student must prepare and submit a report summarizing the capstone learning experience and perform satisfactorily on a final examination.

Neuroscience

<http://neuroscience.illinois.edu>

Program Director: Martha Gillette
 Program Coordinator: Samuel Beshers
 2325 Beckman Institute
 405 North Mathews Avenue
 Urbana, IL 61801
 (217) 333-4971
 E-mail: nsp@life.illinois.edu

Major: Neuroscience
 Degrees Offered: Ph.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Neuroscience and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Program

The Neuroscience Program is an interdisciplinary and highly individualized Ph.D. program. Students have varied backgrounds but typically have undergraduate degrees in psychology, biology, electrical engineering, or computer science. The Neuroscience Program guides students to become productive, scholarly neuroscientists with access to careers in academic research, medicine, industry or non-research careers such as law, policy, or journalism. The faculty have broad and diverse research interests; areas of particular strength include aging, brain plasticity, cognitive functions, neurogenomics, molecular bases of development and disease, and neuroengineering. Integrative and collaborative studies that bridge two or more labs are encouraged. There is a joint M.D./Ph.D. program offered from the Neuroscience Program and the University of Illinois College of Medicine (Urbana-Champaign campus) known as the Medical Scholars Program.

Admission

Applications are considered individually by the admissions committee, usually for the fall semester. Graduate Record Examination (GRE) scores are required. International applicants must meet the minimum Test of English as a Foreign Language (TOEFL) requirement set by the Graduate College. Admission and financial aid are considered together.

Medical Scholars Program

This program is no longer accepting new students. The University is launching the new Carle Illinois College of Medicine. We look forward to announcing the renewal of the MD/PhD program when it becomes available.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Neuroscience. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Financial Aid

The Neuroscience is committed to supporting its students and makes every effort to ensure that students who remain in good academic standing receive full support including tuition waiver and stipend throughout their tenure in the program. Support may come in the form of fellowships, traineeships, research assistantships, or teaching assistantships according to the student's qualifications.

Doctor of Philosophy in Neuroscience

Because of the breadth of the fields in this program, the coursework is tailored to the student's fields of interest as declared by a major and at least two minor areas of concentration from among those listed above. A faculty committee of representatives from the major and minor areas will then meet regularly with the student to plan coursework and research experience. The goal of this plan is to allow maximum flexibility while

providing students with close guidance. Courses and laboratory research experience are supplemented by weekly seminars in neuroscience.

Code	Title	Hours
NEUR 520	Advanced Topics in Neuroscience (Section 1, Seminar - each of first 4 semesters)	4
NEUR 500	Topics in Neuroscience	2
NEUR 520	Advanced Topics in Neuroscience (Section 2, Professional Development Program.)	1
NEUR 599	Thesis Research (0 min applied toward degree)	0
Total Hours		96

Other Requirements¹

Other requirements may overlap

Il students must complete a minimum of one semester of service as a teaching assistant (one semester @50% or 2 semesters @25% appointment) or the requirement may be met by education outreach activity under the supervision of a Neuroscience Program faculty member.

Masters Degree Required Before Admission to Ph.D.?	No
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Program for Graduate Study (<http://www.neuroscience.uiuc.edu/program/study>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Nuclear, Plasma, and Radiological Engineering

<http://npres.illinois.edu>

Head of the Department: James F. Stubbins
 Director of Graduate Studies: Rizwan Uddin
 Associate Head of Academic Programs: Rizwan Uddin
 216 Talbot Laboratory
 104 South Wright Street
 Urbana, IL 61801
 (217) 333-3598, Admissions, (217) 333-2295 Main Line
 E-mail: nuclear@illinois.edu

Major: Nuclear, Plasma, and Radiological Engineering
 Degrees Offered: M.S., Ph.D.

Major: Engineering
 Degrees Offered: M.Eng.
 Graduate Concentration: Energy Systems

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Nuclear, Plasma, and Radiological Engineering and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>).

Graduate Degree Programs

The Department of Nuclear, Plasma, and Radiological Engineering (NPRE) offers programs leading to Master of Science and Doctor of Philosophy degrees in Nuclear, Plasma, and Radiological Engineering. The Master of Science and Doctor of Philosophy degree programs are centered around three theme areas:

- nuclear power engineering
- fusion and plasma science and engineering
- radiological engineering and medical physics

Advanced course work and active research programs are offered in all of these areas.

The NPRE department also administers for the College of Engineering a Master of Engineering degree program with a Concentration in Energy Systems.

The Faculty of the Department are internationally recognized experts in the areas of: nuclear science and engineering, radiation processes and transport, materials science, thermal sciences, systems engineering, energy conversion processes and systems, plasma sciences and processing, fusion energy, radiation-based medical imaging and therapy, dosimetry and radiation protection, radiation detection analysis, reliability and risk analysis, energy systems, and international security. Graduate students in the Department are active participants and contributors to these areas of education and research and typically pursue careers in one of these areas. Graduate students in the Department are also encouraged to take part in course work and research activities in other engineering and science departments to complement their professional development in the nuclear engineering field. Opportunity also exists for specializing in:

1. computational science and engineering via the Computational and Science and Engineering (<http://www.cse.illinois.edu>) (CSE) graduate transcriptable concentration
2. energy and sustainability engineering via the Energy and Sustainability Engineering (<http://ease.illinois.edu>) (EaSE) graduate certificate option.

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Nuclear, Plasma, and Radiological Engineering.

Admission

Application for admissions to the master's and doctoral degree programs is open to all graduates in engineering, mathematics, and the physical sciences with a grade point average of at least 3.00 (A = 4.00) for the last two years of undergraduate work and any graduate work completed. Prerequisites for admission include a course in ordinary differential equations plus one other mathematics course beyond calculus; an intermediate course in atomic and nuclear physics or interaction of radiation with matter; a course in electrical circuit theory; a course in thermodynamics; a course in fluid mechanics or continuum mechanics; and a course introducing nuclear engineering. A student may be admitted before completion of these prerequisites, but he or she must allow

additional time to make up for these deficiencies; courses taken to make up such deficiencies will not count toward the number of units required for the graduate degree. Transcripts and letters of recommendation are required. The Graduate Record Exam (GRE) (<http://www.ets.org>) is required. Information such as undergraduate class rank is recommended.

For full consideration of fall admission with financial aid, application receipt deadline is January 15. Students who wish to enter in the spring term should contact the Department before applying.

All applicants whose native language is not English are required to have a minimum TOEFL (<http://www.toefl.org>) score of 79 (iBT), 213 (CBT), or 550 (PBT); or minimum International English Language Testing System (IELTS) (<https://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses (<http://linguistics.illinois.edu/students/esl/guidelines>) based on an ESL Placement Test (EPT) taken upon arrival to campus.

Applicants to the joint M.B.A. degree program must meet the admissions standards for both programs and be accepted by both programs.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Nuclear, Plasma, and Radiological Engineering and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Nuclear, Plasma, and Radiological Engineering graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217)-333-8146, mospo@illinois.edu).

Medical Scholars Program

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Nuclear, Plasma, and Radiological Engineering graduate degree.

Faculty Research Interests

Faculty research interests cover a wide range including, but not limited to, those listed above under the Graduate Degree Programs section. Faculty in other related fields are available to supervise research for students through formal "affiliate faculty" appointments.

Facilities and Resources

A wide range of major research resources are available for nuclear engineering research. In support of the plasma research area, there are over a dozen ultra-high-vacuum plasma analysis and processing facilities including major Z and Theta Pinches. The flagship device is a mid-size stellarator/tokamak called HIDRA: Hybrid Illinois Device for Research and Applications. It is used for fusion research as well as a variety of plasma-material interaction studies. Graduate students often perform interdisciplinary research work in the Materials Research Laboratory,

Micro and Nanotechnology Laboratory, Coordinated Science Laboratory, National Center for Supercomputing Applications, and Beckman Institute for Advanced Science and Technology. The mechanical behavior program provides a variety of facilities for studies of nuclear materials, including the Advanced Materials Testing and Evaluation Laboratory. Other radiological laboratories are also available for environmental studies and nuclear spectroscopy, health physics and radiation studies, nuclear-waste management, thermal hydraulics and reactor safety, reactor physics and reactor kinetics, controlled nuclear fusion, direct energy conversion, and plasma physics. The Department is a participant in the Computational Science and Engineering Program on campus. In addition, a wide array of microcomputers and workstations are available.

Financial Aid

Most graduate students receive some form of financial aid. Fellowships are available to support the best applicants. Other students are supported as graduate research, teaching, or general assistants. Financial aid includes federally sponsored traineeships and fellowships and University and industry fellowships. The University is approved for several fellowships including those from the Department of Energy, Nuclear Regulatory Commission, the National Science Foundation, and Hertz. Part- and full-time assistantships include exemption from tuition and partial fees. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Engineering in Engineering, Energy Systems Concentration (p. 860)
- Master of Science in Nuclear, Plasma, and Radiological Engineering (p. 860)

Doctor of Philosophy in Nuclear, Plasma, and Radiological Engineering

Course requirements for the Ph.D. degree include at least 24 graduate hours of course credit beyond that required for the M.S. degree. In addition, 40 or more graduate hours of doctoral thesis credit are required and typically take two or more additional years to complete. Students desiring to work toward the Ph.D. degree must pass the departmental qualifying examination to be admitted to doctoral study. The doctoral candidate must complete course work, pass a preliminary doctoral examination, write a doctoral thesis, and successfully defend the thesis at a final examination before a doctoral faculty committee. A doctoral student typically takes several courses in nuclear engineering plus additional courses that support a specialized research area and provide background in mathematics and science. Under exceptional circumstances and by approved petition, doctoral research may be undertaken off campus.

Code	Title	Hours
NPRE 599	Thesis Research (min-max applied toward degree)	40

NPRE 501 & NPRE 521	Fundamentals of Nuclear Engrg and Interact of Radiation w/Matter (if not taken while completing the M.S. degree)	0-8
NPRE 596	Seminar in Nuclear Sci & Engrg (registration for 1 hour every semester while in residence; credit does not apply toward the degree.)	0
Elective Courses (subject to Other Requirements and Conditions below)		16
8 hours of 500-level courses		
4-8 hours of NPRE graduate level courses, not counting 402, 446, 501, 521, 596, or 599		
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Consult department for details of minimum hours required within the unit.

Credit in NPRE 402 or NPRE 446 does not count toward the degree.

A Master's degree or equivalent is required for admission to the Ph.D. program.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's printed handbook and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Info (<http://npres.illinois.edu/academics/graduate-program/qualifying-examination>)

- Concentration in Energy Systems, available for M.Eng. degree only (p. 860)

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the M.B.A. program and their major department office for more information.

Master of Engineering in Engineering with Concentration in Energy Systems

Requirements

Code	Title	Hours
ENG 471 & ENG 571	Seminar Energy & Sustain Engrg and Theory Energy & Sustain Engrg	4
	Professional Development (One of three options)	4
	1. Practicum: ENG 572 as approved by an advisor	
	2. Project: ENG 573 as approved by an advisor	
	3. 4 credit hours of course work approved by an advisor from the Topical Breadth list or other advisor approved course meeting the requirements for Professional Development.	
	Primary Field courses from an approved list (http://energysystemsmeng.engineering.illinois.edu/degree-requirements)	12
	Secondary Field courses from an approved list (http://energysystemsmeng.engineering.illinois.edu/degree-requirements)	6
	Topical Breadth course from approved list (http://energysystemsmeng.engineering.illinois.edu/degree-requirements)	3
	Electives courses – chosen in consultation with an advisor	3
	Total Hours	32

Other Requirements and Conditions (may overlap): ¹

ENG 572 or ENG 573 may be taken for variable credit up to a maximum of 8 credit hours subject to advisor approval. Additional credit hours exceeding the 4 credit hour requirement may be applied toward the Primary Field course work requirement or the Elective course work requirement.

A minimum of 16 500-level credit hours applied toward the concentration, 8 of which must be in ENG or courses in the primary field

A maximum of one 1-credit-hour course may be applied toward the minimum 16 500-level credit-hour requirement.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's printed handbook and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Nuclear, Plasma, and Radiological Engineering

The M.S. degree takes at least two semesters and a summer session to complete and normally takes three semesters and a summer session. The curriculum requires courses covering the fundamentals of nuclear engineering and radiation interaction with matter, plus two or more courses in an area of concentration chosen by the student in consultation with an advisor. Typical areas are:

- fission engineering including reactor physics and radiation transport
- reactor analysis, thermal hydraulics, and reactor safety
- fuel cycles, radiation effects, and radioactive waste management
- fusion engineering and technology
- plasma engineering and processing
- nuclear materials, corrosion, and irradiation damage
- neutron scattering
- nuclear nonproliferation and public policy issues
- radiation detector development and homeland security applications
- biomedical imaging, MRI applications, radiation protection, radiation-based therapy, and health physics
- reliability and risk analysis and probabilistic risk assessment
- computational methods including Lie Group, integral-differential equation, Monte Carlo, big data and fuzzy logic applications.

Code	Title	Hours
NPRE 599	Thesis Research (min-max applied toward degree)	4-8
NPRE 501 & NPRE 521	Fundamentals of Nuclear Engrg and Interact of Radiation w/Matter	8
NPRE 596	Seminar in Nuclear Sci & Engrg (registration for 1 hour every semester while in residence; credit does not apply toward the degree.)	0
	Two or more NPRE courses in an area of concentration	8
	Additional 500-level courses	8
	Elective courses (subject to Other Requirements and Conditions below)	0-4
	Total Hours	32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Credit in NPRE 402 or NPRE 446 does not count toward the degree.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's printed handbook and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Nutritional Science

<http://www.nutritionalsciences.illinois.edu>

Director of the Division and of Graduate Studies: Rodney W. Johnson
Correspondence and Admission Information: Sarah Wells

449 Bevier Hall
905 South Goodwin Avenue
Urbana, IL 61801
(217) 333-4177
Fax: (217) 333-9368
nutritionalsciences@illinois.edu

Major: Nutritional Science
Degrees Offered: M.S. and Ph.D.

Joint Degree Program: Doctor of Philosophy in Nutritional Science and Master of Public Health (p. 715)
Degrees Offered: Ph.D. and M.P.H.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Nutritional Science and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.uiuc.edu/mdphd>)

Graduate Degree Programs

The Division of Nutritional Sciences is the interdisciplinary program for graduate education in nutrition at the University of Illinois at Urbana-Champaign. More than 60 faculty, representing 15 different departments in seven colleges on the Urbana and Chicago campuses, are members of the Division. The Division is a comprehensive program of study leading to the M.S. and Ph.D. degrees, alone or in combination with either the M.D. or M.P.H. degrees or the registration in dietetics (R.D.). Flexible graduate programs of study enable students to individualize their coursework and professional training. In addition, extensive research opportunities are available that address the spectrum from research at the level of the genome and proteome to clinical and population-based intervention studies. Specialties are classified into six broad theme areas in which our faculty and students are most active (see Research Interests (<http://nutrsci.illinois.edu/research>)). These themes best reflect the areas of nutrition research for which the Division is recognized both nationally and internationally.

Admission

Applicants are expected to have an admission grade point average of 3.0 (A = 4.0) for the last two years of coursework and basic courses in chemistry, biology and mathematics. Deficiencies in these subjects must be removed during the first year of graduate study. The Graduate Record Examination (GRE) is required. Applicants whose native language is not English must achieve a minimum paper-based Test of English as a Foreign Language (TOEFL) score of 550, 213 on the computer-based test or 79 on the iBT TOEFL. Admission in the fall, spring or summer will be considered.

Internship in Dietetics

Students in the Division of Nutritional Sciences can participate in an Academy of Nutrition and Dietetics (AND) accredited graduate dietetic internship program administered through the Department of Food Science and Human Nutrition. The program includes defined graduate course requirements and a six-month dietetic clinical internship. In order to be eligible for the graduate internship program, students must complete all undergraduate course competencies required by the AND for the Registration in Dietetics (R.D.). Students are accepted into the internship by computer matching through the standard dietetic internship application process. More information on the graduate dietetic internship program can be obtained at fshn.illinois.edu/graduate/dietetic-internship/prospective (<http://fshn.illinois.edu/graduate/dietetic-internship/prospective>)

internship/prospective) or from the Department of Food Science and Human Nutrition (260 Bevier Hall; (217)-244-4498).

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Nutritional Science. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Faculty Research Interests

The Division is composed of faculty whose research interests cover many disciplines within nutrition. Descriptions of faculty research interests and a listing of recent publications are available at the Division website. Six broad theme areas are:

- Animal Nutrition
- Biochemical and Molecular Nutrition
- Community Nutrition, Nutrition Education and Consumer Acceptance
- Dietary Bioactive Components
- Food Safety and Toxicology
- Human and Clinical Nutrition

Facilities and Resources

The Division (<http://www.nutrsci.illinois.edu>) office is located in room 449 Bevier Hall. Office and research laboratory facilities utilized by graduate students in Nutritional Sciences are administered by the home department of the student's adviser.

Financial Aid

Financial assistance is available in the form of assistantships, scholarships and fellowships. Applicants seeking fall admission and expecting to be considered for financial assistance should file their applications before the preceding December 15th. Later applications may be considered, depending on the space and support available.

Master of Science in Nutritional Science

Additional courses are available in:

- human and animal nutrition
- biochemistry
- physiology
- immunology
- endocrinology

- food science
- education
- anthropology
- psychology
- sociology
- statistics
- agricultural economics

The non-thesis degree also requires an oral final exam. Students are not admitted directly into the non-thesis program.

Thesis Option

Code	Title	Hours
NUTR 500	Nutritional Sciences Seminar (Enrollment each semester a student is registered in the program)	0
Statistics		4
FSHN 593	Seminar in Foods and Nutrition (One semester of seminar)	2
or NUTR 590	Disciplinary Seminar	
NUTR 510	Topics in Nutrition Research	3-5
or NUTR 561	Advanced Clinical Nutrition	
Biochemistry (if not taken within 2 years of entry)		3-8
Research/Project/Independent Study Hours (2 max applied toward degree)		0-2
One additional course in general nutrition		4
NUTR 599	Thesis Research (min/max applied toward degree)	8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8, 500 level
Minimum Number of 500-level Hours Required Overall in Program:	12, not including 599
Not more than 4 hours of coursework taken on a Credit-No Credit basis will be counted towards the 32 hours total for the M.S. degree	
Nutritional Sciences courses may NOT be taken on a Credit-No Credit option	
Minimum GPA:	3.0
Oral final exam	

¹ For additional details and requirements refer to the department's Graduate Programs information (http://nutrsci.illinois.edu/about_us/program_description/degree_types) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
NUTR 500	Nutritional Sciences Seminar (Enrollment each semester a student is registered in the program)	0

Statistics		4
FSHN 593	Seminar in Foods and Nutrition (One semester of seminar)	2
or NUTR 590	Disciplinary Seminar	
NUTR 510	Topics in Nutrition Research	3-5
or NUTR 561	Advanced Clinical Nutrition	
Biochemistry (if not taken within 2 years of entry)		3-8
At least two additional courses in general nutrition		8
Research/Project/Independent Study Hours (4 max applied toward degree)		0-4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	8, 500 level
Minimum Number of 500-level Hours Required Overall in Program:	12
Not more than 4 hours of coursework taken on a Credit-No Credit basis will be counted towards the 32 hours total for the M.S. degree	
Nutritional Sciences courses may NOT be taken on a Credit-No Credit option	
Minimum GPA:	3.0
Oral final exam	

¹ For additional details and requirements refer to the department's Graduate Programs information (http://nutrsci.illinois.edu/about_us/program_description/degree_types) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Doctor of Philosophy in Nutritional Science

In addition to maintaining a 3.0 average in formal coursework, Ph.D. students are required to take a qualifying examination, an oral preliminary examination and a final thesis examination. There is no foreign language requirement, but students whose native language is not English are required to demonstrate competence in English.

Code	Title	Hours
NUTR 500	Nutritional Sciences Seminar (enrollment each semester and one presentation during program)	1
Select one or both of the following, unless taken during M.S. degree (max 4):		4
FSHN 593	Seminar in Foods and Nutrition	
NUTR 590	Disciplinary Seminar	
NUTR 510	Topics in Nutrition Research	5-9
or NUTR 561	Advanced Clinical Nutrition	
NUTR 511	Regulation of Metabolism	4
Two additional courses in general nutrition		6-8
Research/Project/Independent Study Hours (2 max applied toward degree)		2

NUTR 599	Thesis Research (min/max applied toward degree)	40 or 48
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Coursework total: with M.S. degree in Nutritional Science (16) or with MS in other field (24)

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (32 additional hours min)
---	--

Qualifying Exam Required	Yes
--------------------------	-----

Preliminary Exam Required	Yes
---------------------------	-----

Final Exam/Dissertation Defense Required	Yes
--	-----

Final Exam/Dissertation Defense Required	Yes
--	-----

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's Graduate Programs information (http://nutrsci.illinois.edu/about_us/program_description/degree_types) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Master of Public Health and Ph.D. in Nutritional Science

The M.P.H. can be earned jointly with the Ph.D. in Nutritional Science. In the joint program up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH 469	Environmental Health	4
CHLH 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)		
Electives and seminars, min 3 (may be met by Ph.D. core courses)		
NUTR 500	Nutritional Sciences Seminar (enrollment each semester and one presentation during program)	1
Select one or both of the following (max 4):		1-4
FSHN 593	Seminar in Foods and Nutrition	
NUTR 590	Disciplinary Seminar	
NUTR 510	Topics in Nutrition Research	5-9

or NUTR 561	Advanced Clinical Nutrition	
NUTR 511	Regulation of Metabolism	4
Two additional courses in general nutrition		6-8
Ph.D. Research/Project/Independent Study Hours (2 max applied toward degree)		2
NUTR 599	Thesis Research (min/max applied toward degree)	40
Total Hours		100

Other Requirements ¹

Other requirements may overlap

Minimum Number of 500-level	12 (8 within M.P.H.)
-----------------------------	----------------------

Hours Required Overall in Program:

Masters Degree Required for Admission to PhD?	No
---	----

Qualifying Exam Required	Yes
--------------------------	-----

Preliminary Exam Required	Yes
---------------------------	-----

Final Exam/Dissertation Defense Required	Yes
--	-----

Dissertation Deposit Required	Yes
-------------------------------	-----

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's Graduate Programs information (http://nutrsci.illinois.edu/about_us/program_description/degree_types) and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Philosophy

<http://philosophy.illinois.edu/>

Chair of the Department: Kirk Sanders

105 Gregory Hall
810 South Wright Street
Urbana, IL 61801
(217) 333-2889
phildept@illinois.edu

Major: Philosophy

Degrees Offered: M.A. and Ph.D.

Graduate Concentration: Medieval Studies (p. 837) (available to all degrees)

Joint Degree Program: Doctor of Philosophy (Ph.D.) in Philosophy and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The normal program of graduate study in philosophy is directed toward the Ph.D. The M.A. degree is awarded after completing Stage One. Only under exceptional circumstances and without any commitment of financial aid, students may be allowed to seek only the Master of Arts degree. This happens only rarely. Students seeking solely an M.A. degree are encouraged to apply elsewhere.

Admission

The Graduate College admission requirements apply. Applicants should have had a course in symbolic logic and general courses in the history of ancient and early modern philosophy. Students deficient in these areas

may be admitted, but they are required to remedy their deficiencies by taking such courses in their first year. Applicants should also have done some coursework in such central areas of philosophical inquiry as ethics and the theory of knowledge. All applications for admission must be supported by three letters of recommendation from persons qualified to comment on the applicant's aptitude for graduate study in philosophy. All applicants are also required to take the general aptitude portion of the Graduate Record Examination (GRE) and to submit their scores. They are further required to submit a sample of their written work in philosophy (10-20 pages). International applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and submit their scores; a score of at least 600 on the paper-based test (115 on the computer-based test) is required for regular admission. In addition, these students must demonstrate competence in oral English before they will be allowed to assist as preceptors for the department, as described in the information for teaching assistants. (http://cte.illinois.edu/testing/oral_eng/main.html)

The deadline for applications is January 1 for admission in the following fall semester. Students are not normally permitted to start the program in the spring semester. For additional information see the department's information for prospective graduate students (<http://philosophy.illinois.edu/grad/admissions>).

Language Requirement

Every student must demonstrate competence in one of the four basic philosophical languages (French, German, Latin, or Greek) or else satisfy an alternative requirement (as described below), before advancing to the Third Stage of the program. In the case of French this may be done by passing FR 501 with a grade of B or better or by passing an examination administered by the Department of French. In the case of German this may be done by passing GER 501 with a grade of B or better or by passing an examination administered by the Department of German. In the case of Latin this may be done by passing with a grade of B or better any LAT course at the 300-, 400-, or 500-level. In the case of Greek this may be done by passing with a grade of B or better any GRK course at the 400- or 500-level (with the exception of GRK 403 and GRK 404). Alternatively students may pass a proficiency examination in Latin or Greek administered by the Department of the Classics, the form of which must be approved by the Director of Graduate Studies.

To substitute a language other than one of the basic four, a student must first obtain approval of his or her adviser and of the Graduate Program Committee. Such approval normally will be granted only where the language is directly relevant to the student's work in philosophy.

The student may petition the Graduate Program Committee to replace the language requirement by an approved program of study in her or his area of research. This petition must include a written justification by the student or the advisor. If written by the student, the justification must be approved by the student's advisor. This program of study should be deemed more useful to the student's research than a study of one of the philosophical languages. It may, for example, involve intensive study of specific methods that will greatly enhance the student's research, such as scientific, mathematical, or statistical methods, or it may involve obtaining crucial knowledge of some field outside of philosophy, such as concentrated studies in law, psychology, or religion.

Medical Scholars Program

Students in the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) are expected to fulfill all the degree requirements of both the College of Medicine and the second discipline. At their discretion, some

Ph.D. programs allow a limited number of medical school classes (up to 12 hours) to count toward completion of the graduate degree. Faculty advisors from the medical school and from the graduate units help students set realistic long-term study plans that integrate the two curricula. Students enrolled in the Ph.D.-M.D. program take an average of eight years, including summers, to complete both degrees. The first year of the program is typically spent meeting requirements of the Philosophy degree.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Students admitted to the Ph.D. program are offered financial aid, in the form of fellowships or assistantships, which cover living expenses and include a waiver of tuition and service fees. This aid will usually be continued for up to five years provided the student is making normal progress. Further details and qualifications are given in the department's graduate regulations (<http://philosophy.illinois.edu/grad/regulations>).

Master of Arts in Philosophy

The M.A. degree is awarded after completing Stage I. Students may not apply to the M.A. degree program. Students qualify for the M.A. degree by earning at least 32 hours of graduate credit with at least a 3.25 grade point average (A = 4.0), as specified below.

Code	Title	Hours
Hours in regularly scheduled courses (excluding PHIL 583 and PHIL 590)		24-32
PHIL 590	Directed Research	0-8
or PHIL 583	Individual Topics	
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum Number of 500-level	12
Hours Required Overall (excluding 583 and 590):	
A one-year residence requirement	
Submission of a substantial essay and passing an oral examination on this essay OR admission to Stage II.	
Minimum GPA:	3.25

¹ For additional details and requirements refer to the department's *Graduate Program Regulations* (<http://www.philosophy.illinois.edu/grad>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Philosophy

Code	Title	Hours
A course distribution requirement: Two graduate-level courses must be taken in each of the department's main areas of concentration: value theory, history of philosophy, and metaphysics-epistemology-philosophy of mind. (Some hours may be completed during Stage I)		0-24

Students must demonstrate competence in symbolic logic, either by passing an approved course in the subject or by passing a proficiency examination administered by the department.	0-4
Regular Seminars (Some hours may be completed during Stage I)	12-24
Graduate-level study outside of Philosophy: Max hours allowed 8 (see department page for details)	0-8
Language Requirement: Students must demonstrate competence in one of the four basic philosophical languages: German, French, Greek, or Latin. See the department for details.	0
PHIL 599 Thesis Research (16 min applied toward degree)	16
Total Hours	64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	88
The max. limit of PHIL 583 (Independent Study) hours that can be used to satisfy Ph.D. requirements:	12
Participation in a dissertation seminar is required each term in the Third Stage, as is participation in one regular seminar per year.	
Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (32 hours)
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.33

¹ For additional details and requirements refer to the department's *Graduate Program Regulations* (<http://www.philosophy.illinois.edu/grad>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

The Ph.D. program has three stages. The first stage is completed when a student has earned 32 hours of graduate credit. The second stage is completed when the student has earned 32 additional hours (or, having received a master's degree previously, has earned and has been allowed transfer credit for a total of 64 hours) and has satisfied the preliminary examination requirement, a course distribution requirement, a foreign language requirement, and a logic requirement (see department website for details). Of the 64 hours required for the Ph.D. (beyond the MA level requirements), only 12 can be in Independent Study courses (PHIL 583), and at least 20 must be earned in regular seminars. The third stage is completed when the student has earned another 32 hours of graduate credit (usually in seminars and thesis research) and has satisfied the thesis and doctoral oral examination requirements (see below). Also required in the Third Stage is participation in a dissertation-writing seminar each term and participation in one regular seminar per year. Third-stage regular seminar participation is typically for 2 hours credit, thus totaling 4 hours beyond the 20 hours (min) of seminars required

for Stage 2. A minimum grade point average of 3.33 (A = 4.0) is required for the Ph.D. degree. Candidates must also satisfy the Graduate College residence requirement.

Candidates need not take work in a minor field outside the department. In cases in which advanced study in philosophy would be enhanced by study in a related discipline, students may use such related coursework to satisfy the credit requirements for the degree, limited to 8 hours. If a student wishes the work to count as an extra-departmental minor, the minimum number of hours accepted is 8 and the maximum is 16. Courses applied toward the completion of a minor may not be applied toward the completion of the Course Distributions Requirement for the Philosophy Ph.D.

After satisfying these requirements, a candidate for the Ph.D. must submit an acceptable dissertation and pass a final, oral examination on the thesis. The acceptability of the thesis is judged and the final examination administered by the candidate's doctoral committee.

Ph.D. candidates who wish simultaneously to pursue advanced degrees in other disciplines (e.g., medicine or law) are permitted to do so.

Physics

<http://physics.illinois.edu>

Head of the Department: Dale Van Harlingen
Associate Head for Graduate Programs: Lance Cooper
227 Loomis Laboratory
1110 West Green Street
Urbana, IL 61801-3080
Contact: Wendy R. Wimmer
(217) 333-3645
E-mail: grad@physics.illinois.edu

Major: Physics
Degrees offered: M.S. and Ph.D.

Major: Teaching of Physics
Degrees offered: M.S.

Medical Scholars Program: Doctor of Philosophy in Physics (Ph.D.) and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Physics is actively developing a new paradigm for graduate physics education and research for the 21st century, aimed at enhancing interdisciplinary interactions and creating an integrated approach to educational and research training. Advanced degrees offered in physics are the Master of Science and the Doctor of Philosophy. Outstanding graduate research opportunities are available in many subdisciplines of physics, including:

- condensed matter physics
- high energy and nuclear physics
- astrophysics
- atomic
- molecular and optical physics
- complex systems
- quantum information

- biological physics
- physics education research

Students may select experimental, theoretical, or computational thesis projects. Multidisciplinary projects are especially encouraged, and, with the consent of other departments, students may earn master's degrees in areas such as materials science and engineering, or computer science, simultaneously with their Ph.D. degrees in physics. Opportunity also exists for specializing in:

1. computational science and engineering and
2. energy and sustainability engineering within the department's graduate programs via the Computational Science and Engineering (CSE) Option (<https://www.ece.illinois.edu/academics/grad/overview/cosc.asp>) and the Energy and Sustainability Engineering (EaSE) Option (<http://ease.illinois.edu>).

The Medical Scholars Program (<https://www.med.illinois.edu/mdphd>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Physics.

Admission

Admission to the physics graduate program requires an outstanding record of accomplishment in an undergraduate physics program and clear evidence of considerable academic promise, as judged by test scores, letters of recommendation, and strong intellectual achievements. A bachelor's degree or its equivalent from an accredited college or university in the U.S. or an approved institution of higher learning abroad, with at least 20 semester hours (30 quarter hours) of intermediate and advanced undergraduate physics course work, is required for admission. Course preparation in electricity and magnetism, optics, mechanics, atomic and nuclear physics, quantum mechanics, mathematical physics, differential equations, and analysis is essential. Any deficiency in these areas may delay degree completion by as much as a year. (Students are expected to make up deficiencies during the first graduate year.)

A minimum GPA of 3.00 (A = 4.00) for the last two years of undergraduate work is required; however, because of space limitations, applicants with GPAs below 3.50 are rarely admitted. Students with prior graduate course work must have a minimum GPA of 3.50 for those courses. All applicants must provide test scores from both the general and the physics tests of the Graduate Record Examination (GRE) (<http://www.ets.org>).

Graduates of curricula in the physical and biological sciences, mathematics, or computer science may be admitted with limited standing if they are judged to have the necessary aptitudes to profit from graduate work in physics. Such students are admitted to full standing after completing course work to remove deficiencies in physics preparation.

All applicants whose native language is not English must submit a minimum TOEFL (<http://www.toefl.org>) score of 79 (iBT), 213 (CBT), or 550 (PBT); or minimum International English Language Testing System (IELTS) (<http://www.ielts.org>) academic exam scores of 6.5 overall and 6.0 in all subsections. Applicants may be exempt from the TOEFL if certain criteria (<http://grad.illinois.edu/admissions/instructions/04c>) are met. For those taking the TOEFL or IELTS, full admission status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for scores greater than 102 (TOEFL iBT), 253 (TOEFL CBT), 610 (TOEFL PBT), or 6.5 (IELTS). Limited status (<http://grad.illinois.edu/admissions/instructions/04c>) is granted for lesser scores and requires enrollment in English as a Second Language (ESL) courses ([\[linguistics.illinois.edu/students/esl/guidelines\]\(http://linguistics.illinois.edu/students/esl/guidelines\)\) based on an ESL Placement Test \(EPT\) taken upon arrival to campus.](http://</p>
</div>
<div data-bbox=)

A few applicants may be admitted for the spring semester, in addition to the customary fall semester admissions. See the Physics graduate admissions Web site (<http://physics.illinois.edu/grad/apply.asp>) for lists of deadlines and application materials.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both Physics and the College of Medicine. An application to the Medical Scholars Program will also serve as the application to the Physics graduate program. Further information on this program is available by contacting the Medical Scholars Program (125 Medical Sciences Building, (217)-333-8146, mspo@illinois.edu).

Medical Scholars Program

Please note applications are not being accepted at this time.

Students in the Medical Scholars program must meet the specific requirements for both the medical (<https://www.med.illinois.edu/mdphd>) and graduate degrees. On average, students take eight years to complete both degrees. The first year of the combined program is typically spent meeting requirements of the Physics graduate degree.

Faculty Research Interests

The research specialties of Physics faculty fall into the broad categories described in the graduate programs section of this document. Details of each individual's specific interests are available at the department's faculty research Web site. (<http://physics.illinois.edu/research>) Included are faculty whose primary appointments are in other departments but who supervise Physics students.

Facilities and Resources

The Department of Physics offers world-class research facilities in traditional areas of physics, including condensed matter, nuclear, particle, and optical physics, as well as state-of-the-art instruments for quantum information, nanoscale science and engineering, and biological physics. For a complete description of physics facilities, please consult the department's facilities Web site (<http://physics.illinois.edu/research/shops.asp>).

Financial Aid

Fellowships, research assistantships, and teaching assistantships (all of which include waivers of tuition and some fees) are available for the majority of admitted students. All applicants, regardless of U.S. citizenship, whose native language is not English and who wish to be considered for teaching assistantships must demonstrate spoken English language proficiency (<http://grad.illinois.edu/admissions/taengprof.htm>) by achieving a minimum score of 24 on the speaking subsection of the TOEFL iBT or 8 on the speaking subsection of the IELTS. For students who are unable to take the iBT or IELTS, a minimum score of 4CP is required on the EPI test (http://cte.illinois.edu/testing/oral_eng/epi_overview.html), offered on campus. All new teaching assistants are required to participate in the Graduate Academy for College Teaching (http://cte.illinois.edu/programs/ta_train.html) conducted prior to the start of the semester.

- Master of Science in Physics (p. 868)
- Master of Science in Teaching of Physics (p. 868)

Doctor of Philosophy in Physics

Admission to Ph.D. candidacy is based on the faculty's evaluation of a student's potential to carry out independent research, scholastic competence as evidenced by grades and class ranks, and satisfactory performance on the qualifying examination. Although there is no formal Ph.D. core curriculum, all candidates are expected to complete courses necessary for their research, which may include advanced courses in:

- mechanics
- electromagnetism
- light
- atomic physics and quantum mechanics
- nuclear and particle physics
- condensed matter physics
- mathematical or computational methods for physics

In addition to the required course work for the Ph.D., a candidate must also:

1. pass the qualifying examination, an in-depth test of classical mechanics, electricity and magnetism, statistical physics, and quantum mechanics (in recent years, the overall success rate on the qualifying examination has averaged 98 percent);
2. pass a preliminary examination, which consists of a brief paper on the proposed thesis topic and an oral examination that tests familiarity with the background literature and understanding of the physics underlying the thesis project;
3. complete a thesis that demonstrates the capability to produce independent research on an original topic; and
4. pass a final oral examination by a faculty committee on the results of the research project. Proficiency in a language other than English is not required.

Frequently, PHYS 597, taken prior to the preliminary exam, marks the beginning of a research relationship with a faculty member which can be formally continued as PHYS 599.

Entering with approved M.S. degree

Code	Title	Hours
PHYS 599	Thesis Research (min applied toward the degree)	6
Select two of the following breadth courses:		8
PHYS 513 or PHYS 514	Quantum Optics & Information Modern Atomic Physics	
PHYS 540	Astrophysics	
PHYS 550	Biomolecular Physics	
PHYS 560 or PHYS 569	Condensed Matter Physics I Emergent States of Matter	
PHYS 570	Subatomic Physics	
PHYS 597	Individual Study (prior to the preliminary exam)	1-16
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		49 max
Total Hours		64

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Recommended elective courses:
PHYS 504, 505, 508 & 509, 580 & 581 (& denotes sequence)

PHYS 599 (thesis research) cannot be taken until after the preliminary exam is passed.

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Degree Requirements (<http://physics.illinois.edu/grad/degree-requirements.asp>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://physics.illinois.edu/grad/qual.asp>)

Entering with approved B.S. degree

Code	Title	Hours
PHYS 599	Thesis Research (min applied toward the degree)	6
Select two of the following breadth courses:		8
PHYS 513 or PHYS 514	Quantum Optics & Information Modern Atomic Physics	
PHYS 540	Astrophysics	
PHYS 550	Biomolecular Physics	
PHYS 560 or PHYS 569	Condensed Matter Physics I Emergent States of Matter	
PHYS 570	Subatomic Physics	
PHYS 597	Individual Study (prior to the preliminary exam)	1-16
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		81 max
Total Hours		96

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

Recommended elective courses:
PHYS 504, 505, 508 & 509, 580 & 581 (& denotes sequence)

A minimum of 12 500-level credit hours applied toward the degree.

A minimum of 16 PHYS credit hours, with 8 at the 500 level.

PHYS 599 (thesis research) cannot be taken until after the preliminary exam is passed.

An additional maximum of 8 hours of PHYS 597 (or other individual study) may be applied toward the elective course work requirement.

These students may earn a Master of Science degree during the Ph.D. program

Ph.D. exam and dissertation requirements:

Qualifying exam:²

Preliminary exam

Final exam or dissertation defense

Dissertation deposit

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Degree Requirements (<http://physics.illinois.edu/grad/degree-requirements.asp>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

² Qualifying Exam Information (<http://physics.illinois.edu/grad/qual.asp>)

Master of Science in Physics

The M.S. degree is usually completed in 1.5 years of full-time study by students entering in full standing. Students entering with deficiencies may require up to two years to complete the degree requirements.

Code	Title	Hours
	Elective courses (subject to Other Requirements and Conditions below)	32
Total Hours		32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum of 12 500-level credit hours applied toward the degree.

A minimum of 16 PHYS credit hours, with 8 at the 500 level.

A maximum of 8 hours of PHYS 597 (or other individual study) may be applied toward the elective course work requirement.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Degree Requirements (<http://physics.illinois.edu/grad/degree-requirements.asp>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Master of Science in Teaching of Physics

Code	Title	Hours
	At least 2 education courses selected in consultation with the Physics Advisor based on the student's interests	8

Elective courses (subject to Other Requirements and Conditions below)	24
Total Hours	32

Other Requirements and Conditions ¹

Other Requirements and Conditions may overlap

A minimum 16 PHYS credit hours, with 8 at the 500 level.

A maximum of 8 hours of PHYS 597 (or other individual study) may be applied toward the elective course work requirement.

A minimum of 12 500-level credit hours applied toward the degree.

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Degree Requirements (<http://physics.illinois.edu/grad/degree-requirements.asp>) and the Graduate College Handbook (<http://grad.illinois.edu/gradhandbook>).

Plant Biology

James Dalling
265 Morrill Hall
505 South Goodwin Avenue
Urbana, IL 61801
PH: (217) 333-3261
FX: (217) 244-7246
<http://www.life.illinois.edu/plantbio/index.html>

E-mail: plants@life.illinois.edu (plants@life.uiuc.edu)

Major: Plant Biology
Degrees Offered: M.S., Ph.D.

Major: Plant Biotechnology
Degrees Offered: M.S.
Graduate Concentration: Professional Science Master's (M.S. only) - not currently accepting applications

Graduate Degree Programs

The Department of Plant Biology offers three graduate programs leading to the Master of Science degrees (the traditional thesis option, the non-thesis option), the non-thesis Plant Biotechnology M.S. with Professional Science Master's (PSM) concentration and a Doctor of Philosophy degree. It also participates in an interdepartmental programs leading to a doctoral degree: the Program in Ecology, Evolution and Conservation Biology (<http://sib.illinois.edu/peec>). In addition, students can participate, during their degree programs, in several non-degree granting interdepartmental programs and interest groups, such as the Cell and Molecular Biology Training Program (<http://neuroscience.illinois.edu/program/opportunities/cellmolecular.html>).

The Department teaches and conducts research in basic plant biology. Its focus is integrative:

- biological processes are investigated at multiple levels of organization using molecular

- biochemical
- physiological
- ecological approaches

Areas of specialization within the department include:

- biochemistry
- biodiversity
- bioinformatics
- cell biology
- conservation biology
- development
- ecology
- environmental physiology
- evolution
- genetics
- genomics
- modeling
- molecular biology
- mycology
- paleoecology
- photosynthesis
- phytochemistry
- population biology
- biotechnology
- systems biology
- systematics

Graduate students acquire reasonable breadth in their overall biological and professional training as well as expert-level depth in their areas of specialization.

Students in the Illinois PSM in Plant Biotechnology program emphasize plant-related disciplines that support biotechnological areas, including genetics, genomics, biochemistry, physiology and cell and molecular biology.

The Plant Biology Departmental website (<http://www.life.illinois.edu/plantbio>) provides additional information about the department, its admissions procedures, degree requirements, facilities, and the research interests of its faculty.

Admission

Prospective students for thesis-option graduate studies in Plant Biology are encouraged to identify faculty member(s) whose research specialty(ies) most closely coincide(s) with their interests and to correspond directly with them. Acceptance for thesis degrees is based on the applicant's academic achievement and research potential. Acceptance for the non-thesis option in Plant Biology is based on the applicant's academic achievement. Admission into the Plant Biotechnology PSM concentration is based on the applicant's academic achievement and expressed interest in non-academic careers that blend science and business. While departmental requirements do not specify particular courses as prerequisites for admission, applicants should have had an undergraduate degree in biology or related sciences. Admission to the graduate program requires an undergraduate grade point average of at least 3.0 (A = 4.0). Graduate Record Examination (GRE) scores (or approved equivalent) are required; however no minimum scores are specified for admission. An advanced subject test is recommended.

International students should have a Test of English as a Foreign Language (TOEFL) score of 600 or above on the paper-based test, or 250 or above on the computer-based test (cBT) or 102 or above on the internet-based test (iBT).

Facilities and Resources

The Plant Biology Department's diverse state-of-the-art research laboratories are located in Morrill Hall, Edward R. Madigan laboratory and the Institute for Genomic Biology. In addition, the Department maintains extensive plant growth-chamber facilities, environmentally controlled greenhouses, a conservatory with live teaching and research collections, herbaria, a center for paleobotanical collections and diverse local and remote field sites including SoyFACE (<http://soyface.illinois.edu>). The University also offers exceptional research support services including the Roy J. Carver Biotechnology Center (<http://www.biotech.illinois.edu>), service laboratories in the Institute for Genomic Biology (<http://www.igb.illinois.edu/facilities-services>), the Beckman Institute (<http://www.beckman.illinois.edu>) and the University Library (<http://www.library.illinois.edu>), one of the world's largest.

Financial Aid

Fellowships, teaching assistantships, and research assistantships are available for qualified MS and PhD students in Plant Biology. Fellowships in these programs are awarded on a competitive basis.

Illinois PSM students may not hold assistantships or other tuition and fee waiver-generating appointments; statutory waivers and tuition scholarships are accepted.

- Master of Science in Plant Biotechnology, Professional Science Master's Concentration (<http://catalog.illinois.edu/graduate/graduate-majors/plant-bio/ms-plant-biotechnology-psm-concentration>) (not currently accepting applications)
- Master of Science in Plant Biology (p. 870)

Doctor of Philosophy in Plant Biology

Candidates for the Ph.D. are expected to complete a minimum of 96 hours of graduate coursework and research. A formal evaluation (the Two-Year Review) of the student's academic progress is made prior to the end of the second year of study (end of Stage I). Departmental approval must be obtained at this juncture in order to continue in the graduate program. A Preliminary Examination is taken during the second year (if the student entered with an M.S. degree) or the third year (if the student entered with a B.S. degree) (end of Stage 2). This consists of an oral examination of general knowledge in three of nine broadly-defined areas of plant biology and defense of a written research proposal on the thesis research topic prepared by the student. Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all Ph.D. candidates. The final stage (Stage 3) of the program consists of preparing an acceptable thesis based on independent research designed in consultation with a faculty advisor and approved by a graduate faculty thesis committee. A final oral examination, in which the student defends the thesis, a public seminar, and deposit of an approved thesis complete the program. The Ph.D. degree program is expected to be completed within five years. See the Plant Biology Department's online Graduate Student Handbook (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) for a detailed description of the Stages and Requirements of the Ph.D. program.

Entering with approved M.S./M.A. degree

Code	Title	Hours
Research/Project/Independent Study Hours (no max applied toward degree)		
PBIO 599	Thesis Research (no max applied toward degree)	
Total Hours		64

Other Requirements¹

Other requirements may overlap

Teaching:	at least the equivalent of one semester as a half-time teaching assistant
Masters Degree Required or Admission to PhD?	No, but Masters level requirements (32 hours minimum) must be met in order to enter State 2 of Ph.D. program.
Preliminary Exam Required:	Yes, at the end of State 2, in order to enter Stage 3
Final Exam/Dissertation Defense Required:	Yes, at end of Stage 3
Dissertation Deposit Required:	Yes, at end of Stage 3
Minimum GPA:	3.0

¹ For additional details and requirements, please refer to the *Plant Biology Department's online Graduate Handbook* (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) and the *University's Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
Research/Project/Independent Study Hours (no max applied toward degree):		
PBIO 599	Thesis Research (no max applied toward degree)	
Total Hours		96

Other RequirementsOther Requirements:²

Teaching:	at least the equivalent of one semester as a half-time teaching assistant
Minimum GPA:	3.0
Masters Degree Required or Admission to PhD?	No, but Masters level requirements (32 hours minimum) must be met in order to enter State 2 of Ph.D. program.
Preliminary Exam Required:	Yes, at the end of State 2, in order to enter Stage 3
Final Exam/Dissertation Defense Required:	Yes, at end of Stage 3
Dissertation Deposit Required:	Yes, at end of Stage 3

¹ For additional details and requirements, please refer to the *Plant Biology Department's online Graduate Handbook* (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) and the *University's Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

**Master of Science in Plant Biology
Non-Thesis Option**

Code	Title	Hours
Course hours distributed among three of the following areas: anatomy, biochemistry, development, ecology, evolution, genetics, molecular biology, physiology, and systematics (4 of these hours must be outside the immediate research interests of the student)		12
IB 590	Individual Topics (8 max applied toward degree)	8
Electives in consultation with and by permission of advisor		12-20
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements, please refer to the *Plant Biology Department's online Graduate Handbook* (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) and the *University's Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Thesis Option

Plant Biology Thesis option: The requirement of a thesis for the M.S. degree in Plant Biology is determined in consultation with the candidate's adviser. The program is normally completed within two years. Candidates are expected to complete at least 32 semester hours of graduate coursework and research agreed upon with a faculty adviser.

Code	Title	Hours
Course hours distributed among three of the following areas: anatomy, biochemistry, development, ecology, evolution, genetics, molecular biology, physiology, and systematics (4 of these hours must be outside the immediate research interests of the student)		12
Electives in consultation with and by permission of advisor		12-20
PBIO 599	Thesis Research (8 max applied toward degree)	8
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements, please refer to the *Plant Biology Department's online Graduate Handbook* (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) and the *University's Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Plant Biotechnology, Professional Science Master's Concentration

Students in the Plant Biotechnology PSM typically complete the program in 16 months, consisting of 3 full-time, on-campus semesters and a summer internship. The 42 credit hour curriculum requires a minimum of 32 semester hours of approved science coursework determined in consultation with the candidate's Plant Biology adviser. As a result of approved non-thesis research and team industry projects, students may apply a maximum of 6 semester hours of IB 590 Individual Topics credit toward their science coursework. The PSM concentration requires 10 semester hours of business courses approved by the Illinois PSM Program. PSM 555, PSM 501, PSM 502, and PSM 503 are required and may be taken for 0 or 1 credit hour, but cannot be applied to the required hours for either the science or business curriculum. Enrollment in PSM 555 is required in the summer term during which the internship is completed; PSM specific summer tuition is assessed. Students must enroll full-time in the fall and spring terms (12 or more hours).

Code	Title	Hours
Science electives selected in consultation with advisor ¹		23
IB 510	Discussions in Plant Biology (Biotechnology section, 3 semesters)	3
IB 590	Individual Topics (6 max applied toward degree (optional))	6
IB 474	Plant Proteomics- Metabolomics	2
IB 473	Plant Genomics	1
IB 503	Methods/Application in Biotech	3
PSM Concentration courses		10
PSM 555	PSM Internship (0 min)	0
PSM Seminar ²		0
PSM 501	PSM Industry Seminar I	
PSM 502	PSM Industry Seminar II	
PSM 503	PSM Industry Seminar III	
Total Hours		42

Other Requirements ³

Other requirements may overlap

A concentration is required.

Minimum 500-level Hours Required 12

Overall:

Students must enroll full-time in the fall and spring terms (12 or more hours)

Transfer credit from Illinois or other institutions is not permitted

Minimum GPA: 3.0

¹ For required courses see life.uiuc.edu/plantbio/psm (<http://www.life.uiuc.edu/plantbio/psm>)

² Students can opt to take the PSM seminar series for 0 credit (pass/fail) or 1 credit hour (letter grade). Credit hours for these courses do not apply towards either the 32 science hours or 10 business hours required for the degree.

³ For additional details and requirements, please refer to the Plant Biology Department's online Graduate Handbook (<http://www.life.illinois.edu/plantbio/gradhandbook.htm>) and the University's Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Political Science

<http://www.pol.illinois.edu>

Head of the Department: Robert Pahre
 Director of Graduate Studies: Jeffrey Mondak
 420 David Kinley Hall
 1407 W. Gregory Drive
 Urbana, IL 61801
 (217) 333-3881 voice
 (217) 244-5712 fax
 E-mail: gradpol@illinois.edu

Major: Political Science
 Degrees Offered: M.A., Ph.D.
 Graduate Concentrations: Civic Leadership (M.A. only), African American Studies (p. 644) (available to all)

Major: Public Administration
 Degrees Offered: M.A.

Joint Degree Program: Political Science and Law (p. 809)
 Degrees Offered: M.A. with Civic Leadership concentration and J.D.

Joint Degree Program: Political Science and Law (p. 809)
 Degrees Offered: Ph.D. and J.D.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Political Science and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Political Science offers graduate programs leading to the degrees of Master of Arts and Doctor of Philosophy. Students are not admitted to the master's degree program in Political Science, except for the Civic Leadership concentration. The department is not accepting applications to the Public Administration program.

Admission

Admission to the Ph.D. Program

The Graduate College admission requirements apply. The student should have a minimum of 20 hours of undergraduate work in political science and cognate disciplines such as economics, psychology, finance, sociology, or history. All applicants are required to submit Graduate Record Examination (GRE) scores, a personal statement, and an example of written work. Applicants whose native language is not English must submit the TOEFL iBT or IELTS score. The Ph.D. program typically admits students for the fall semester. Application deadline is December 15th.

Admission to the Master of Arts with Concentration in Civic Leadership

Admission is restricted to students who were accepted to the Civic Leadership Program as undergraduates at the University of Illinois. Application deadline is January 1. Applicants who wish to obtain a joint MA-JD degree program must apply separately for admission to the Law School.

Medical Scholars Program

Applications are not being accepted at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Political Science. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program and is essential for students whose career goals include college teaching.

Financial Aid

Students accepted into the department's Ph.D. program are eligible to apply for financial aid. Most incoming students with good credentials and continuing students demonstrating satisfactory progress will receive some type of financial aid, but the type and amount will vary. The Department of Political Science provides, on a competitive basis, aid packages up to \$22,000, plus waivers of tuition and some fees. Financial aid is usually a combination of fellowship money and assistantships. Limited amounts of aid are also available for dissertation field research, internships, and the presentation of papers at professional meetings.

- Master of Arts in Political Science (p. 873)
- Master of Arts in Political Science, Civic Leadership Concentration (p. 873)

Doctor of Philosophy in Political Science

The course of study leading to a Ph.D. in Political Science requires a minimum of three years of full-time study, culminating in the successful defense of a doctoral dissertation. A minimum of 96 graduate hours of academic credit is required, 32 of which may be graduate hours of dissertation research. At least 64 of the 96 graduate hours must be taken in residence. A grade of B or better is required in all courses.

In addition to meeting Graduate College requirements, the Department of Political Science requires that students complete a "scope and methods" sequence, acquire proficiency in analytic skills, and demonstrate expertise in several subfields within the discipline. The progress of doctoral candidates is monitored at various points in the program. In addition to an interim evaluation, students must pass a set of qualifying examinations and present a dissertation proposal. Once the doctoral dissertation is completed, the candidate must successfully complete an oral final defense.

Entering with approved M.S./M.A. degree

Code	Title	Hours
	Tools of Inquiry: two-course sequence in statistical methods, three additional courses in statistical methods, formal theory or qualitative methods (PS 523 may be taken in partial fulfillment of the Tools of Inquiry requirement, providing it is not also used to satisfy the Scope and Methods requirement).	20
PS 521	Phil Bases of Pol Inquiry	4
PS 522 or PS 523	Research Design and Techniques The Comparative Method	4
	Course work in one substantive area of political science	20
	Course work in a minor area.	8
PS 598	Dissertation Design Seminar	0
PS 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's *graduate handbook* (<http://www.pol.illinois.edu/graduates/handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
	Master's Equivalency: Hours of 500 level coursework in PS	24-32
	Tools of Inquiry: two-course sequence in statistical methods, three additional courses in statistical methods, formal theory or qualitative methods (PS 523 may be taken in partial fulfillment of the Tools of Inquiry requirement, providing it is not also used to satisfy the Scope and Methods requirement).	20
PS 521	Phil Bases of Pol Inquiry	4
PS 522 or PS 523	Research Design and Techniques The Comparative Method	4
	Course work in one substantive area of political science	20
	Course work in a minor area.	8
PS 598	Dissertation Design Seminar	0
PS 599	Thesis Research (min/max applied toward degree)	32-40
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.pol.illinois.edu/graduates/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Joint J.D. in Law and Ph.D. in Political Science

A joint J.D. and Ph.D. in International Relations is an option for students. Students must be admitted separately to each program as a joint degree candidate. To receive the joint J.D./Ph.D. in International Relations, students must satisfy all existing requirements for the Ph.D. in Political Science, including major and minor field course requirements, scope and methods sequence, tools, qualifying examinations, dissertation design seminar, and dissertation project. Joint degree students would be allowed to count 16 hours of law credit toward their Ph.D. Joint degree students would elect International Relations as their major area, and up to 8 hours of law school course credit would count toward this area. In addition, joint degree students will be permitted to select "Law" as their minor field, using 8 hours of law credit to satisfy minimum course requirements, provided such credit is from course outside the international law subfield (e.g., American constitutional law); this presents a new option for international relations students who otherwise would have to select American politics, comparative politics, or political theory as a minor field. This program allows an exception to the simultaneous conferral rule in that the J.D. may be conferred prior to completion of the Ph.D. degree.

Joint J.D. in Law and M.A. in Political Science, Civic Leadership Concentration

The M.A./J.D. joint degree program is a track in the Civic Leadership Program that provides qualified students with the opportunity to complete both degrees in just three years of post-baccalaureate study. Illinois students who have been named Civic Leadership Fellows in the fall of their junior year of undergraduate study, and who have taken the LSAT by the time they are selected as a fellow, are eligible for early admission into the College of Law. Students must fulfill the requirements for the M.A. in Political Science with a concentration in Civic Leadership as detailed above. The College of Law will recognize up to 12 hours of credit taken in fulfillment of the Civic Leadership Program M.A. requirements. In addition, a minimum of 78 hours of Law courses will be required to meet the 90 hours required for the J.D. degree. For information contact the Director, Civic Leadership Program, Department of Political Science.

Master of Arts in Political Science

Students enrolled in the Ph.D. program can usually earn a Master of Arts in Political Science within three semesters. It entails the completion of 32 graduate hours and the achievement of a 3.0 GPA in all courses taken. A master's paper is required.

Thesis Option

Code	Title	Hours
Tools of Inquiry Coursework		24-32
PS 599	Thesis Research (min/max applied toward degree)	0-8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.pol.illinois.edu/graduates/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
Tools of Inquiry Coursework		24-32
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

A master's paper is required

Minimum Hours Required Within the Unit: 24

Minimum 500-level Hours Required Overall: 24

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.pol.illinois.edu/graduates/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Political Science, Civic Leadership Concentration

Students who have completed undergraduate coursework in the Civic Leadership Program and are admitted into the Graduate College can usually earn a Master of Arts in Political Science, with a Concentration in Civic Leadership within one year. It entails the completion of 32 graduate hours and the achievement of a 3.0 GPA in all courses taken. A master's paper is required, which is fulfilled by the completion of a collaborative project undertaken as part of the Practicum in Civic Leadership.

Only UIUC students who have participated in the undergraduate portion of the Civic Leadership Program are eligible for admission in the graduate

concentration in Civic Leadership. For information contact the Director, Civic Leadership Program, Department of Political Science.

Code	Title	Hours
	Practicum in Civic Leadership	4-8
Total Hours		32

Other Requirements ¹

Other Requirements may overlap

A concentration is not required.

A master's paper is required

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.pol.illinois.edu/graduates/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Professional Science Master's

Natalie Bosecker, Director

Illinois Professional Science Master's (PSM)

Graduate College

204 Coble Hall, 801 South Wright Street

Champaign, Illinois 61820

PH: (217) 265-5363

Email: PSMdegree@illinois.edu

Graduate Concentration: Professional Science Master's

Graduate Degree Program

The concentration in Professional Science Master's (PSM) provides masters students with a unique learning experience by combining traditional science, technology, or mathematics disciplines with an integrated professional curriculum focusing on core business knowledge and skills. Traditional depth in the disciplinary field coupled with business-related workplace skills and internship experience prepares graduates for careers in business, government, and not-for-profits. Programs are full-time, non-thesis, cohort-based and are designed to be completed in 16 months.

The Professional Science Master's concentration is available in:

M.S. in Agricultural Production (p. 648)

M.S. in Bioenergy (p. 676)

M.S. in Geographic Information Science (p. 775)

M.S. in Food Science and Human Nutrition (p. 770)

M.S. in Plant Biotechnology (p. 871) (not currently accepting applications)

M.S. in Technical Systems Management (p. 652)

Admission

Candidates for admission to the concentration and associated Illinois M.S. degree must have a bachelor's degree from an accredited institution

equivalent to those from the University of Illinois at Urbana-Champaign. Minimum requirements include a grade point average of 3.0 or higher (A = 4.0) for the last 60 hours of undergraduate work and for any graduate study. Graduate Record Examination (GRE) scores are required of all applicants. Test of English as a Foreign Language (TOEFL) scores vary by program. Admission to one of the eligible degree programs listed above is required, and their admission requirements vary by program and may be more rigorous than the minimums presented here. Transfer credit may not be applied to this program due to the cohort nature of this program.

Financial Aid

Financial assistance in the form of full or partial waiver of tuition and fees – is rarely available to Illinois PSM students (except for statutory waivers). Departments providing assistance that includes waivers must pay Illinois PSM tuition and fees on students' behalf. Illinois PSM students may be eligible for student loans.

Graduate Concentration in Professional Science Master's

Specific requirements vary by major degree program, but all programs require a minimum total of 42 graduate hours of work in three areas: a scientific discipline (may include related interdisciplinary fields), business, and an internship.

Code	Title	Hours
	Credit within the disciplinary major, as indicated by the specific program	32
	Business curriculum (common across all Illinois PSM Programs) ¹	10
	Industry Seminar Series:	0
PSM 501	PSM Industry Seminar I	
PSM 502	PSM Industry Seminar II	
PSM 503	PSM Industry Seminar III	
PSM 555	PSM Internship	0
Total Hours		42

Other Requirements ²

Other requirements may overlap

Students are not eligible to transfer graduate credit into these programs.

See individual program pages for specific details of disciplinary requirements.

Full-time enrollment (12 credit hours or higher) is required in fall and spring semesters; summer enrollment is required for the internship.

¹ The 10 semester hour business curriculum is delivered in partnership with the College of Business, typically in two credit-hour courses. All Illinois PSM students take business courses together as a cohort. To remain responsive, specific courses will vary from year-to-year but are built around themes:

- Finance
- Management and marketing
- Project management
- Science and regulatory policy
- Teamwork and leadership

² For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Program in Ecology, Evolution and Conservation Biology

<http://sib.illinois.edu/peec/>

See School of Integrative Biology (<http://sib.illinois.edu>)

Director of the Program: Angela Kent
515 Morrill Hall
505 South Goodwin Avenue
Urbana, IL 61801
(217) 333-7802
E-mail: PEEC-Support@illinois.edu

Major: Ecology, Evolution and Conservation Biology
Degrees Offered: M.S., Ph.D.

Graduate Degree Programs

The Program in Ecology, Evolution and Conservation Biology (PEEC) is an interdepartmental program designed to provide individualized training in preparation for careers in these disciplines. Because of the breadth of fields covered by this program, there will be no fixed course requirements other than attendance at the program's seminar series and annual graduate student symposium. Courses taken by a student and the student's Advisory Committee generally will come from multiple departments. The goal of the program's regulations is to allow maximum flexibility while providing close supervision, with the outcome of producing scientists who are broadly educated and technically competent in ecology, evolutionary biology and associated disciplines. The program offers M.S. and Ph.D. degrees.

Admission

Prospective candidates must meet the requirements for admission set by the Graduate College of the University of Illinois at Urbana-Champaign. Only applicants who have graduated from an accredited college or university and who hold or will be granted a baccalaureate degree (or its equivalent) comparable in content and completed credit hours to that granted by the University of Illinois will be considered. Applicants must have a minimum grade-point average of 3.0 (A = 4.0) computed from the last two years of undergraduate (and any graduate) work completed. The program will give preference to candidates who hold a degree in biology or a closely related discipline and show promise of excellence in research and teaching. Typically, only students with strong letters of recommendation, high scores on the Graduate Record Examinations and a GPA well above the minimum stated above will be admitted. Demonstration of academic excellence by other means (e.g., extensive field or laboratory research experience) will also be considered. The

Admissions Committee will make decisions concerning admission. For students whose native language is not English, the Program requires a minimum paper-based TOEFL score of 613 (257 on the computer-based test or 103-104 on the web-based test).

Financial Aid

Students admitted to the Program are typically offered two years of support for the M.S. degree and five years of support for the Ph.D. Support consists of fellowships, teaching assistantships or research assistantships. Such support typically comes with waiver of tuition, service fees, or both. Continued offers of assistantships or fellowships each academic year will depend on an evaluation of satisfactory progress by the Director of the Program. Students who require more than two years to complete the M.S. degree or five years to complete the Ph.D. degree must submit a written petition to the Director of the Program, supported by their Advisor, to be considered for an additional year of support.

Master of Science in Ecology, Evolution and Conservation

All students must register for and attend the weekly PEEC seminar series (IB 546A) each semester in residence. An orientation seminar (IB 546B) must be taken the first fall semester in residence. Excuses because of conflicts must be approved by the Director of the Program. Graduation requires the completion of a thesis. Student research will be guided and approved by an Advisory Committee of three faculty from at least two departments, including the Major Advisor who will serve as chair. The director of the program must approve membership of the Masters Advisory Committee.

Requirements

Code	Title	Hours
IB 546	Topics in Ecology & Evolution (Sections A & B, A to be taken each semester of enrollment)	1-10
Thesis Hours Required (min/max applied toward degree) (credit in rubrics other than BIOL, NRES, PBIO or ENT must be petitioned to apply):		8-12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Course work in three core areas with grades no lower than B or S.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the Program's graduate handbook (<http://sib.illinois.edu/peec/current/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Ecology, Evolution and Conservation

All students must register for and attend the weekly PEEC seminar series (IB 546A) each semester in residence. The Director of the Program must

approve excuses because of conflicts. An orientation seminar (IB 546B) must be taken the first fall semester in residence.

No later than their second semester in the program, the student in consultation with their Major Advisor will select members of the student's Doctoral Committee, which will meet annually with the student to plan coursework and research and to review and facilitate progress toward the degree. Students will prepare a short written report of their activities during the previous year for consideration by the Doctoral Committee. The Doctoral Committee will thoroughly consider all aspects of the student's activities, after which the Major Advisor will provide a written report of progress to the Director of the Program.

The faculty constituting a student's Doctoral Committee must come from two or more departments, comprise a minimum of four members (including the Major Advisor), be familiar with the student's area of research interest, and be approved by the Director of the Program. The chair of the Doctoral Committee is typically the Major Advisor, provided that the advisor is both a member of the University's Graduate Faculty and the Program in Ecology, Evolutionary and Conservation Biology. If this is not the case, the Director of the Program will appoint a chairperson who fulfills these requirements from among the committee membership. The Doctoral Committee will be responsible for administering the necessary examinations. No later than their sixth semester in the program, and preferably in their fifth semester before the deadline for submission of a proposal for an NSF Dissertation Improvement Grant (typically, the third Friday in November), doctoral students must take a Preliminary Examination. For this exam, a member of the Doctoral Committee other than the major advisor will be appointed chair by the Director of the Program. The first part of the three-hour oral exam will be general and cover the student's three core areas of emphasis. The second part of the exam will be a defense of the research proposal. Two weeks prior to the exam, the student must present to the Doctoral Committee a proposal prepared in the format of a proposal for an NSF Dissertation Improvement Grant. It should describe the objectives of the research project, the experimental plan and rationale, the results of pilot studies, a budget, and a tentative timetable for its completion. The student will present evidence of feasibility and significance of the proposal, but the main research for the dissertation shall not have been performed prior to the Preliminary Examination. A detailed report of the exam and a copy of the research proposal shall be submitted to the Director of the Program. A passing grade qualifies the student as a Ph.D. candidate. A failing grade will require the student to take a second preliminary examination no later than the following semester. A second failure will result in dismissal from the program.

Upon completion of a dissertation and the other requirements of the program, the student shall be subject to a Final Examination, which shall consist of a defense of the dissertation. Copies of the completed dissertation, approved by the Major Advisor, should be submitted to the Doctoral Committee at least two weeks prior to the Final Examination. The thesis will be judged in relation to published scholarly work in the field, and students will be encouraged to begin publishing their results before taking their Final Examination. Passing this exam and presentation of the dissertation by the student at a public seminar sponsored by the program qualify the student for the Ph.D. degree. Failure will require the student to conduct additional research and to repeat the Final Examination.

Entering with approved M.S./M.A. degree

Code	Title	Hours
IB 546	Topics in Ecology & Evolution (Section A to be taken each semester of enrollment. Section B if not taken in MS program)	1-10
Thesis Hours Required (8 min applied toward degree) (Credit in rubrics other than BIOL, NRES, PBIO or ENT must be petitioned to apply.):		8
Total Hours		64

Other Requirements ¹

Other requirements may overlap

All students must complete at least two semesters of favorably evaluated teaching

Course work in three core areas with grades no lower than B or S.

Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the Program's graduate handbook (<http://sib.illinois.edu/peec/current>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with B.S./B.A. degree

Code	Title	Hours
IB 546	Topics in Ecology & Evolution (Sections A & B. Section A to be taken each semester of enrollment.)	1-10
Thesis Hours Required (8 min applied toward degree)(Credit in rubrics other than BIOL, NRES, PBIO or ENT must be petitioned to apply.):		8
Total Hours		96

Other Requirements ¹

Other requirements may overlap

All students must complete at least two semesters of favorably evaluated teaching

Course work in three core areas with grades no lower than B or S.

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (32 hours min)
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the Program's graduate handbook (<http://sib.illinois.edu/peec/current>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Psychology

<http://www.psychology.illinois.edu>

Head of the Department: Wendy Heller
 Director of Graduate Studies: Nicole Allen
 Admissions Information: Ashley Ramm
 309 Psychology Building
 603 East Daniel Street
 Champaign, IL 61820
 (217) 333-2169
 E-mail: psych-gradstudy@illinois.edu

Major: Psychology
 Degrees offered: M.S., Ph.D.
 Graduate Concentration: Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Major: Psychological Science
 Degrees offered: M.S.

Graduate Degree Programs

The Department of Psychology offers graduate programs leading to the degrees of Master of Science and Doctor of Philosophy. Doctor of Philosophy programs are offered in the following areas of psychology:

- Behavioral Neuroscience
- Cognitive Neuroscience
- Clinical/Community
- Cognitive
- Developmental
- Quantitative
- Social-Personality
- Industrial-Organizational
- Visual Cognition and Human Performance

A Master of Arts degree is awarded to students in the doctoral program as an intermediate degree. Master of Science programs are offered as terminal degrees in only two areas: personnel psychology and measurement psychology.

Admission

The Graduate College admission requirements apply for all programs. All candidates for admission must have a minimum grade point average of 3.0 (or B) on a 4.0 scale in courses representing the last 60 hours of work completed for the bachelor's degree. The candidate for admission to the graduate program should ordinarily have the following preparation: a minimum of 15 semester hours in psychology, a laboratory research methods course in psychology, and a course in statistics. Departmental committees also consider Graduate Record Examination (GRE) scores and letters of recommendation. Preference is given to students who have taken mathematics beyond college algebra and to those who have some research experience. Applications for admission to part-time study are usually not approved. Students are accepted only for fall admission. The application deadline is December 10.

In addition to the aforementioned criteria, applicants are evaluated on their supporting documents, career goals, career promise, and research interests. Substantial additional weight is given to the quality and extent of prior research and other relevant experience.

All applicants whose native language is not English or who are from any country other than the US, the United Kingdom, Canada, Australia, or New Zealand (even if they are native English speakers) are required by the University to submit the results of an English language proficiency test. The university will accept the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) to determine admission eligibility.

- The minimum total TOEFL iBT score for admission (including all four sections): 79
- Minimum total TOEFL iBT score for exemption from the English as a Second Language Placement Test (EPT) for admission (including all four sections): 103
- Minimum total IELTS score for admission: 6.5, including a minimum subscore of 6 on all four modules. Students receiving scores below 7 will be required to take the EPT for placement in English as Second Language courses.

In addition to the general requirement for English proficiency testing described above, the University of Illinois is also required by state law and University policy to give teaching appointments only to international graduate students who have more specifically passed an English language SPEAKING proficiency test. Applicants have the following options to satisfy this requirement:

- Minimum score of 24 on the speaking section of the TOEFL iBT
- Minimum score of 8 on the speaking section of the IELTS
- Minimum score of 50 on the TSE
- Minimum score of 5 on the EPI (English Proficiency Interview) test.

International applicants must present documentation for one of the above-listed tests of spoken English at the time of application to the Psychology Department.

Refer to www.psychology.illinois.edu (<http://www.psychology.illinois.edu>) (Graduate Program) for additional information about the Department of Psychology's admission requirements.

Graduate Teaching Experience

The department requires Ph.D. candidates to gain teaching experience as part of their academic work. Such experience is considered a vital part of the graduate program and usually takes the form of a teaching assistantship. Students have the option of teaching two class sections (50% TA) for one semester or one class section (25% TA) for two semesters in order to meet the requirement.

Faculty Research Interests

The program is designed to prepare students for academic and research-oriented careers. Students become actively involved in research during their first semester, devoting an increasing percent of time toward independent research throughout their graduate careers.

For the most part, we view graduate education as an apprenticeship. Our task is to provide an environment where mature young scholars can gain experience in research as they collaborate with faculty and with other graduate students. The program encourages interdisciplinary

study both within psychology and between psychology and other fields. Faculty research interests can be reviewed here (<http://www.psychology.illinois.edu/people/faculty>).

Facilities and Resources

Students have everything they need, including personal office space and full access to research, library, and computing services, as well as to a large pool of research participants. The excellent cooperation between program areas in the department and with other units in the University provides access to expertise and methodology in a variety of areas including but not limited to:

- the Psychological Services Center
- the Counseling Center
- the Beckman Institute for Advanced Science and Technology
- the Center for the Study of Reading
- the Institute of Communications Research
- the School of Labor and Employee Relations
- the Family Resiliency Program
- the Neuroscience Program
- the Institute for Genomic Biology
- the Departments of Computer Science
- Educational Psychology
- Linguistics
- Molecular and Cellular Biology and Statistics
- the Colleges of Law and Medicine

Financial Aid

Students generally complete the doctoral degree in 4-6 years, and the Psychology Department makes financial support available to all Ph.D. students in good standing for up to 6 years. The University application form and supplemental application materials provide all the information that is required by the committees administering various funding sources, which include teaching assistantships, research assistantships, and fellowships.

The M.S. in Psychological Science is self-supporting. The program does not accept non-statutory tuition waivers, and students enrolled in this program are ineligible to hold waiver-generating appointments.

- Master of Science in Psychological Science (p. 879)
- Master of Science in Psychology (p. 879)

Doctor of Philosophy in Psychology

The Doctor of Philosophy degree is awarded to candidates who complete an approved program in their area of specialization and meet departmental and Graduate College requirements for the degree. These must include at least 64 or 96 graduate hours of graduate work; satisfactory performance in courses or examinations dealing with quantitative methods and chosen areas of specialization; a master's thesis or equivalent; appropriate advanced courses and seminars in the area of specialization and in related and supporting areas; satisfactory performance on a doctoral qualifying examination; satisfactory performance on an oral preliminary examination; completion of an acceptable Ph.D. thesis; and satisfactory performance on an oral examination in defense of the thesis.

Entering with approved M.S./M.A. degree

Code	Title	Hours
PSYC 506	Statistical Methods I	4
PSYC 507	Statistical Methods II (or an approved equivalent quantitative course sequence)	4
Completion of "core courses" within program area and departmental requirements		
At least two different psychology seminar courses, taken for at least 2 hours each (4 min)		4
Approved minor courses		12-16
Distribution courses: general graduate survey courses in at least two other Program Areas.		0-4
PSYC 599	Thesis Research (min/max applied toward degree)	0-24
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 24

Overall:

Teaching experience is required: Yes

A master's thesis or a master's-level research report is required: Yes

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's *graduate handbook* (<http://www.psychology.illinois.edu/graduate/current/handbook>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved B.S./B.A. degree

Code	Title	Hours
Master's level equivalent course work		32
Completion of "core courses" within program area and departmental requirements		
At least two different psychology seminar courses, taken for at least 2 hours each (4 min)		4
PSYC 506	Statistical Methods I	4
PSYC 507	Statistical Methods II (PSYC 507 (or an approved equivalent quantitative course sequence))	4
Approved minor courses		12-16
Distribution courses: general graduate survey courses in at least two other Divisions.		0-4
PSYC 599	Thesis Research (min/max applied toward degree)	0-24
Total Hours		96

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 24

Overall:

Teaching experience is required: Yes

A master's thesis or a master's-level research report is required: Yes

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.psychology.illinois.edu/graduate/current/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Psychology

This degree is not designed to prepare a student for a professional position. As part of the doctoral program, it is a step toward the Ph.D. Note that the department does not require that students obtain a master's degree, but a master's-level research report must be submitted to the department as part of the Ph.D. program.

Code	Title	Hours
PSYC 590	Individual Research	0 to 8
Total Hours		32

Other Requirements¹

Other requirements may overlap

The Master of Science in Psychology degree is awarded as an intermediate degree to candidates for the Doctor of Philosophy degree who have satisfactorily completed 32 graduate hours of graduate work and written an acceptable research report.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.psychology.illinois.edu/graduate/current/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Psychological Science

A two-year, research-based program designed for students who want research experience augmented by advanced courses in experimental techniques and professional development within a top-rated department at a world-class university. Each student admitted to the program is

paired with a faculty advisor/mentor based on research interests. A Master's thesis is not required.

Code	Title	Hours
PSYC 500	Professional Develop for Psych	1 to 4
PSYC 501	Best Psych Research Practices	2 to 4
PSYC 506	Statistical Methods I	4
PSYC 507	Statistical Methods II	4
PSYC 590	Individual Research	0 to 16
Electives		12
Total Hours		32

Other requirements¹

Other requirements may overlap.

Minimum 500-level Hours Required 12

Overall

Minimum GPA 2.75

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.psychology.illinois.edu/graduate/current/handbook>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Recreation, Sport and Tourism

<http://rst.illinois.edu>

Head of the Department: Laurence Chalip
 Director of Graduate Studies: Laura Payne
 Graduate Coordinator: Ryan Latvaitis
 104 Huff Hall
 1206 South Fourth Street
 Champaign, IL 61821
 (217) 333-4410
 E-mail: lpayne@illinois.edu and latvaiti@illinois.edu

Major: Recreation, Sport & Tourism
 Degrees Offered: M.S., Ph.D.

Online Program: Recreation, Sport & Tourism
 Degrees Offered: M.S.

Graduate Degree Programs

The Department of Recreation, Sport & Tourism offers programs of study leading to the Master of Science and Doctor of Philosophy degrees. The Master of Science program educates students about leisure behavior, public parks and recreation systems, sport and tourism, in various private, public and semi-public settings providing leisure services. The M.S. degree may be undertaken as a terminal professional track program or serve as the first step toward the Ph.D. program. The Ph.D. program is designed to develop researchers and educators in the study of leisure behavior, the management of recreation, tourism, and sport systems that provide leisure services, or both.

Admission

The Graduate College admission requirements apply. Specifically, the admission requirements are a minimum grade point average of 3.0 (A = 4.0) for the last two years of undergraduate work and any graduate work completed. The Graduate Record Examination (GRE) is required for all

campus-based graduate degrees. In accordance with Graduate College requirements, scores on the TOEFL must be greater than 102 and scores on the IELTS must be greater than 6.5. Students are also required to provide a statement of purpose outlining their area of study, and three letters of reference. Preference is given to applicants who will be full-time students and active degree candidates. Students may be admitted for the fall, spring, or summer semesters.

Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program. It is also anticipated that doctoral students will engage in research activities and scholarly communication under the guidance of their advisor.

Financial Aid

The department offers quarter-time and half-time assistantships in teaching, administration, and research, as well as tuition and fee waivers and the opportunity to apply for fellowships.

Master of Science in Recreation, Sport and Tourism

A candidate for the M.S. degree must spend at least one semester on campus. A full-time student can complete the program in three or four semesters.

Thesis Option

Code	Title	Hours
RST 501	Concepts & Applications in Recreation, Sport & Tourism	4
Select two of the following:		8
RST 512	Managing Recreation, Sport & Tourism Organizations	
RST 515	Marketing in RST	
RST 516	Finance & Budgeting in RST	
Select one Option Area Course from:		4
RST 502	Critical Issues Recreation Mgt	
RST 520	Critical Issues Sport Mgt	
RST 530	Critical Issues Tourism Mgt	
Additional Coursework		
Support Option		8
Research Methods		8
RST 599	Thesis Research	4
Total Credit Hours		36

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12 at the 500 level
Within the Unit:

Minimum 500-level Hours Required 16
overall:

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's website (<http://rst.illinois.edu/grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
RST 501	Concepts & Applications in Recreation, Sport & Tourism	4
RST 512	Managing Recreation, Sport & Tourism Organizations	4
RST 515	Marketing in RST	4
RST 516	Finance & Budgeting in RST	4
RST 594	Special Topics in Leisure (Section SM)	4
Select one Option Area Course from:		4
RST 502	Critical Issues Recreation Mgt	
RST 520	Critical Issues Sport Mgt	
RST 530	Critical Issues Tourism Mgt	
Additional Coursework		12
Total Credit Hours		36

Other Requirements ¹

Other requirements may overlap

Minimum Hours Overall Required 12 at the 500 level
Within the Unit:

Minimum 500-level Hours Required 16
overall:

Minimum GPA: 3.0

¹ For additional details and requirements for all degrees, please refer to the department's website (<http://rst.illinois.edu/grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Recreation, Sport and Tourism

Departmental requirements include satisfactory performance on the written preliminary examination at the completion of formal coursework, the oral preliminary examination on the proposed research for the thesis, and a final examination in defense of the doctoral thesis.

Code	Title	Hours
RST 503	Adv Leisure Research Methods	4
RST 550	Theory and Methods of Leisure	4
RST 551	Contemporary Issues in Leisure	4
RST 590	Doctoral Research Seminar and Colloquium (required for four semesters)	4
Coursework to support specialization (of the 28 required hours, a student must complete a minimum of 12 hours of RST coursework)		28
Advanced research methods to support specialization		16+
RST 599	Thesis Research (min/max applied toward degree)	20
Total Hours		80

Other Requirements ¹

Other requirements may overlap

Two years in residence	
Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	No
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements for all degrees, please refer to the department's website (<http://rst.illinois.edu/grad-overview>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Online Program

See requirements for the non-thesis option of the Master of Science.

Religion

<http://religion.illinois.edu>

Head of the Department: Valerie Hoffman

Director of Graduate Studies: Jonathan Ebel
2090 Foreign Language Building, MC-166
707 South Mathews
Urbana, Illinois 61801
Tel: (217) 333-0473
Fax: (217) 244-4019
Email: religion@illinois.edu

Graduate Major: Religion
Degrees Offered: M.A.
Graduate Minor: Religion

Graduate Degree Programs

The Department of Religion offers a Master of Arts in Religion.

Admission

The Graduate College admission requirements apply. Applicants need not have an undergraduate major in the study of religion. But they must demonstrate a capacity to undertake advanced study in this area of inquiry. All applications for admission must be supported by three letters of recommendation from persons qualified to comment on the applicant's aptitude for graduate study in religion. Applicants are required to submit a sample of their written work. The Graduate Record Examination (GRE) is required. International applicants whose native language is not English must take the IELTS or the Test of English as a Foreign Language (TOEFL) and have their scores submitted to Institution Code #1836, Dept. #00. A score of at least 600 on the paper-based test (PBT), or 250 on the computer-based test (CBT), or 100 on the internet-based test (iBT) is required for admission to this program.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Facilities and Resources

The extraordinary University Library is the department's main research facility; within it, the History, Philosophy & Newspaper Library, the Rare Book Room, and the area studies libraries (Slavic, Africana, Latin American, Asian Libraries) all serve faculty and students with expert bibliographers and focused collections. Among other special collections that are likely to be useful to our students are Afro-Americana and Women's Studies; the library is also a major repository for government documents.

Financial Aid

Financial aid is available to many students in the form of fellowships or assistantships. More information is available on the Graduate College web site, <http://www.grad.illinois.edu/fellowship/finaid>.

Master of Arts in Religion

Thesis Option

Code	Title	Hours
REL 510	Graduate Intro to Religion	4
	Two additional 500-level courses at least one of which must be in Religion	8
	Each student will establish a primary field of study in consultation with the Director of Graduate Studies and the student's advisor. Two courses must be taken within that field. In most cases, the primary field of study will be a particular field such as Buddhism, Christianity, Hinduism, Islam, Judaism, Philosophy of Religion, or Religion in America, min. 8	8
	Language Requirement: Students will demonstrate reading comprehension in one language other than English that is appropriate for research in the main field of the student's interest. The student will demonstrate that competence by completing a fourth-semester (or more advanced) course in a foreign language or by passing a reading comprehension test administered by the department. Credit does not apply to requirements	0
REL 599	Thesis Research	0 to 16
Total Hours		24-40

Other Requirements ¹

Other requirements may overlap

Students may take up to two of the required eight courses in departments other than Religion. Courses must be relevant to the student's curriculum in Religion.

Minimum 500-level Hours Required 12
Overall:

Minimum 500-level Hours Required 8
Within the Unit:

Student's must pass the MA examination

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
REL 510	Graduate Intro to Religion	4
Two additional 500-level courses at least one of which must be in Religion		8
Each student will establish a primary field of study in consultation with the Director of Graduate Studies and the student's advisor. Two courses must be taken within that field. In most cases, the primary field of study will be a particular field such as Buddhism, Christianity, Hinduism, Islam, Judaism, Philosophy of Religion, or Religion in America, min. 8		8
Language Requirement: Students will demonstrate reading comprehension in one language other than English that is appropriate for research in the main field of the student's interest. The student will demonstrate that competence by completing a fourth-semester (or more advanced) course in a foreign language or by passing a reading comprehension test administered by the department. Credit does not apply to requirements.		0
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required Overall: 12

Minimum 500-level Hours Required Within the Unit: 8

Students may take up to two of the required eight courses in departments other than Religion. Courses must be relevant to the student's curriculum in Religion.

Two Revised research papers in the student's primary field of study are required.

Student's must pass the MA examination

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Religion

The graduate minor in Religion is designed for graduate or professional students in other disciplines who desire to complement their degree program with a study of Religion. The Minor will consist of any coherent set of at least 12 graduate hours of courses that is approved by the Director of Graduate Studies in the Department of Religion. It will include at least one graduate seminar in the Department of Religion. The

successful completion of a minor is noted on the student's transcript. For admission to the program contact the department.

Code	Title	Hours
Any graduate seminar in Religion		4
Graduate electives in Religion at the 400 level or above		8
Total Hours		12

Other Requirements ¹

Minimum 500-level Hours Required Overall: 8

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Romance Linguistics

<http://www.spanport.illinois.edu/>

Director: Professor José Ignacio Hualde
4080 Foreign Languages Building
707 S. Mathews Avenue
Urbana, Illinois 61801
phone: (217) 333-3390
fax: (217) 244-8430
e-mail: jihualde@illinois.edu

Graduate Concentration: Romance Linguistics
Participating Programs: French (Ph.D.), Italian (Ph.D.), Linguistics (Ph.D.), Portuguese (Ph.D.), Spanish (Ph.D.)

Graduate Degree Program

The concentration in Romance Linguistic requires a minimum of 24 hours of graduate-level coursework and it is open to PhD students in the participating Departments.

Admission

Ph.D. students in any of the participating Departments within the School of Literatures, Cultures and Linguistics are admitted into the program with the consent of their advisor and the director of the program.

Graduate Concentration in Romance Linguistics

Code	Title	Hours
RMLG 435	Introduction to Romance Linguistics	4
RMLG 559	Sem Romance Ling (3 courses on different topics)	12
Two 400- or 500-level courses in the linguistics of other Romance languages and/or in general linguistics, as approved by the student's advisor		8
Language Requirement:		

Reading knowledge or completion of two semester language courses with a minimum grade of B in two Romance languages other than the student's major language, or an equivalent approved by the Romance Linguistics Advisory Committee. (Language courses taken to satisfy this requirement do not count towards the total number of hours.)

Total Hours

24

Other Requirements ¹

Other requirements may overlap

A dissertation or thesis in the area of Romance Linguistics. It must include significant research on at least 2 Romance languages. Whether this requirement is satisfied is determined by the Romance Linguistics Advisory Committee. We expect that a member of one of the cooperating departments external to the student's home department will normally be a member of the student's dissertation committee.

In addition to the graduate concentration requirements, students must also complete the requirements of their major degree. All hours taken to complete the Concentration in Romance Linguistics count toward the Ph.D.s in Linguistics, Spanish, Italian or Portuguese. Sixteen of the proposed twenty-four concentration hours will count towards coursework for the Ph.D. in French.

¹ For additional details and requirements refer to the department's graduate concentration program (<http://www.medieval.illinois.edu/education>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Russian, East European, and Eurasian Center

<http://www.reeec.illinois.edu/>

Head of the Department: John Randolph
 Director of Graduate Studies: John Randolph
 104 International Studies Building
 910 South Fifth Street
 Champaign, IL 61820
 (217) 333-1244
 Fax: (217) 333-1582
 E-mail: reec@illinois.edu

Major: Russian, East European, and Eurasian Studies
 Degrees offered: M.A.

Graduate Minors: Russian, East European, and Eurasian Studies; Balkan Studies

Graduate Degree Programs

The Russian, East European, and Eurasian Center offers a two-year program of language and area studies courses leading to an interdisciplinary Master of Arts degree. The program is designed to meet the needs of students proceeding to disciplinary-based doctoral work and those planning non-academic professional careers with area expertise.

Admission

Prospective graduate students should have completed at least two years of Russian or another language of Eastern Europe or Eurasia. Applicants must submit the Graduate College application for admission, certified transcripts of all undergraduate and graduate work, Graduate Record Examination (GRE) scores (verbal, quantitative, and written), three letters of reference, and a writing sample. International students must submit Test of English as a Foreign Language (TOEFL) scores. All applicants must meet the requirements of the Graduate College. Admission is ordinarily in the fall semester, but occasional exceptions are made for spring and summer admission.

Faculty Research Interests

The faculty (<http://www.reeec.illinois.edu/people/faculty>) affiliated with the Center represent a broad range of interests and methodological approaches in the social sciences and the humanities, as well as the professional schools.

Facilities and Resources

The Russian, East European, and Eurasian Center was founded in 1959 and designated a National Resource Center by the U.S. Department of Education. It serves as an intellectual and institutional hub for the university community and the public through conferences, lectures, colloquia, visiting scholars, study groups, exhibits, films, and other activities.

The annual Summer Research Laboratory on Russia, Eastern Europe, and Eurasia features special workshops, seminars, lectures, films, and other events, most of which are free and open to the public.

The International and Area Studies Library (<http://www.library.uiuc.edu/spx>) at the University of Illinois has one of the country's three outstanding Slavic library collections. The Slavic Reference Service (<http://www.library.illinois.edu/spx/srs.html>) serves all faculty and students with expert bibliographers.

Language training is provided by the Department of Slavic Languages and Literature (<http://www.slavic.illinois.edu>) in:

- Bulgarian
- Bosnian, Croatian, Serbian
- Czech
- Polish
- Russian
- Ukrainian
- Old Church Slavonic

Financial Aid

Financial aid is awarded on an academic year basis. All fellowships and assistantships include a stipend plus tuition and service fee waiver. Qualified incoming students who are U.S. citizens or permanent residents

should also apply for U.S. Department of Education Foreign Language and Area Studies (FLAS) fellowships.

Qualified students may also be eligible to compete for other fellowships at the campus level. A limited number of graduate assistantships, which include a tuition and fee waiver, are also available to outstanding students. The Center offers a 50 percent graduate assistantship in the area of outreach; research assistantships are sometimes available through the Slavic and East European Library. Information on need-based financial aid may be obtained from the Graduate College Fellowships Office.

Master of Arts in Russian, East European, and Eurasian Studies

Electives outside of Russian, East European, and Eurasian Studies should complement the student's core courses, research, and professional interests. A master's thesis or major research paper is required, to be based on research using primary sources, including sources in the language used to meet the competency requirement.

Thesis Option

Code	Title	Hours
REES 550	Seminar in REEE Studies	4
IS 530	Information Needs of Particular Communities	4
Core courses in Russian, East European, or Eurasian studies, earned in at least three different disciplines outside of REEES, with at least one at the 500 level.		24
Electives, at least one must be at the 500 level		6
Language Requirement: third-year competency in Russian or another language of Eastern Europe or Eurasia. Language courses cannot count toward the 24 hour core requirement, but can count toward the degree total.		
REES 599	Thesis Research (8 max applied toward degree)	8
Total Hours		38

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.reeec.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
REES 550	Seminar in REEE Studies	4
IS 530	Information Needs of Particular Communities	4
Core courses in Russian, East European, or Eurasian studies, earned in at least three different disciplines outside of REEES, with at least one at the 500 level.		24
Electives, at least one must be at the 500 level		6

Language Requirement: third-year competency in Russian or another language of Eastern Europe or Eurasia. Language courses cannot count toward the 24 hour core requirement, but can count toward the degree total.

Total Hours 38

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.reeec.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

- Russian, East European, and Eurasian Studies Minor (p. 885)
- Balkan Studies Minor (p. 884)

Students within the REEES M.A. program cannot also pursue a graduate minor in the same field. For additional details and requirements refer to the department's Graduate Programs (<http://www.reeec.illinois.edu/students/minors>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Balkan Studies

The Balkan Studies graduate minor is designed for M.A. or Ph.D. students in other disciplines who desire to complement their degree program with interdisciplinary study of the Balkans. Students interested in pursuing the minor must have a minimum of two years of college-level study of a language of the region (e.g., Albanian, Bulgarian, modern Greek, Hungarian, Macedonian, Romani, Romanian, Serbian or Croatian, Slovene, Turkish, Yiddish). A program of study can be tailored to the needs and interests of the individual student in consultation with Center staff; for admission to the program contact the Center.

Code	Title	Hours
IS 530	Information Needs of Particular Communities	2 or 4
Electives (4 hours at the 500 level) At least 8 graduate hours that relate to the Balkans chosen from a list maintained by REEEC and taken outside of the student's enrolling department.		8
Language Requirement: A minimum of two years college-level study of a language of the area or equivalent, including but not limited to Albanian, Bulgarian, modern Greek, Hungarian, Macedonian, Romani, Romanian, Serbian or Croatian, Slovene, Turkish, and Yiddish. For professional work in the region or scholarly research on area topics at least three years of relevant language study are recommended.		
Students must also submit a research paper primarily on the region.		
Total Hours		10-12

Other Requirements ¹

Other requirements may overlap

A research paper primarily on the Balkans is required. Normally, this paper would be written in a research seminar in a disciplinary department. A master's thesis or doctoral dissertation can be submitted in lieu of the research paper, if it deals primarily with the region. Students are encouraged to present their work in a public forum at the University, such as the REEEC Noontime Scholars lecture series.

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.reeec.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Russian, East European, and Eurasian Studies

The Russian, East European, and Eurasian Studies graduate minor is designed for M.A. or Ph.D. students in other disciplines who desire to complement their degree program with interdisciplinary study of Russia, Eastern Europe, and Eurasia. A program of study can be tailored to the needs and interests of the individual student in consultation with Center staff; for admission to the program contact the Center.

Code	Title	Hours
IS 530	Information Needs of Particular Communities	2 or 4
	Electives (4 hours at the 500 level) At least 8 graduate hours that relate to Russia, Eastern Europe, or Eurasia chosen from a list maintained by REEEC and taken outside of the student's enrolling department.	8
	Language Requirement: A minimum of two years or equivalent college-level study of a language of the area. For professional work in the region or scholarly research on area topics at least three years of relevant language study are recommended.	
	Students must also submit a research paper primarily on the region.	
	Total Hours	10-12

Other Requirements ¹

Other requirements may overlap

If students take both LIS 530 and REES 550, credit for one may be applied to the elective requirement.

A research paper primarily on the region. Normally, this paper would be written in a research seminar course in a disciplinary department. A master's thesis or doctoral dissertation can be submitted in lieu of the research paper, if it deals primarily with the region. Students are encouraged to present their work in a public forum at the University, such as the REEEC Noontime Scholars lecture series.

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.reeec.illinois.edu/students/grad>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Second Language Acquisition and Teacher Education (SLATE)

<http://www.slate.illinois.edu/>

Director: Professor Melissa Bowles
4080 Foreign Languages Building
707 S. Mathews Avenue
Urbana, Illinois 61801
Phone: (217) 333-3390
Fax: (217) 244-8430
E-mail: bowlesm@illinois.edu

Graduate Concentration: Second Language Acquisition and Teacher Education

Participating Programs: Anthropology (Ph.D.), Communication (Ph.D.), Curriculum and Instruction (Ph.D.), East Asian Languages and Cultures (Ph.D.), Educational Psychology (Ph.D.), French (Ph.D.), German (Ph.D.), Italian (Ph.D.), Linguistics (Ph.D.), Portuguese (Ph.D.), Psychology (Ph.D.), Spanish (Ph.D.), Speech and Hearing Science (Ph.D.)

Graduate Degree Program

The concentration in SLATE requires a minimum of 28 hours of graduate-level coursework and is open to PhD students in the participating Departments.

Admission

PhD students in any of the participating Departments are admitted into the program with the consent of their advisor and the Director of the SLATE program. A coursework prerequisite (LING 400 - Introduction to Language Structure) is required, and either it or an equivalent course must be completed prior to admission. If a student believes s/he has completed an equivalent (or more advanced) course than the prerequisite, s/he may submit a petition to the Director of SLATE requesting that course to be substituted for LING 400. Petition forms and instructions, as well as an admission form, are located on the SLATE website, at <http://slate.illinois.edu/students/forms/>.

Graduate Concentration in Second Language Acquisition and Teacher Education

Code	Title	Hours
Language Structure		
Select two of the following:		8
LING 501	Syntax I	
LING 502	Phonology I	
LING 541	Syntax II	
LING 542	Phonology II	
LING 550	Sociolinguistics II	
LING 551	Pragmatics	
SPAN 558	Sem Spanish Synchronic Ling (some sections) ¹	

LING/EALC 430	Intro to East Asian Ling
FR 416	Structure of French Language
FR 529	Studies in French Linguistics (some sections) ¹
GMC 562	Germanic Linguistics (some sections) ¹
GER 465	Ling Structures of German
GER 520	History of the German Language
ITAL 450	Italian Syntax & Phonology (some sections) ¹
SLAV 480	Intro to Slavic Linguistics (some sections) ¹
EALC 550	Seminar in EALC (some sections) ¹
And other courses as approved by the SLATE Director and Executive Committee	
Psycholinguistics/Sociolinguistics	
Select one of the following: 4	
CI 562	Ling and the School Curr
LING 450	Sociolinguistics I
LING 550	Sociolinguistics II
LING 560	Seminar in Bilingualism
PSYC 524	Dev Psycholinguistics
PSYC 525	Psycholinguistics
SPAN 558	Sem Spanish Synchronic Ling (some sections, e.g., "Sociolinguistica Hispanica") ¹
FR 529	Studies in French Linguistics (some sections, e.g., "Language and Gender") ¹
EPSY 566	Adv Psycholinguistics
SPAN 588	Sem Second Lang Learn ((some sections)) ¹
And other courses as approved by the SLATE Director and Executive Committee ^{2,3}	
Second Language Studies	
Select one of the following: 8	
LING 529	Second Lang Acq & Bilingualism
EPSY 487	Principles of Language Testing (EIL/FR/GER/ITAL/PORT/SLS/SPAN 460 Principles of Language Testing)
EIL 587	Seminar in Second Lang Studies (some sections) ¹
EALC 550	Seminar in EALC (some sections) ¹
EPSY 590	Advanced Seminar in Educ Psyc (Section BE: "Discourse Analysis in Second Language Acquisition"; Section N: "Second Language Acquisition, a Developmental Perspective")
CI 499	Issues and Development in Educ (some sections, e.g., "Foundations of Bilingual/Multilingual Education") ¹
CI 590	Sem for Adv Stu of Education (some sections, e.g., "Second Language Reading and Writing") ¹
SPAN 588	Sem Second Lang Learn (EALC/FR/GER/ITAL/LING/PORT/SLS 588 – some sections) ¹

EPSY 563	Theories in SLA (CI/EALC/EIL/FR/GER/ITAL/LING/PORT/SPAN/SLS 584 Theories in SLA)
And other courses as approved by the SLATE Director and Executive Committee ^{2,3}	
Research Methods	
1. Select one of the following: 4	
LING 514	Design and Methodology in Linguistic Research
EPSY 480	Educational Statistics (And one course from 2.)
2. An advanced course in quantitative or qualitative research (selected in consultation with student's advisor) that is related to the student's research topic including (but not limited to) courses on the following list: 4	
LING 514	Design and Methodology in Linguistic Research
EPSY 590	Advanced Seminar in Educ Psyc (Section AE: "Theoretical and Methodological Issues in SLA Research")
EPSY 578	Qualitative Inquiry Methods
EPSY 584	Multivar Anlysis in Psych and Ed
EPSY 580	Statistical Inference in Educ
EPSY 582	Advanced Statistical Methods
CI 509	Curriculum Research (some sections) ¹
EIL 587	Seminar in Second Lang Studies (some sections, e.g., "Language Assessment and Data Handling") ¹
SPAN 588	Sem Second Lang Learn (EALC/FR/GER/ITAL/LING/PORT/SLS 588 – some sections)
SOC 581	Survey Research Methods I
SOC 582	Survey Research Methods II
And other courses as approved by the Director and the SLATE Executive Committee ^{2,3}	
Language Requirement	
In order to earn a SLATE concentration, students must demonstrate competence in a second language. For native English speakers, a "second language" can be the second language of research/teaching, or, for those concentrating on ESL as the subject of research and teaching, any second language. For non-native speakers, the proficiency in English that is required for admission is considered more than adequate to fulfill this requirement. This requirement is designed to ensure the full appreciation and understanding of what it means to experience the learning of a second language. Second language competence is assessed in a variety of ways, to be determined by the student's advisor. 0	
Total Hours 28	
Other Requirements⁴	
Other requirements may overlap	
Courses applying toward fulfillment of the SLATE course requirements must be taken for a minimum of 3 graduate credit hours.	

Of the courses required for the SLATE concentration, at least four (4) must be at the 500-level.

A single course may count toward only one requirement. For instance, LING 550: Sociolinguistics II could fulfill either the Psycholinguistics/Sociolinguistics requirement OR be counted as one of the courses toward the Linguistics/Language Structure requirement, but not both.

In addition to the graduate concentration requirements, students must also complete the requirements of their major degree.

In order to earn a SLATE concentration, the student's dissertation topic must be related to one or more aspects of second language studies. The SLATE Executive Committee verifies that the content qualifies.

¹ For courses marked with a 1, only some sections satisfy SLATE requirements. Prior to early registration each semester, the SLATE Executive Committee will issue a list of the specific sections being offered the following semester that will count toward satisfying SLATE course requirements. Current and historic lists are maintained on the SLATE website: www.slate.illinois.edu/students/courses/. (<http://www.slate.illinois.edu/students/courses/>)

² A student may petition the SLATE Executive Committee to have courses taken elsewhere accepted as equivalents for any of the UIUC courses on the list. Before filing such a petition, students are advised to contact the SLATE Director. At least 5 of the required courses must be taken in residence at UIUC. Instructions for the petition may be found here (https://apps.atlas.illinois.edu/FormBuilderSurvey/Survey/LAS/SLATE/Petition_for_Course_Substitution_or_Waiver_of_Requirement).

³ A student may fill out a petition if s/he believes that a course s/he has taken that is not included in the list for a given category could be substituted for one that is on the list. Instructions for the petition may be found here (https://apps.atlas.illinois.edu/FormBuilderSurvey/Survey/LAS/SLATE/Petition_for_Course_Substitution_or_Waiver_of_Requirement).

⁴ For additional details and requirements refer to the department's concentration requirements (<http://www.slate.illinois.edu/students/requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Slavic Languages and Literature

<http://www.slavic.illinois.edu>

Head of the Department: Valeria Sobol
 Director of Graduate Studies: Richard Tempest
 2090 Foreign Languages Building
 707 South Mathews Avenue
 Urbana, IL 61801
 (217) 333-0680
 E-mail: slavic@illinois.edu

Major: Slavic Languages and Literatures
 Degrees Offered: M.A., Ph.D.

Graduate Degree Programs

The Department of Slavic Languages and Literatures offers graduate work leading to the degrees of Master of Arts and Doctor of Philosophy in Slavic Languages and Literatures. Scope of the department includes Bulgarian, Czech, Old Church Slavonic, Polish, Russian, Bosnian/Croatian/Serbian, Yiddish and Ukrainian.

Admission

Prospective graduate students of Slavic languages and literatures should have had the equivalent of at least three years of college study in the language of their proposed specialization and advanced coursework in that literature. Applicants should apply online (www.grad.illinois.edu/admissions/apply/) and submit a statement of purpose, three letters of recommendation and a writing sample. Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should be sent to:

SLCL Graduate Student Services
 3070 Foreign Languages Bldg.
 707 S. Mathews Ave.
 Urbana, IL 61801

Graduate Record Examination (GRE) scores are required for all students. The applicant should ask the ETS to submit scores to institution 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 79 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is expected as part of the academic work of all Ph.D. candidates in this program. Non-native English speakers must first pass a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Faculty Research Interests

Graduate courses are offered in:

- Bulgarian
- Czech
- Old Church Slavonic
- Polish
- Russian
- Bosnian/Serbian/Croatian
- Yiddish
- Ukrainian languages and literatures

The faculty represent a broad range of interests and methodological approaches, including:

- the intersections of literature and law, medicine, and psychoanalysis
- Russian-Jewish Studies

- intellectual history
- gender, sexuality, and the body
- Stalinist culture
- film history and theory
- Czech revival culture
- nationalism and literature
- Polish modernism, postmodernism, and visual culture
- exilic and emigre literature
- East European pop culture

Facilities and Resources

The University of Illinois at Urbana-Champaign has one of the country's three outstanding Slavic library collections (<http://www.library.illinois.edu/spx>). The Illinois Summer Research Laboratory on Russia and Eastern Europe brings to the campus more than one hundred postdoctoral researchers from all over the country every year to take advantage of the Slavic library resources.

Centers, Programs and Institutes

The federally-funded Russian, East European, and Eurasian Center (<http://www.reeec.illinois.edu>) (established in 1959) is an important funding source for our graduate students and hosts a variety of conferences and speakers every year.

Financial Aid

Students may receive various forms of financial assistance, including University fellowships, Foreign Language and Area Studies (FLAS) Fellowships, teaching assistantships, and research assistantships. There are also opportunities for part-time related work in the Slavic and East European Division of the University Library and elsewhere on the campus. Most students are awarded multiple-year support packages that include a mixture of teaching and fellowship, conditional on satisfactory progress through the program (see www.grad.illinois.edu/admissions/taengprof.htm (<http://www.grad.illinois.edu/admissions/taengprof.htm>)).

Master of Arts in Slavic Languages and Literature

In addition to fulfilling the requirements of the Graduate College, candidates must pass written examinations, which are largely based on survey courses in the respective fields. All students must complete 32 graduate hours of advanced courses including at least 20 in Slavic Languages and Literatures. No master's thesis is required.

Code	Title	Hours
RUSS 501	Russian for Grad Students I	4
RUSS 502	Russian for Grad Students II	4
SLAV 576	Methods in Slavic Grad Study	4
Select one of the following:		2 or 4
HIST 560	Problems in Russian History	
HIST 551	Prob European Hist Since 1789 (Section A)	
REES 550	Seminar in REEE Studies	
IS 530	Information Needs of Particular Communities	

Two 400- or 500- level literature or culture courses offered by the Slavic Department	8
Total Hours	32

Other Requirements¹

Other requirements may overlap

Minimum Hours Required Within the Unit:	20
Minimum Number of 500-level Hours Required Overall in Program:	12
Candidates must pass a written examination	
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Graduate Programs Web pages (<http://www.slavic.uiuc.edu/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Slavic Languages and Literature

All candidates for the Ph.D. degree must fulfill the general requirements of the Graduate College and must have a reading knowledge of at least one non-Slavic, research related language, most often French or German. A student entering the program with a Master of Arts degree from another department or university must complete SLAV 576. In consultation with the graduate advisor, the Ph.D. student designs an individualized program of study that includes a major field in one Slavic-area literature (any national literature currently offered by the department), study in a second Slavic-area language, and a minor field. A Ph.D. preliminary examination, consisting of written and oral portions on both major and minor fields, is required. A thesis is required for the degree of Doctor of Philosophy.

Code	Title	Hours
Graduate-level courses in a minor field (three courses in a single area, or two courses each in two distinct areas) and may be completed outside the department.		12-14
SLAV 576	Methods in Slavic Grad Study (if not taken during MA program)	4
Language Requirement: Demonstration of knowledge of a second Slavic-area language and a research language; can be satisfied through four semesters of language study or the successful completion of a translation examination. The research language requirement can be satisfied by completion of FR 500 and FR 501 or GER 500 and GER 501, the equivalent courses in another language, or a translation exam.		
SLAV 577	Slavic Languages Pedagogy Seminar (2 credit hour course, students take the course twice)	4
SLAV 599	Thesis Research (min/max applied toward degree)	24
Total Hours		64

Other Requirements ¹

Other Requirements may overlap

Minimum Hours Required Within the Unit:	20
Minimum Hours Required in Major Field:	20
Masters Degree Required Before Admission to PhD?	Yes
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Graduate Programs Web pages (<http://www.slavic.uiuc.edu/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Social Work

<http://socialwork.illinois.edu>

Head of the School: Dean Wynne Korr
1010 W. Nevada St.
Urbana, IL 61801
(217) 333-2261
E-mail: socialwork@illinois.edu

Director of Graduate Studies: Associate Dean Min Zhan

Major: Social Work
Degrees Offered: M.S.W., Ph.D.
Graduate Concentrations: Leadership, and Social Change (M.S.W. only) and Advanced Clinical (M.S.W. only)

Outreach Program: Social Work
Degree Offered: M.S.W.
Graduate Concentrations: Advanced Clinical (M.S.W. only)

Joint Degree Program: Doctor of Philosophy in Social Work and Master of Public Health (p. 718)
Degrees Offered: Ph.D. and M.P.H.

Joint Degree Program: Master of Social Work and Ph.D. in Social Work
Degrees Offered: M.S.W. and Ph.D.

Graduate Degree Programs

The School of Social Work offers programs leading to the Master of Social Work (MSW) and the Doctor of Philosophy (Ph.D.) degrees. The MSW program is accredited by the Council on Social Work Education (CSWE). The MSW program offers courses on the Urbana campus and off-campus through its MSW Outreach program.

Admission

For the MSW program, applicants must meet the following minimum requirements:

1. a baccalaureate degree from an accredited college or university in the United States or from a recognized institution of higher learning abroad;
2. a grade point average of 3.0 (A = 4.0) or greater for the last 60 semester hours of undergraduate work;
3. 20 hours of completed coursework in a liberal arts core consisting of social and behavioral sciences, the humanities, and biological sciences
4. evidence of personal attributes that are suitable for the profession of social work;
5. a score of 103 or above on the TOEFL test;
6. provision of a written supplementary statement.

For the Advanced Standing MSW program applicants must meet all the requirements above, and in addition have earned a Bachelor of Social Work (BSW) degree from a CSWE accredited program in the past 7 years.

For the Ph.D. program, applicants must meet the following minimum requirements:

1. a master degree in social work or in related disciplines;
2. a GRE score within the last 5 years;
3. demonstrating a potential for research and other scholarly work;
4. aptitude for leadership in the field of social work.

iMSW Program

Designed for the working professional who cannot attend a graduate program on the University of Illinois campus, the iMSW Program allows students to remain in their home community while pursuing a graduate degree. The School offers a three-year part-time program of study through its iMSW Outreach. This program is offered across the state and for students in adjoining states. Classes are offered in on-line and hybrid/blended learning formats. Face to face class sessions are offered on weekends. In their third year students complete two concentration courses on campus. After completing their coursework students do an internship/field placement back in their home communities. Students complete the same course requirements as students in the on-campus MSW program (see above). iMSW students who qualify for the Advanced Standing program may complete a shorter two-year course of study (see above).

Post-MSW Certification Program

The School offers the Illinois Professional Educator License (PEL) with Endorsement in School Social Work. Individuals with an MSW from an accredited School of Social Work are eligible to apply for the endorsement program. Individuals enrolled in the PEL program take two School Social Work courses and complete a one semester internship in a public school. Students whose MSW did not have sufficient clinical coursework may be required to complete additional coursework to meet ISBE criteria. Upon completion of the program students are eligible for the School Social Worker on an Illinois Professional Educator License from the Illinois State Board of Education (ISBE).

Master of Social Work in Social Work

The master's degree provides specialized study for advanced social work practice. Students take foundation and advanced courses in social work practice methods with individuals, families and organization, in policy and services, in research, and in human behavior and the social environment.

A two-semester field placement/internship (minimum 900 hours) in a social service agency is required. A total of 64-72 hours of graduate coursework is required for the M.S.W. degree. The determination of the number of hours needed within the range is determined on a case-by-case basis after considering each student's prior coursework and experience. The curriculum may be completed in 16 to 24 months of full-time study.

Students choose from one of the two concentrations listed below. Students in the LSC concentration prepare for advanced macro practice which focuses on work with communities and organizations rather than work with individuals and families. In the LSC concentration students are prepared to work in either leadership/administration or advocacy/policy. Students in the Advanced Clinical concentration prepare for clinical practice with individuals, families and groups, and in one of the focus area's.

1. Master of Social Work, Leadership & Social Change (LSC) Concentration (p. 891)
 - The LSC concentration is focused exclusively on macro practice and is not for students interested in direct service.
2. Master of Social Work, Advanced Clinical (p. 891)

Advanced Standing MSW

Students with a Bachelor's degree in Social Work (BSW) within the past seven years from a social work program accredited by the Council on Social Work Education (CSWE) and a GPA of 3.0 (A = 4.0) or greater for the last 60 semester hours of undergraduate work are eligible for the advanced standing program. This is a three semester/44 hour program that may be completed in 12 months by most students. Students with a concentration in school social work participate in a one semester internship during their second Fall semester for a 3 semester/44 hour program completed in 16 months.

1. Advanced Standing Master of Social Work, Leadership & Social Change (LSC) Concentration (p. 891)
2. Advanced Standing Master of Social Work, Advanced Clinical (p. 891)

Doctor of Philosophy in Social Work

The Ph.D. program is typically a 64 graduate hour program for students who enter with an MSW or other master's degree. The program is interdisciplinary and has a strong research emphasis. The Ph.D. program is organized around five curricular components: (1) seminars in social welfare policy, social work practice theories, and teaching; (2) research methodology and statistics; (3) an interdisciplinary area of study; (4) a qualifying exam; and (5) the dissertation. While the curriculum focuses on issues of relevance to social work and social welfare policy, students select courses not just in the School of Social Work but also from the full range of graduate courses offered, for example: educational psychology, human and community development, sociology, labor and industrial relations, psychology and anthropology. Candidates prepare for teaching, research, policy analysis, and leadership in social services.

Code	Title	Hours
SOCW 579	Social Work Practice Theories	4
SOCW 585	National Social Welfare Policy	4
SOCW 593	Applied Qualitative Research	4
SOCW 595	Quantitative Research Designs	4
SOCW 575	Social Work Teaching Seminar	4

SOCW 594	Individual Research (2 semesters of enrollment required)	8
Focus Area (2-3 courses outside of Social Work)		12
3 courses in statistics and research methodology, 2-3 from outside of Social Work		12
SOCW 599	Dissertation Research	12
Total Hours		64

Other Requirements¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required:	Yes
Preliminary Exam Required:	Yes
Final Exam/Dissertation Defense Required:	Yes
Dissertation Deposit Required:	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://socialwork.illinois.edu/academics/doctoral-program-ph-d/degree-and-course-requirements>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Gender Relations in International Development

Code	Title	Hours
WGPP 581	Gender Relations & Intl Dev	4
One elective at the 500 level from a list approved by the GRID faculty advisory committee.		4
One elective from a list of 400- and 500-level courses approved by the GRID faculty advisory committee.		4
Total Hours		12

Other requirements:

Other requirements may overlap.

For this multi-disciplinary graduate minor, students must select courses from at least two departments or units.

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Social Work and Ph.D. in Social Work

Admission to the Joint MSW – Ph.D. program is restricted to students who have a master's degree in a related field and who intend to complete a Ph.D. in the School of Social Work. Both degrees (MSW, Ph.D.) will be awarded upon completion of the program.

- Joint M.S.W. and Ph.D (<http://catalog.illinois.edu/graduate/graduate-majors/social-work/advocacy-leadership-social-change>)

Master of Public Health and Ph.D. in Social Work

• M.P.H./Ph.D. (p. 891)

Advanced Standing MSW, Leadership & Social Change Concentration

Code	Title	Hours
	Methods (Macro for LSC)	12
	Policy	4
	Research	4
	HBSE	4
	Field Education	12
	Electives (Based on Clinical or Administrative Focus)	8
	Total Hours	44

Other Requirements ¹

A concentration is required.

Minimum 500-level Hours Required 36

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://socialwork.illinois.edu/academics/master-of-social-work>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.P.H. and Ph.D. in Social Work

The M.P.H. can be earned jointly with the Ph.D. in Social Work. In the joint program up to 12 hours of coursework may be applied to both degrees, and the degrees are conferred simultaneously at the completion of the program.

Code	Title	Hours
CHLH 410	Public Health Practice	4
CHLH 469	Environmental Health	4
CHLH 540	Health Behavior: Theory	4
CHLH 550	Health Policy: United States	4
CHLH 572	Principles of Epidemiology	4
CHLH 573	Biostatistics in Public Health	4
CHLH 575	Chronic Disease Prevention	4
CHLH 577	Health Program Evaluation	4
CHLH 594	Special Topics (Cultural Competence and Health Promotion)	4
CHLH 587	MPH Applied Practice Experience	4
CHLH 589	MPH Integrative Learning Experience	2
	Area of concentration coursework from approved list, min 3 (may be met by Ph.D. core courses)	
	Electives and seminars, min 3 (may be met by Ph.D. core courses)	
SOCW 579	Social Work Practice Theories	4
SOCW 585	National Social Welfare Policy	4
SOCW 593	Applied Qualitative Research	4
SOCW 595	Quantitative Research Designs	4

SOCW 575	Social Work Teaching Seminar	4
SOCW 594	Individual Research (2 semesters of enrollment)	8
	Ph.D. Focus Area (outside of Social Work-may be met by M.P.H. core courses)	12
	3 courses in statistics and research methodology, outside of Social Work (may be met by M.P.H. core courses)	12
SOCW 599	Dissertation Research (min applied toward degree)	12
	Total Hours	100

Other Requirements ¹

Masters Degree Required for Admission? No

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required: Yes

Dissertation Deposit Required: Yes

Minimum GPA: 3.0

¹ For additional details and requirements refer to the two departments' Graduate Handbooks and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Social Work, Leadership & Social Change Concentration

Code	Title	Hours
	Methods (Macro focus for LSC)	16
	Policy	4-8
	Research	4-8
	HBSE	4-8
	Field Education	24
	Electives	8
	Total Hours	64-72

Other Requirements ¹

A concentration is required.

Minimum 500-level Hours Required 48

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Handbook (<http://socialwork.illinois.edu/academics/master-of-social-work>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Social Work, Advanced Clinical Concentration

Code	Title	Hours
	Methods (Clinical focus)	16
	Policy	8-12
	Research	4-8

HBSE	4-8
Field Education	24
Electives	4
Total Hours	64-72

Other Requirements ¹

A concentration is required.

Minimum 500-level Hours Required 48

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Handbook* (<http://socialwork.illinois.edu/academics/master-of-social-work>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Sociology

<http://www.sociology.illinois.edu>

Head of the Department: Kevin Leicht

Director of Graduate Studies: Monica McDermott

3120 Lincoln Hall

702 S. Wright St.

Urbana, IL 61801

(217) 333-1950

Fax: (217) 333-5225

E-mail: soc@illinois.edu

Major: Sociology

Degrees Offered: M.A., Ph.D.

Graduate Concentration: African American Studies (p. 644) (available to all degrees)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Sociology and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Sociology offers graduate programs leading to the Doctor of Philosophy degree.

Admission

The Graduate College admission requirements apply. Students applying for admission should have a background in one of the social sciences, preferably sociology. Applicants must submit Graduate Record Examination (GRE) scores on the tests of verbal ability, quantitative ability, and analytical ability. The advanced test in sociology is optional. A writing sample is required. Non-native English speakers must also submit Teaching of English as a Foreign Language (TOEFL) scores and the Test of Spoken English (TSE) scores. The department does not accept applications to the M.A. program.

Medical Scholars Program

Applications are not being accepted at this time.

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Sociology. Students may apply to the Medical Scholars Program prior to beginning graduate school or while

in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Financial support is provided for most graduate students through teaching assistantships, research assistantships, tuition and fee waivers, fellowships, and other University and external financial support.

Master of Arts in Sociology

The master's degree is granted as an intermediate step on the way to the Ph.D. Students should ordinarily complete the requirements during their second year of residence.

Code	Title	Hours
SOC 510	Professionalization Seminar (2 semesters)	4
SOC 500 or SOC 501	Classical Sociological Theory Contemp Sociological Theory	4
SOC 485	Intermediate Social Statistics (or equivalent)	4
Select one of the following:		4
SOC 571	Demography and Human Ecology	
SOC 581	Survey Research Methods I	
SOC 583	Qualitative Research Methods	
SOC 587	Adv Social Statistics II	
SOC 590	Individual Topics in Sociology	
Six additional courses at 400 or 500 level (at least 4 in SOC and 4 at the 500 level)		24
Total Hours		40

Other Requirements ¹

Other requirements may overlap

At least two semesters in residence and 5 UIUC courses minimum are required.

A Master's paper is required.

Minimum Hours Required Within the Unit: 32

Minimum 500-level Hours Required Overall: 28

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.sociology.illinois.edu/grad/current>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Sociology

The graduate program is small and cohesive with a high faculty-student ratio. All students are required to take a small core of required courses in theory and methods. Each term that students are in residence, they participate in at least one of a series of professional development workshops. Doctoral candidates must pass specialty examinations and write and defend a dissertation proposal and final dissertation.

Entering with approved B.S./B.A. Degree

Code	Title	Hours
SOC 510	Professionalization Seminar (2 semesters)	4
SOC 500 & SOC 501	Classical Sociological Theory and Contemp Sociological Theory	8
SOC 485	Intermediate Social Statistics (or equivalent)	0-4
SOC 583	Qualitative Research Methods	4
SOC 586	Adv Social Statistics I	4
Select one of the following:		4
SOC 571	Demography and Human Ecology	
SOC 581	Survey Research Methods I	
SOC 583	Qualitative Research Methods	
SOC 587	Adv Social Statistics II	
SOC 590	Individual Topics in Sociology	
An additional 5 substantive courses at the 500 level		12
Electives to bring coursework total to 72		32-36
SOC 599	Thesis Research (min/max applied toward degree)	3-24
Total Hours		96

Other Requirements ¹

Other requirements may overlap

Students must earn a B or better in every required course.

Minimum Hours Required Within the Unit: 43

Minimum 500-level Hours Required Overall: 43

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.sociology.illinois.edu/grad/current>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved M.S./M.A. Degree

Code	Title	Hours
SOC 510	Professionalization Seminar (2 semesters)	4
SOC 500 & SOC 501	Classical Sociological Theory and Contemp Sociological Theory	8
SOC 485	Intermediate Social Statistics (or equivalent)	0-4
SOC 583	Qualitative Research Methods	4
SOC 586	Adv Social Statistics I	4
Select one of the following:		4
SOC 571	Demography and Human Ecology	
SOC 581	Survey Research Methods I	
SOC 583	Qualitative Research Methods	
SOC 587	Adv Social Statistics II	
SOC 590	Individual Topics in Sociology	
An additional 5 substantive courses at the 500 level		12
Electives to bring coursework total to 48		8-12
SOC 599	Thesis Research (min/max applied toward degree)	3-24
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Students must earn a B or better in every required course.

Minimum Hours Required Within the Unit: 43

Minimum 500-level Hours Required Overall: 43

Qualifying Exam Required Yes

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required Yes

Dissertation Deposit Required Yes

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's graduate handbook (<http://www.sociology.illinois.edu/grad/current>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

South Asian and Middle Eastern Studies

<http://www.csames.illinois.edu>

Interim Director: Behrooz Ghamari-Tabrizi

Associate Director: Angela Williams

221 International Studies Building

Phone: (217) 244-7331

E-mail: csames@illinois.edu

Major: South Asian and Middle Eastern Studies

Degrees offered: MA

Graduate Degree Programs

The Center for South Asian and Middle Eastern Studies offers an MA in South Asian Studies and an MA in Middle Eastern Studies. The MA program provides preparation in language and area studies for students intending either to pursue a Ph.D. in a related field or to enter a career requiring language and regional expertise, such as in government, an NGO, business, media, international law, private foundations, or cultural exchanges.

Admission

Applicants to the graduate program must submit an application for admission online (www.grad.illinois.edu/admissions/apply (<http://www.grad.illinois.edu/admissions/apply>)) and submit a statement of purpose, three letters of reference completed by teachers, advisers, or recent employers, and a 10-20 page writing sample. Also required are original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed. Applicants are expected to have a strong background in at least one South Asian or Middle Eastern language; normally, this means a minimum of two years of formal study. Graduate Record Examination (GRE) scores are required and should be submitted to institution code 1836. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 103 on the internet-based test (iBT) for admission with full standing; they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c (<http://www.grad.illinois.edu/Admissions/instructions/04c>)). Applicants must have a BA or a BS degree to apply to the MA program. Applications are accepted for fall admission only.

Financial Aid

The Center makes every effort to assist graduate students in securing financial aid. Financial aid packages usually combine some form of fellowship support with teaching or research assistantships in a manner that allows for both teaching experience and timely completion of the degree. Financial aid may include: University Fellowships, Foreign Language and Area Studies (FLAS) Fellowships, Minority Academic Partnership Plan (MAPP) Fellowships, teaching assistantships, and research assistantships. All awards of financial aid are made following competitive application.

www.csames.illinois.edu/program/ma (<http://www.csames.illinois.edu/program/ma>)

www.flas.illinois.edu (<http://www.flas.illinois.edu>)

Master of Arts in South Asian and Middle Eastern Studies

Code	Title	Hours
	Three 500-level courses in the major field in area related courses	12
	Elective hours	12
	Language Requirement: Candidates must demonstrate knowledge of one South Asian language or Middle Eastern language at the fourth-year level by satisfactory completion of appropriate (400-level) coursework or examination.	8
Total Hours		32

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12
Overall:

Upon Completion of their coursework, candidates must pass a written examination covering the coursework on area studies and complete two satisfactory research/seminar papers.

Minimum GPA: 3.25

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.csames.illinois.edu/program/ma>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

² For a list of approved courses, see the SAME course archive (<http://www.csames.illinois.edu/program/courses/archive/all>) and visit the CSAMES website to see current course offerings (<http://www.csames.illinois.edu/program/courses>) each semester.

Spanish and Portuguese

<http://www.spanport.illinois.edu>

Head of the Department: Mariselle Meléndez
Director of Graduate Studies: Javier Irigoyen-García
4080 Foreign Languages Building
707 South Mathews Avenue
Urbana, IL 61801
(217) 244-3250
E-mail: span-port@illinois.edu

Major: Portuguese

Degrees Offered: M.A., Ph.D. (*Please note: Until further notice, we are accepting applications only to the M.A. in Portuguese, not to the Ph.D.*)

Major: Spanish

Degrees Offered: M.A., Ph.D.

Graduate Concentrations: Medieval Studies (available to all), Romance Linguistics (Ph.D.), Spanish Linguistics (M.A. only), Spanish Literatures and Cultures (M.A. only), Second Language Acquisition and Teacher Education (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Spanish and Doctor of Medicine (M.D.) through the Medical Scholars Program (<https://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The Department of Spanish and Portuguese offers work leading to the Master of Arts and Doctor of Philosophy in Spanish and Portuguese, and to a Concentration in Second Language Acquisition and Teacher Education (SLATE). Fields of specialization are:

- Spanish linguistics
- Romance linguistics
- Spanish literature and cultural studies
- Latin American literature and cultural studies
- Luso-Brazilian literature and cultural studies

A graduate course in Catalan literature is available. Also, the department is affiliated with the Latina/Latino Studies Program. Students in the area of Latina/Latino studies may be able to work with experts in the other disciplines in Latina/Latino studies such as anthropology, history, political science, sociology, and so forth in order to design and complete a program of studies in a particular area.

Admission

The normal prerequisite for a graduate major is an undergraduate major in the corresponding Romance language or consent of the department. Students doing graduate work for any advanced degree in Spanish or Portuguese must possess a command of the language. Applicants should apply online (www.grad.illinois.edu/admissions/apply) and submit a statement of purpose, three letters of recommendation and a writing sample of approximately 10-20 pages in the form of one or two papers, at least one of which must be written in Spanish or Portuguese (as applicable). Original transcripts (with English translations if applicable) showing all undergraduate and graduate work completed should also be uploaded. Graduate Record Examination (GRE) scores are required of all domestic applicants and should be submitted to institution code 1836. International applicants who have taken the GRE are encouraged to submit their scores as well. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) and must score at least 88 on the internet-based test (iBT); they must also pass the speaking sub-section of the iBT with a minimum score of 24 (see www.grad.illinois.edu/Admissions/instructions/04c). Applications are accepted for fall admission only. Application questions may be directed to SLCL Graduate Student Services at slclgradservices@illinois.edu.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp.

Centers, Programs, and Institutes

The option to pursue a concentration in SLATE (Second Language Acquisition and Teacher Education) is available to doctoral students in the department's programs in linguistics. Candidates selecting this option are required to complete courses in linguistics, psycholinguistics/sociolinguistics, second language studies, and research methodology in addition to advanced study in linguistics of the particular language. For information about SLATE go to www.slate.illinois.edu.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, this department requires degree candidates to teach as part of their academic

work. Such experience is considered a vital part of the graduate program. Non-native English speakers must first pass a test of their oral English ability (see www.grad.illinois.edu/admissions/taengprof.htm).

Financial Aid

The department offers financial aid (in the form of fellowships, teaching assistantships, and research assistantships) to all of the students it admits. Other kinds of fellowships and research support are also available on a competitive basis to qualified candidates; they include dissertation research and travel grants, conference travel grants, and summer fellowships.

Master of Arts

All students enrolled in the Spanish M.A. program must choose one of two concentrations: Spanish with concentration in Spanish Linguistics; or Spanish with concentration in Spanish Literatures and Cultures.

In addition to fulfilling the general requirements of the Graduate College, candidates for the M.A. in Spanish with concentration in Spanish Literatures and Cultures must pass a comprehensive examination based on coursework and a general reading list. Candidates for the M.A. in Spanish with concentration in Spanish Linguistics must complete a research paper in lieu of a formal comprehensive examination.

Areas of specialization offered in Portuguese are Luso-Brazilian literature and cultural studies. Detailed statements of the requirements for each specialization may be obtained from the department.

- Master of Arts in Spanish, Spanish Literatures and Cultures Concentration (p. 896)
- Master of Arts in Spanish, Spanish Linguistics Concentration (p. 896)
- Master of Arts in Portuguese (p. 896)

Doctor of Philosophy in Spanish

Doctor of Philosophy in Portuguese (*Please note: Until further notice, we are accepting applications only to the M.A. in Portuguese, not to the Ph.D.*)

Code	Title	Hours
Coursework selected in consultation with advisor		
SPAN or PORT 571	is required of all teaching assistants	4
Language Requirement: Students in all doctoral programs except SLATE must demonstrate reading proficiency in two languages besides the foreign language of specialization (not including English).		
SPAN/PORT 599	Thesis Research (32 max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 16

Overall:

Masters Degree Required for Yes

Admission to PhD?

Qualifying Exam Required No

Preliminary Exam Required Yes

Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

Areas of specialization offered in Spanish are:

- Medieval
- Early Modern
- Modern and Contemporary Spanish (Iberian) Studies
- Latin American colonial studies and modern and contemporary Latin American studies
- Spanish linguistics (with various subfield specializations)
- Romance linguistics (with various subfield specializations)

We also teach Catalan and Basque.

¹ For additional details and requirements refer to the department's guidelines for graduate students (<http://www.spanport.illinois.edu/graduate/guidelines>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Portuguese

The M.A. in Portuguese is administered through the Department of Spanish and Portuguese. Its goal is to provide to provide breadth in the various areas of Luso-Brazilian Literature as well as develop the student's ability to interpret and analyze literature. It requires a minimum of 32 graduate hours. Students must also successfully complete exams in four areas of Luso-Brazilian literature/cultural studies, chosen in consultation with their advisor.

Code	Title	Hours
	Course work in Luso-Brazilian literature/cultural studies selected in consultation with advisor.	32
Total Hours		32

Other Requirements ¹

Other requirements may overlap

PORT 571 is required of all teaching assistants

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's guidelines for graduate students (<http://www.spanport.illinois.edu/graduate/guidelines>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Spanish, Spanish Linguistics Concentration

The M.A. Concentration in Spanish Linguistics is administered through the Department of Spanish and Portuguese. Its goal is to provide graduate students with rigorous training in all main areas of Spanish Linguistics. It requires a minimum of 32 graduate hours, including coursework on the phonological, morphological and syntactic structure

of the Spanish language, as well as its history, sociolinguistics, and acquisition as a second language.

Code	Title	Hours
	Two 500 level courses in Hispanic linguistics	8
	One course in each of the departmental areas (syntax, phonology, morphology, sociolinguistics and dialectology, historical linguistics, second language acquisition).	24
Total Hours		32

Other Requirements ¹

Other requirements may overlap

A concentration is required.

SPAN 571 is required of all teaching assistants

Students must also submit a research paper completed in consultation with their advisor.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's guidelines for graduate students (<http://www.spanport.illinois.edu/graduate/guidelines>) and the *Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Spanish, Spanish Literatures and Cultures Concentration

The M.A. Concentration in Spanish Literatures and Cultures is administered through the Department of Spanish and Portuguese. Its goal is to provide graduate students with rigorous training in all main areas of Spanish Literatures and Cultures, as well as a working knowledge of Brazilian/Lusophone literatures and cultures. It requires a minimum of 32 graduate hours, including coursework in both Latin American and Spanish peninsular literary and cultural production in each of the general chronological periods.

Code	Title	Hours
	Two 500 level courses in Spanish or Luso-Brazilian literature/cultural studies and/or in related fields, chosen in consultation with the advisor	8
	To ensure basic professional preparation, complete the following: SPAN 572 (Theory and Literary Criticism) or equivalent	4
	To ensure broad knowledge of the field of Spanish-language literatures and cultures:	20
Choose one course from each of groups 1-5 below		
Group 1: Pre-18th Century Peninsular		
Group 2: Colonial Spanish American (Pre-Columbian to 1810)		
Group 3: Modern and Contemporary Spanish American		
Group 4: Modern and Contemporary Peninsular		

Group 5: Luso-Brazilian Studies

Total Hours 32

Other Requirements¹

Other requirements may overlap

A concentration is required.

SPAN 571 is required of all teaching assistants

Students must also complete three comprehensive exams on areas chosen in consultation with their advisors.

Minimum 500-level Hours Required 16

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's guidelines for graduate students (<http://www.spanport.illinois.edu/graduate/guidelines>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Special Education<http://education.illinois.edu/sped>

Interim Department Head: Michaelene Ostrosky
 Director of Graduate Studies: Johnell Bentz
 Graduate Admissions Information: Stephanie Rayl
 288 Education Building
 1310 South Sixth Street
 Champaign, IL 61820
 Phone: (217) 333-0260
 Fax: (217) 333-6555
 E-mail: gradservices@education.illinois.edu

Major: Special Education

Degrees offered: Ed.M., M.S., C.A.S., Ph.D.

Off-Campus Program: Special Education

Degree Offered: Ed.M.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Special Education and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

www.education.illinois.edu/sped/programs/ (<http://www.education.illinois.edu/sped/programs>)

The Department of Special Education offers several master's program areas of emphasis and licensure: Infancy and Early Childhood Special Education, Learning and Behavior Specialist I (LBS-I), Learning and Behavior Specialist II (LBS-II), General Master's in Special Education, and Research Practitioner in Special Education. LBS-I is the master's program that prepares teachers for their initial teaching licensure. The other master's programs are available for practicing teachers and other professionals interested in graduate studies. Several of these programs can be completed on a full or part-time basis. In most cases, full-time students take two years to complete their program of studies.

The Department also offers a terminal degree called the Certificate of Advanced Study (C.A.S.) in Special Education. The Certificate of Advanced Studies program is intended for students who desire a planned course of study beyond the master's degree, but do not wish to pursue the type of scholarly work typically expected in a doctoral program.

The Doctor of Philosophy (Ph.D.) degree is a research focused degree and is tailored to the individual. Each candidate works closely with an adviser to develop an integrated course of study reflecting his or her goals in the area of special education. All doctoral students have the opportunity to be involved in research, university teaching, and service to the field of special education during their doctoral studies. Doctoral students typically complete the program in four to five years of full-time resident study. Please see the Department of Special Education www.education.illinois.edu/sped/programs/DocProgram.html (<http://www.education.illinois.edu/sped/programs/DocProgram.html>) for more information about requirements and to view the Department of Special Education Doctoral Advisement Manual.

Admission<http://education.illinois.edu/programs/grad/how-to-apply>

Applicants must submit a complete application for admission. The application is located on the Graduate College Web site. (<http://www.grad.illinois.edu>) The applicant must submit three letters of reference and transcripts of all previous undergraduate and graduate work. A 3.0 grade point average (A = 4.0) for the last two years of the undergraduate program and for any previous graduate work is a minimum requirement for admission. The applicant must also submit a goal statement indicating his/her interests, experiences, and goals for pursuing graduate study in special education. In addition to the above items, international students must submit a Test of English as a Foreign Language (TOEFL) score (taken within two years of the start of the semester for which the student is requesting admission). International students must have a total iBT score greater than 102 (72nd-79th percentile). The minimum speaking score is 24 (79th percentile). Master's applicants should also submit a Master's Degree Program Special Education Form (<http://education.illinois.edu/programs/grad/how-to-apply>). Doctoral program applicants are required to submit a writing sample in addition to their goal statement.

Off-Campus Program

The Department of Special Education offers master's degree programs off-campus in coordination with Federal Personnel Preparation Grant awards. The focus of the off-campus program changes depending on the type of grant award. For example, past emphases have been on behavior intervention and multiple disabilities. For degree requirements, see the Master of Education chart above.

Medical Scholars Program**Please note applications are not being accepted at this time.**

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Special Education. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight

years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Licensure

The Council on Teacher Education functions as the all-University governance system for licensure. Graduate students who wish to qualify for the council's recommendation for a teaching or administrative license must complete the appropriate graduate program. The Department of Special Education offers graduate-level licensure programs in Learning and Behavior Specialist I (LBS-I), and Learning and Behavior Specialist II (LBS-II). Early Childhood Special Education master's students who already hold a Professional Educator License who went through an Early Childhood approved program qualify for the Illinois ECSE approval. Students completing the Director of Special Education focus are eligible for the State of Illinois Director of Special Education Endorsement. For specific information about licensure requirements, call the Council on Teacher Education (217-333-7195) or go to www.cote.illinois.edu (<http://www.cote.illinois.edu>).

Faculty Research Interests

The Department of Special Education faculty have a variety of research interests. There are multiple opportunities for graduate students to engage in research activities with faculty. For information about specific faculty research interests, current grants, and publications, please visit the Faculty Research Profiles web site education.illinois.edu/sped/Research-Teaching-and-Service (<http://education.illinois.edu/sped/Research-Teaching-and-Service>).

Facilities and Resources

The College of Education has many resources to assist graduate students through their academic career. The Bureau of Educational Research works with students to secure research funding. The Council on Teacher Education entitles candidates seeking a Professional Educator License and provides accreditation of professional education programs. Each student completing a degree program is assigned a graduate adviser, who is available to assist the student with planning the program of study and determining degree requirements, courses and timelines for degree completion.

Information on University resources can be found at <http://www.grad.illinois.edu/current-students>.

Financial Aid

Students engaged in graduate study and research at the University of Illinois at Urbana-Champaign find an environment where collaboration among faculty members and students is nurtured and rewarded and where the students' contributions are recognized and valued. In many cases, this recognition comes in the form of financial awards that enable students to devote concentrated attention to their studies. Virtually all doctoral candidates receive assistantships/ traineeships. Traineeships are grant funded and are available for full-time students pursuing initial teacher licensure and leadership preparation in specific areas. Other financial aid opportunities (e.g., fellowships and assistantships) are available to part-time and other master's degree students on a competitive basis. Students receiving traineeships, assistantships, and fellowships are exempt from payment of tuition and some fees.

There are opportunities available through the department (<http://www.ed.illinois.edu/sped/financialaid.html>), the College of Education (<http://education.illinois.edu>), and the Bureau of Educational Research (<http://www.ed.illinois.edu/ber/fundingresources.html>). Please note:

Graduate students employed as Staff by the University of Illinois at Urbana-Champaign are not eligible for a College of Education Award or Scholarship. Campus opportunities can be found at the Graduate College (<http://www.grad.illinois.edu/funding-jobs>) and the Office of Student Financial Aid (<http://www.osfa.illinois.edu>).

- Master of Education in Special Education (p. 899)
- Master of Science in Special Education (p. 900)

Please refer to the departmental website for typical course sequences and licensure requirements (<http://www.education.illinois.edu/sped/programs>) for specific program emphases.

Doctor of Philosophy in Special Education

Code	Title	Hours
Completion of at least 64 hours beyond the master's degree including:		
Major Subject Coursework (minimum)		32
SPED 599	Thesis Research (min/max applied toward degree)	4-20
Independent Study (min/max applied toward degree)		0-12
Research coursework ¹		16-20
Total Hours		64

Other Requirements ²

Minimum GPA 3.0

Masters Degree Required for Admission to PhD

Residency: Maintain continuous full time (12 hours) enrollment until the student takes the preliminary examination and during the graduating semester. Zero hours are required for all other semesters.

Early Research Requirement

Qualifying Exams

Human Subjects Approval

Preliminary Exam

Final Exam/Dissertation Defense

Dissertation Deposit

¹ All students will take a minimum of 16-20 credit hours, depending on area of methodology focus, in approved research methods courses (<http://education.illinois.edu/current-students/graduate/coe-graduate-handbook/phd/research-requirement>).

² For additional details and requirements refer to the department's Web site (<http://www.education.illinois.edu/sped>), the College of Education Graduate Programs Handbook (http://education.illinois.edu/students/grad_handbook), and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Certificate of Advanced Study in Special Education

The University of Illinois at Urbana-Champaign's College of Education complies with the U.S. Department of Education's Gainful Employment requirements by disclosing information to applicants regarding our Certificate of Advanced Study program. Required information can be found here (http://archives.provost.illinois.edu/certificates/CAS_SPED/13.1001-Gedt.html).

Code	Title	Hours
If the student does not have a Masters degree from the University of Illinois at Urbana-Champaign, Foundations Courses must be completed:		
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Educational Policy Studies		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Elective Hours:		24
500-Level Hours Required: 12 hours (Independent Study included)		
General Coursework Required: 20 hours		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
Total Hours		32

Other Requirements ¹

Enrollment must be preceded by at least two years of acceptable professional work experience.

Minimum GPA:	3.0
--------------	-----

¹ For additional details and requirements refer to the department's Web site, the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Master of Education in Special Education

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		
Select one of the following:		4
EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	
Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
Select one of the following:		4
EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	
EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Select a minimum of 18 hours from the following:		18
SPED 517	Disability Issues in SPED	
SPED 524	Supervised Prac in SPED	
SPED 526	Collaborative Leaders in SPED	
or SPED 566	Leadership in ECSE	

SPED 591	Field Study and Thesis Seminar	
Elective Hours:		6
400/500-Level Hours Required: 6 hours (Independent Study included)		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-6
Total Hours		32

Other Requirements:¹

Program/Licensure Requirements 10-61 hours depending on emphasis, <http://education.illinois.edu/sped/programs>

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Master of Science in Special Education

Code	Title	Hours
Psychological Foundations Courses in Educational Psychology		

Select one of the following: 4

EPSY 400	Psyc of Learning in Education	
EPSY 401	Child Language and Education	
EPSY 402	Sociocultural Infl on Learning	
EPSY 404	Adjustment in School Settings	
EPSY 405	Personality and Soc Dev	
EPSY 406	Psyc of Classroom Management	
EPSY 407	Adult Learning and Development	
EPSY 408	Learning & Hum Dev w/ EdTech	
EPSY 430	Early Adolescent Development	
EPSY 485	Assessing Student Performance	
EPSY 490	Developments in Educ Psyc	

Philosophical and Social Foundations Courses in Education Policy, Organization and Leadership		
--	--	--

Select one of the following: 4

EOL 548	Poli & Cultural Context of Ed	
EPS 400	History of American Education	
EPS 401	History of Educational Ideas	
EPS 402	Asian American Education	
EPS 403	European Education to 1600	
EPS 404	European Education since 1600	
EPS 405	Historical & Social Barriers	
EPS 410	Professional Ethics in Education	
EPS 411	School and Society	
EPS 412	Critical Thinking for Teachers	
EPS 413	Aesthetic Education	
EPS 415	Technology & Educational Reform	
EPS 420	Sociology of Education	
EPS 421	Racial and Ethnic Families	

EPS 423	Politics of Education	
EPS 424	Economics of Education	
EPS 426	Comparative Education	
Select a minimum of 18 hours from the following:		18
SPED 517	Disability Issues in SPED	
SPED 524	Supervised Prac in SPED	
SPED 526	Collaborative Leaders in SPED	
SPED 566	Leadership in ECSE	
SPED 591	Field Study and Thesis Seminar	
Elective Hours:		4
400/500-Level Hours Required: 4 hours (Independent Study included)		
Research/Project/Independent Study Hours (min/max applied toward degree):		0-8
SPED 599	Thesis Research (min/max applied toward degree)	2-8
Total Hours		32

Other Requirements¹

Human Subjects Approval

Program/Licensure Requirements 10-61 hours depending on emphasis, <http://education.illinois.edu/sped/programs>

Minimum GPA 3.0

¹ For additional details and requirements refer to the department's Web site, the College of Education Graduate Programs Handbook, and the Graduate College Handbook.

Speech and Hearing Science

<http://www.shs.illinois.edu>

Department Head: Karen Iler Kirk, Ph.D.

901 South Sixth Street
Champaign, IL 61820
(217) 333-2230
E-mail: shs@illinois.edu

Director of Graduate Studies: Cynthia Johnson, Ph.D.

Graduate Support: Andrea Pacey
901 South Sixth Street, Room 220
apacey@illinois.edu (shs-grad-admissions@ahs.illinois.edu)

Major: Audiology
Degrees Offered: Au.D.

Major: Speech and Hearing Science
Degrees Offered: M.A., Ph.D.
Graduate Concentration: Second Language Acquisition and Teacher Education (p. 885) (Ph.D. only)

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Speech and Hearing Science and Doctor of Medicine (M.D.) through the Medical Scholars Program (<http://www.med.illinois.edu/mdphd>)

Graduate Degree Programs

The department offers programs leading to the Master of Arts, Doctor of Audiology, and Doctor of Philosophy degrees, with specialization in various aspects of audiology and speech-language pathology.

The Department of Speech and Hearing Science offers graduate programs of study in speech-language pathology, audiology, and speech, language, and hearing science. The department prepares scientists and professionals who specialize in the study of perception and production of spoken, written, signed, and alternative communication and communication disorders, as well as dysphagia. Graduate degrees are offered at the master's and doctoral levels.

Admission

Although a B.A./B.S. in the field is not required for admission to the clinical M.A. or Au.D. programs, recommended background includes undergraduate credit in the following areas or their equivalents: phonetics, anatomy and physiology of the speech and hearing mechanism, hearing science, speech science, speech pathology, audiology, and aural rehabilitation. The M.A. and Au.D. programs begin in the fall only.

For more information about admissions, see:

<http://www.shs.illinois.edu/Graduates/Admissions.aspx>

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Speech and Hearing Science. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp (<http://www.med.illinois.edu/msp>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Master of Arts in Speech and Hearing Science

In the Master of Arts degree program, students learn about speech-language pathology in medical and educational settings, as well as speech, language and hearing science. This degree may be taken as either a terminal degree or as preparation for further graduate study, including a doctoral degree. For students seeking a terminal degree, the Master of Arts program may be designed with or without clinical practicum experience.

The clinical program ensures clinical competence in speech-language pathology necessary for employment in a healthcare and educational settings, private practice, or industry. Successful completion of this program ensures that the student has met the academic and

clinical requirements for the American Speech-Language-Hearing Association (ASHA) certification and can choose to pursue the Illinois state certification required for speech-language pathology in the public schools. The program is accredited by the Council on Academic Accreditation in Speech-Language Pathology and Audiology. The clinical MA program requires a minimum of 60 graduate hours. All students in the clinical program are required to take the following courses:

Clinical Program, Thesis or Non-thesis

Code	Title	Hours
SHS 410	Stuttering: Theory & Practice	4
SHS 430	Devel & Disorders Phonol Artic	4
SHS 431	Lang Disorders Preschool Child	4
SHS 470	Neural Bases Spch Lang	4
SHS 511	Assessment and Management of Voice Disorders	4
SHS 513	Assessment and Management of Dysphagia	4
SHS 514	Motor Speech Disorders	4
SHS 533	Advanced Language Diagnostics	2
SHS 534	Aphasia and Related Disorders	4
SHS 570	Quant Reasoning Spch Hear Sci	4
SHS 571	Clinical Sociolinguistics	4
SHS 579	Prof/Eth/Legal Issues AuD/SLP	3
SHS 592	Prosem Spch & Hear Sci	0
Elective hours (not including SHS 599) ¹		0-12
Required Clinical Practica		8-12
SHS 599	Thesis Research (A thesis is optional, but if completed 0-8 hrs. may be applied)	0-8
Total Hours		60

¹ To be eligible for the Illinois state professional educator license, students must complete SHS 532, Language Disorders in School-Age Children, and SHS 575, School Speech-Language Clinical Methods. Other electives are identified by the student under the guidance and approval of their academic advisor.

Other Requirements¹

Other requirements may overlap

Minimum 500-level Hours Required 12 min

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.shs.illinois.edu/Graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Clinical Program, Thesis or Non-thesis

The non-clinical MA program may prepare the student for employment in industry or for a doctoral program. This program requires 40 graduate hours. SHS 592 is required and the student must build a logical and coherent series of approved courses.

For a student seeking a non-terminal degree, the Master of Arts program enables the student to undertake fundamental coursework that will be an integral part of an overall doctoral program.

The student's program for the Master of Arts degree will be determined on an individual basis, taking into consideration the Graduate College and departmental requirements. A master's thesis should be part of a pre-doctoral student's plan of study.

Code	Title	Hours
SHS 592	Prosem Spch & Hear Sci	0-1
Elective hours		40
SHS 599	Thesis Research (A thesis is optional, but if completed 0-8 hrs. may be applied)	0-8
Total Hours		40

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 20

Minimum 500-level Hours Required Overall: 20

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.shs.illinois.edu/Graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

- Doctor of Philosophy in Speech and Hearing Science (p. 902)
- Doctor of Audiology (p. 902)

Doctor of Audiology

The Doctor of Audiology (Au.D.) is a four-year post-baccalaureate degree that emphasizes the application of basic science and technology and provides advanced professional training for the diagnosis and habilitation/rehabilitation of hearing disorders and related communication and educational disorders, as well as the scholarly study of professional practice-centered problems. The first two years of the program have more didactic courses than clinical practicum. The Comprehensive Examination (a written qualifying exam) is typically taken after one and a half years of the program, with the Preliminary Examination (defense of the prospectus for the Doctoral Research Project) taken at the beginning of the third year. The third year typically involves didactic coursework and clinical practicum, as well as completion of the Doctoral Research Project. The fourth year usually involves full-time clinical practicum. The Final Examination (defense of the Doctoral Research Project) should be completed by the end of the fourth year. The program is accredited by the Council on Academic Accreditation in Speech-Language Pathology and Audiology.

The Au.D. program requires a minimum of 112 semester hours. Didactic coursework requires 72 hours, with required courses comprising 60 hours.

Code	Title	Hours
Electives/specialty emphasis		12-16
Clinical practica		30-36
Select one of the following:		10-16
SHS 593	Special Problems (Doctoral Project)	

SHS 599 Thesis Research (min/max applied toward degree)

Total Hours 112

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to AuD? No

Qualifying Exam Required: Yes

Preliminary Exam Required: Yes

Final Exam/Dissertation Defense Required: Yes

Dissertation Deposit Required: No

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate programs (<http://www.shs.illinois.edu/Graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Doctor of Philosophy in Speech and Hearing Science

Admission to the doctoral program requires completion of a bachelor's degree. The doctoral program is divided into three stages: Stage I, which includes the master's degree or its equivalent; Stage II, which is advanced course work and completion of all departmental requirements, with the exception of the dissertation defense and deposit; and Stage III, which is the conduct of the dissertation, its defense and deposit.

The program may be planned with specialization in many areas of audiology, speech-language pathology, and speech, language or hearing science. Individual programs of study will be tailored to the student's area of scholarly and research interests and are planned by the student and the advisor. The minimum academic course requirements for this degree are 40 graduate hours of course work beyond those required for a master's degree or equivalent, a qualifying exam, and a dissertation.

The first two to four years of the doctoral program are typically devoted to course work, including the completion of an Early Research Project (ERP), in the area of concentration selected by the student. For students entering with a M.A./M.S., the ERP occurs early in Stage II and must be completed before the Qualifying Exam. For students entering the PhD program directly from a B.A./B.S. degree, the ERP may be undertaken and completed in Stage I or Stage II. In the middle of Stage II, students will take a Qualifying Exam. Successful completion of the Qualifying Exam provides evidence of the student's satisfactory progress toward scholarly independence and indicates the student is then qualified to begin the planning stages of a dissertation proposal. A preliminary exam on the dissertation proposal occurs at the end of Stage II and marks the transition to Stage III. The doctoral program culminations with a Final Exam/Dissertation Defense, and oral examination over a written document.

Entering with approved M.A./M.S. or Au.D. degree

Code	Title	Hours
3 courses in statistics-related areas		12
SHS 590	History of CSD	4
SHS 592	Prosem Spch & Hear Sci	2-4
SHS 594	PhD Early Research Project	6-8
One or two advanced 500-level seminars in SHS		4
Restricted elective hours, not including SHS 594, SHS 594, SHS 599 ¹		8-12
SHS 599	Thesis Research (min/max applied toward degree)	24
Total Hours		64

Other Requirements²

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ *Restricted elective courses, requiring approval by the mentor with input from the advising committee, are identified to support students' individualized areas of study within the broad field of communication sciences and disorders. If minimum credits are completed in SHS 592/SHS 594, then the maximum of restricted electives are required. If maximum credits are taken in SHS 592/SHS 594, then the minimum of restricted electives are required.*

² *For additional details and requirements refer to the department's graduate programs (<http://www.shs.illinois.edu/Graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).*

Entering with approved B.A./B.S. degree

Code	Title	Hours
3 courses in statistics-related areas		12
SHS 590	History of CSD	4
SHS 592	Prosem Spch & Hear Sci	2-4
SHS 594	PhD Early Research Project	8
One or two advanced 500-level seminars in SHS		4
Restricted elective hours, not including SHS 592, SHS 594, SHS 599 ¹		40-42
SHS 599	Thesis Research (min/max applied toward degree)	24
Total Hours		96

Other Requirements²

Other requirements may overlap

Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes

Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ *Restricted elective courses, requiring approval by the mentor with input from the advising committee, are identified to support students' individualized areas of study within the broad field of communication sciences and disorders. If minimum credits are completed in SHS 592/SHS 594, then the maximum of restricted electives are required. If maximum credits are taken in SHS 592/SHS 594, then the minimum of restricted electives are required.*

² *For additional details and requirements refer to the department's graduate programs (<http://www.shs.illinois.edu/Graduates>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).*

Statistics

<http://www.stat.illinois.edu>

Chair of the Department: Douglas G. Simpson
 Director of Ph.D. Program: Xiaofeng Shao
 Director of M.S. Program: Jeff Douglas
 M.S. Advisor: David Dalpiaz
 Contact: Aaron Thompson
 101 Illini Hall
 725 South Wright Street
 Champaign, IL 61820
 (217) 333-2167
stat-office@illinois.edu

Major: Statistics
 Degrees Offered: M.S., Ph.D.
 Graduate Minor: Statistics
 Graduate Concentrations: Analytics (M.S. only), Applied Statistics (M.S. only)

Graduate Degree Programs

The Department of Statistics offers graduate study leading to the Master of Science in Statistics, the Master of Science in Statistics with specialization in various areas of application, and the Doctor of Philosophy in Statistics.

Admission

Graduate College admission requirements apply. Students are expected to have a strong undergraduate mathematics background, but need not have an undergraduate statistics or mathematics degree. Students may be admitted with deficiencies, which are to be removed during the first year of graduate work. A minimum Test of English as a Foreign Language (TOEFL) score of 590 for the paper-based test or 243 for the computer-based test is required for students whose native language is not English. The Graduate Record Examination (GRE) is required. The department offers Ph.D. admissions for the fall only.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in the Ph.D. program.

Financial Aid

Financial aid is available primarily in the form of teaching assistantships, research assistantships, and fellowships. For further information write to the Graduate Admissions Committee, Department of Statistics.

- Master of Science in Statistics (p. 904)
- Master of Science in Statistics, Analytics Concentration (p. 905)
- Master of Science in Statistics, Applied Statistics Concentration (p. 905)

Doctor of Philosophy in Statistics

Code	Title	Hours
MS Equivalent Core		
STAT 424	Analysis of Variance	4
STAT 425	Applied Regression and Design	4
STAT 426	Sampling and Categorical Data	4
STAT 510	Mathematical Statistics I	4
Theory Core Courses		
STAT 511	Mathematical Statistics II	4
STAT 553	Probability and Measure I	4
STAT 575	Large Sample Theory	4
Select one Practicum Course: 4		
STAT 427	Statistical Consulting	
STAT 593	STAT Internship	
STAT 595	Preparing Future Faculty	
Select one Computational Theory and Methods Course: 4		
STAT 428	Statistical Computing	
STAT 525	Computational Statistics	
STAT 530	Bioinformatics	
STAT 542	Statistical Learning	
Select one of the Stochastic Processes and Time Series Courses: 4		
STAT 429	Time Series Analysis	
STAT 433	(Stochastic Processes)	
STAT 554	Probability and Measure II	
STAT 555	Applied Stochastic Processes	
Select at least 3 elective courses from a list within the department. At least two courses must be at the 500-level. 12		
Thesis and Individual Study Courses 0-32		
STAT 590	Individual Study and Research	0 to 8
STAT 599	Thesis Research (0 min applied toward degree)	0
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	No, but Masters level requirements must be met (32 additional hours min)
Qualifying Exam Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes

Dissertation Deposit Required	Yes
Minimum GPA:	2.75

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.stat.illinois.edu/students/graduates.shtml>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

The Graduate Minor in Statistics is designed for doctoral students pursuing degrees in other fields who wish to enhance their statistical knowledge and credentials. Students within the major cannot minor in the same program. The Minor is taken in conjunction with, and is intended to complement the student's work in their primary disciplines. Admission to the minor requires an application to the Department and admission to a PhD program (MS track to PhD cannot apply until they are in the PhD program) in another field at the University of Illinois. Applications for the Minor are submitted upon completion of the required courses. Approval is contingent on having grade point average of 3.0 or better in the Minor. A total of three courses, constituting 12 graduate credit hours, are required for the minor in Statistics degree. At least 8 credit hours must be taken at the 500 level. No course substitutions allowed.

Code	Title	Hours
400-level Statistics coursework chosen from approved departmental list		
500-level Statistics coursework chosen from approved departmental list		8
Total Hours		12

Students wishing information beyond that provided here should contact the Director of MS Studies in Statistics.

Master of Science in Statistics

Code	Title	Hours
STAT 425	Applied Regression and Design	4
STAT 510	Mathematical Statistics I	4
Select one of the following: 4		
STAT 424	Analysis of Variance	
STAT 426	Sampling and Categorical Data	
STAT 429	Time Series Analysis	
STAT 430	Topics in Applied Statistics	
STAT 578	Topics in Statistics	
Five elective courses from departmental list 20		
STAT 427	Statistical Consulting (or experience in applied statistics)	0-4
or STAT 593	STAT Internship	
STAT 410/MATH 464	Statistics and Probability II (or equivalent proficiency [may be waived with approval])	4
Total hours		32-36

Other Requirements ¹

Other Requirements may overlap

A concentration is not required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.stat.illinois.edu/students/graduates.shtml>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Statistics, Analytics Concentration

Code	Title	Hours
STAT 440	Statistical Data Management	4
STAT 448	Advanced Data Analysis	4
STAT 510	Mathematical Statistics I	4
STAT 425	Applied Regression and Design	4
STAT 542	Statistical Learning	4
Select one of the following:		4
STAT 424	Analysis of Variance	
STAT 426	Sampling and Categorical Data	
STAT 429	Time Series Analysis	
STAT 430	Topics in Applied Statistics	
STAT 578	Topics in Statistics	
STAT 428	Statistical Computing	4
or CS 412	Introduction to Data Mining	
STAT 427	Statistical Consulting	4
or STAT 593	STAT Internship	
STAT 410/MATH 464	Statistics and Probability II (or equivalent proficiency [may be waived with approval])	4
Select one of the following:		4
STAT 525	Computational Statistics	
STAT 571	Multivariate Analysis	
CS 512	Data Mining Principles	
Total hours		36-40

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.stat.illinois.edu/students/graduates.shtml>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Science in Statistics, Applied Statistics Concentration

Douglas G. Simpson, Department Chair

101 Illini Hall, MC-374

725 South Wright Street

Champaign, IL 61820 USA

PH: 217-333-2167

<http://www.stat.illinois.edu/>

The Department of Statistics offers the Master of Science in Statistics with specialization in a variety of areas of application. The degree program consists of a core of statistics courses covering statistical theory, linear models, and statistical consulting, and further coursework in the field of application and in statistics. The program offers an additional degree for students earning an advanced degree in the area of application.

To be eligible for this program, students must be pursuing an advanced degree in a department other than Statistics at the Urbana-Champaign campus. Students interested in economic statistics should apply for the applied concentration. Full statements of degree requirements are available from the head of the unit offering a specialization or from the Graduate Advisor of the Department of Statistics.

Code	Title	Hours
Five graduate courses must be completed in your primary field, in an area relevant to the field of Statistics.		20
Select one of the following:		4
STAT 424	Analysis of Variance	
STAT 425	Applied Regression and Design	
STAT 426	Sampling and Categorical Data	
STAT 428	Statistical Computing	
STAT 429	Time Series Analysis	
STAT 525	Computational Statistics	
STAT 571	Multivariate Analysis (if not used to fulfill another requirement)	
STAT 424	Analysis of Variance	4
or STAT 425	Applied Regression and Design	
STAT 427	Statistical Consulting (or experience in applied statistics)	0-4
or STAT 593	STAT Internship	
STAT 410/MATH 464	Statistics and Probability II (or equivalent proficiency)	4
Total hours		32-36

Other Requirements ¹

Other requirements may overlap

A concentration is not required.

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Graduate Programs (<http://www.stat.illinois.edu/students/graduates.shtml>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

STAT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/STAT>)

Courses

STAT 510 Mathematical Statistics I credit: 4 Hours.

Distributions, transformations, order-statistics, exponential families, sufficiency, delta-method, Edgeworth expansions; uniformly minimum variance unbiased estimators, Rao-Blackwell theorem, Cramer-Rao lower bound, information inequality; equivariance. Prerequisite: STAT 410.

STAT 511 Mathematical Statistics II credit: 4 Hours.

Bayes estimates, minimaxity, admissibility; maximum likelihood estimation, consistency, asymptotic efficiency; testing and confidence intervals; Neyman-Pearson lemma, uniformly most powerful tests; likelihood ratio tests and large-sample approximation; nonparametrics. Prerequisite: STAT 510.

STAT 525 Computational Statistics credit: 4 Hours.

Various topics, such as ridge regression; robust regression; jackknife, bootstrap, cross-validation and resampling plans; E-M algorithm; projection pursuit; all with a strong computational flavor. Same as CSE 525. May be repeated if topics vary. Prerequisite: STAT 425, STAT 426, and STAT 511; or consent of instructor.

STAT 530 Bioinformatics credit: 4 Hours.

Same as ANSC 543, CHBE 571, and MCB 571. See CHBE 571.

STAT 534 Advanced Survival Analysis credit: 4 Hours.

Introduction to the analysis of time-to-event outcomes. Topics include censoring, discrete survival, parametric models, nonparametric one- and K-sample methods, Cox regression, regression diagnostics, time-dependent covariates, and multivariate survival outcomes. Emphasis on key underlying concepts. Counting process-based theoretical justification and practical implementation will also be discussed. 4 graduate hours. No professional credit. Prerequisite: STAT 410, STAT 425, and knowledge of R.

STAT 538 Clinical Trials Methodology credit: 4 Hours.

The topics of the course focus on clinical trials designs and inferential techniques that are commonly used in the pharmaceutical industry. Topics include fixed sample designs for normal and survival data, two-sided group sequential design, Pocock's and O'Brien-Fleming boundaries, general theory of group sequential design, alpha and beta spending functions, one-sided designs with early stopping to accept the null hypothesis, non-inferiority designs, and inferential techniques. Computing in SAS will be emphasized. 4 graduate hours. No professional credit. Prerequisite: STAT 410, STAT 425, and familiarity with SAS.

STAT 542 Statistical Learning credit: 4 Hours.

Modern techniques of predictive modeling, classification, and clustering are discussed. Examples of these are linear regression, nonparametric regression, kernel methods, regularization, cluster analysis, classification trees, neural networks, boosting, discrimination, support vector machines, and model selection. Applications are discussed as well as computation and theory. Same as CSE 542. Prerequisite: STAT 410 and STAT 425.

STAT 543 Appl. Multivariate Statistics credit: 4 Hours.

Same as CPSC 543. See CPSC 543.

STAT 545 Spatial Statistics credit: 4 Hours.

Theory and methods for analyzing univariate and multivariate spatial and spatio-temporal data. Covers both fundamental theories and cutting-edge research advances for geostatistics, and statistical methods for aggregated data and point processes. Real data examples will be provided in class and statistical software will be used to illustrate the data analysis. 4 graduate hours. No professional credit. Prerequisite: STAT 425 or equivalent.

STAT 551 Theory of Probability I credit: 4 Hours.

Same as MATH 561. See MATH 561.

STAT 552 Theory of Probability II credit: 4 Hours.

Same as MATH 562. See MATH 562.

STAT 553 Probability and Measure I credit: 4 Hours.

Measures and probabilities; integration and expectation; convergence theorems and inequalities for integrals and expectations; independence; convergence in probability, almost surely, and mean; Three Series Theorem; laws of large numbers. Prerequisite: MATH 447 or consent of instructor.

STAT 554 Probability and Measure II credit: 4 Hours.

Measure extensions, Lebesgue-Stieltjes measure, Kolmogorov consistency theorem; conditional expectation, conditional probability, martingales; distribution functions and characteristic functions; convergence in distribution; Central Limit Theorem; Brownian Motion. Credit is not given for both STAT 554 and either MATH 561 or MATH 562.

STAT 555 Applied Stochastic Processes credit: 4 Hours.

Same as MATH 564. See MATH 564.

STAT 558 Risk Modeling and Analysis credit: 4 Hours.

Same as MATH 563. See MATH 563.

STAT 571 Multivariate Analysis credit: 4 Hours.

Inference in multivariate statistical populations emphasizing the multivariate normal distribution; derivation of tests, estimates, and sampling distributions; and examples from the natural and social sciences. Prerequisite: STAT 410 and MATH 415, or consent of instructor.

STAT 575 Large Sample Theory credit: 4 Hours.

Limiting distribution of maximum likelihood estimators, likelihood ratio test statistics, U-statistics, M-, L-, and R-estimators, nonparametric test statistics, Von Mises differentiable statistical functions; asymptotic relative efficiencies; asymptotic expansions. Same as ECON 578. Prerequisite: STAT 511 and either MATH 561 or STAT 554.

STAT 578 Topics in Statistics credit: 4 Hours.

May be repeated if topics vary. Prerequisite: Consent of instructor.

STAT 587 Hierarchical Linear Models credit: 4 Hours.

Same as PSYC 587 and EPSY 587. See EPSY 587.

STAT 588 Covar Struct and Factor Models credit: 4 Hours.

Same as EPSY 588, PSYC 588, and SOC 588. See PSYC 588.

STAT 590 Individual Study and Research credit: 0 to 8 Hours.

Directed reading and research. Approved for letter and S/U grading. May be repeated with approval. Prerequisite: Consent of instructor.

STAT 593 STAT Internship credit: 0 to 8 Hours.

Supervised, off-campus experience in a field in which statistical science plays an important role. Approved for letter and S/U grading. Prerequisite: STAT 425 and consent of instructor.

STAT 595 Preparing Future Faculty credit: 2 Hours.

Prepares Ph.D. students who are interested in an academic career to develop a successful academic career path, and to prepare graduate students for their future roles as teachers, and researchers. The course will focus on profession, job search, research, teaching and service. The course will involve guest panels, small and large group presentations and interactive Q&A with student participation.

STAT 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

Teaching of Biological Science

<http://sib.illinois.edu/>

Director of Life Sciences Masters Degree Programs: Dr. Chris Phillips
School of Integrative Biology
286 Morrill Hall
505 S Goodwin
Urbana, IL 61801
Contact: Carol Hall
(217) 333-8208
Email: cahall@illinois.edu

Online Program: Teaching of Biological Science
Degrees Offered: M.S.

Graduate Degree Program

The Master of Science in the Teaching of Biological Sciences (M.S.) degree program is designed for graduate students in a biological discipline who wish to earn teacher certification while completing the MS Degree in Biology. Individuals who are already certified to teach biology in Illinois public schools may enter the program to earn the MS degree while taking graduate courses in both biology and education.

Admission

The application requirements vary depending on whether or not the applicant is certified to teach in Illinois. Applicants holding an Illinois Teaching Certificate need only meet the application requirements for the Biology MS Program. Applicants who are seeking teacher certification in conjunction with the Biology MS program must meet additional application requirements for the College of Education to be admitted to the teacher certification program.

All Applicants must hold a baccalaureate degree (or equivalent) comparable in content and number of credit hours with that granted by the University of Illinois at Urbana-Champaign. Applicants must have an overall grade-point average of 3.0 (A=4.0) for the last 2 years of undergraduate study. Applicants must have completed a biology undergraduate majors program of study equal to or approximating that offered by the School of Integrative Biology or the School of Molecular and Cellular Biology. Applicants must either have proof of Illinois state teacher certification in Science: Biology or complete the Science: Biology teacher certification requirements while in the MS program.

Applicants who are not certified to teach biology must also apply to the Department of Curriculum and Instruction, College of Education for admission to the teacher certification program. This dual application has another set of admission requirements. Applicants must have an undergraduate grade point average of 3.0 (A=4.0) or better. Applicants must demonstrate high-level written communication (quality of writing,

thoughtfulness about education, reflective thinking). Applicants must provide evidence of formal or informal experience working with children or youth comparable to the age-level of students served in the program for which application is made. All applicants must pass the Illinois Certification Testing System Tests of Basic Skills AND Science: Biology prior to the application deadline. Graduate Record Examination (GRE) Scores are required by the College of Education prior to the application deadline. The institution number is 1836 and the GRE program code is 00 or 0203. Applicants must agree to a Criminal Background Check and fingerprinting.

Applicants whose native language is not English are required to submit TOEFL scores. International applicants must have a TOEFL score of at least 613 (paper-based test), 257 (computer-based test), or 103-104 (internet-based test) to be considered for admission. The TOEFL must be taken within two years of the proposed term of entry; older scores are not valid. The Test of Spoken English (TSE) is required; applicants must receive a score of at least 60. Request that official TOEFL and TSE scores be sent directly to the University of Illinois at Urbana-Champaign. The institution number is 1836 and the program code is 00 or 35.

See the Program Web Site (<http://omst.sib.illinois.edu/apply/app>) for application deadlines, procedures, and more detailed application guidelines.

Financial Aid

Financial assistance in the form of full or partial waiver of tuition and fees is not available to online M.S. students (except statutory waivers).

Online Master of Science in Teaching of Biological Science

Applicants may or may not be previously certified to teach in the State of Illinois. This master's program is available online (<http://omst.sib.illinois.edu/>).

Applicant Previously Certified

Code	Title	Hours
	While specific courses are not required, previously certified candidates must complete a minimum of 8 hours of graduate level courses offered by departments in the College of Education. (These courses would be selected in consultation with the Biology advisor based on the student's interests)	8
	Elective hours selected from either biology or education	8
	Hours Required within the unit (Biology-IB or MCB)	16
	Research/Project Hours (min/max applied toward degree):	0-4
	Total Hours	32

Other Requirements ¹

Other requirements may overlap

Courses taken "credit/no credit" may not be used toward degree requirements.

Deficiencies in undergraduate courses needed to satisfy the certification requirement must also be taken; these courses normally do not count toward the 32 or 51 graduate hours needed to complete the degree.

Deficiencies are determined by an audit of transcripts conducted by the Teacher Certification Officer.

Hours Required Within the Unit (Biology - IB or MCB): 16

500-level Hours Required Overall in Program: 12 min

Conferral of the MS degree is contingent upon the completion of all teacher certification requirements.

Qualification for teacher certification is contingent upon the completion of all MS degree requirements.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the program requirements (<http://omst.sib.illinois.edu/apply/graduation>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Applicant NOT Previously Certified

Code	Title	Hours
	Students Without Previous Certification must complete the 4-semester sequence of professional education courses, including one semester of student teaching, required for teacher certification. (29 graduate hours plus 2 undergraduate hours) Some of the graduate level courses are counted toward the basic requirement of 16 graduate hours of Education courses required for the MS degree.	35
	One 4 hour, 500-level Curriculum and Instruction course	4
	One 2 hour, 400-level Education Policy Studies course (These are selected from a list of approved courses in consultation with the Biology advisor based on the student's interests)	2
	Hours required within the Unit (Biology-IB or MCB)	16
	Research/Project Hours (min/max applied toward degree):	0-4
	Total Undergraduate Hours	2
	Total Graduate Hours	51

Other Requirements ¹

Other requirements may overlap

Courses taken "credit/no credit" may not be used toward degree requirements.

Deficiencies in undergraduate courses needed to satisfy the certification requirement must also be taken; these courses normally do not count toward the 32 or 51 graduate hours needed to complete the degree. Deficiencies are determined by an audit of transcripts conducted by the Teacher Certification Officer.

Hours Required Within the Unit (Biology - IB or MCB): 16

Hours Required Within the Unit (Biology - IB or MCB): 16

500-level Hours Required Overall in Program (min): 12

Conferral of the MS degree is contingent upon the completion of all teacher certification requirements.

Qualification for teacher certification is contingent upon the completion of all MS degree requirements.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the program requirements (<http://omst.sib.illinois.edu/apply/graduation>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Theatre

<https://theatre.illinois.edu/>

Head of the Department and Director of Graduate Studies: Kirsten Pullen
4-122 Krannert Center for the Performing Arts
500 South Goodwin Avenue

Urbana, IL 61801
(217) 333-2371
theatre@illinois.edu

Major: Theatre

Degrees Offered: M.A., M.F.A., Ph.D.

Graduate Concentrations: Acting (M.F.A. only), Design and Technology (M.F.A. only)

Admission

Candidates should apply to one of the ten graduate areas offered: Master of Fine Arts in Theatre with specialization in acting, costume design, costume technology, lighting design, scenic design, sound design and technology, stage management, or scenic technology; the Master of Arts in Theatre with specialization in theatre history; or the Doctor of Philosophy in Theatre with specialization in theatre history. All applicants should present transcripts documenting undergraduate or graduate study of theatre practice, dramatic literature, and theatre history with a cumulative grade point average in these subjects of at least 3.0 (A = 4.0). Applicants whose first language is not English must submit recent Test of English as a Foreign Language (TOEFL) scores; the current minimum score for consideration is 550 on the paper-based test (213 on the computer-based version).

Candidates for the M.F.A. degree must demonstrate talent in theatrical performance or production by audition or by the presentation of a portfolio of their work to an admissions committee of the faculty, either on campus or at one of the regional University/Resident Theatre Association (U/RTA) audition sites. M.F.A. candidates are admitted in the fall term only. The M.F.A. acting program accepts applications only every three years; the next academic years in which applications will be accepted are 2011-2012 for Fall 2012 admission.

Master's and doctoral candidates should present records of at least a 3.0 grade point average in all subjects studied at the undergraduate and graduate levels, supply samples of their scholarly writing, and submit recent Graduate Record Examination (GRE) scores. In addition to the Test of English as a Foreign Language (TOEFL) scores required of all foreign students, master's and doctoral candidates whose first language is not English are encouraged to submit scores of the Test of Written English (TWE). Ph.D. candidates should hold a master's degree in theatre or in a related field. Master's and doctoral candidates are normally admitted in the fall term.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

- Master of Arts in Theatre (p. 909)
- Master of Fine Arts in Theatre, Acting Concentration (p. 909)
- Master of Fine Arts in Theatre, Design and Technology Concentration (p. 910)

Doctor of Philosophy in Theatre

A comprehensive oral and written examination; an oral or written special-field examination; and defense of the dissertation before a committee of the graduate faculty is required. The program can be completed in two to three years beyond the master's degree.

Code	Title	Hours
	500-level theatre seminar	16
Language Requirement: a reading knowledge of one foreign language		
	Elective hours	32
THEA 599	Thesis Research (min/max applied toward degree)	32
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Masters Degree Required for Admission to PhD?	Yes
Qualifying Exam Required	No
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Arts in Theatre

A full-time student can complete this program in one academic year.

Thesis Option

Code	Title	Hours
	Theatre history, literature, and theory to be selected from departmental list	20
	Applied theatre	4
THEA 599	Thesis Research (min/max applied toward degree)	0 min
Total Hours		32

Other Requirements ¹

Other requirements may overlap

At least two semesters in residence	
Final comprehensive examination	
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
	Theatre history, literature, and theory to be selected from departmental list	20
	Applied theatre	4

Electives	8
Total Hours	32

Other Requirements ¹

Other requirements may overlap

At least two semesters in residence	
Final comprehensive examination	
Minimum 500-level Hours Required	12
Overall:	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Fine Arts in Theatre, Acting Concentration

The M.F.A. is a terminal degree in theatre practice. Approved areas of specialization include acting, costume design, costume technology, lighting design, scenic design, scenic technology, sound design and technology, and stage management. Only full-time students will be admitted to the program. With departmental and Graduate College approval, up to two semesters of residency and 32 hours of coursework may be waived on the basis of the student's prior professional experience, although such cases are rare.

Code	Title	Hours
	Acting	48
	Theater History	4
	Departmental approved electives	20
Total Hours		72

Other Requirements ¹

Other requirements may overlap

A concentration is not required.	
Minimum 500-level Hours Required	12
Overall:	
Must be in residence six semesters	
Students in the MFA Program participate continuously in the production program of the Department of Theatre, which presents six to eight productions annually at Krannert Center.	
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Graduate Programs and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Master of Fine Arts in Theatre, Design and Technology Concentration

The M.F.A. is a terminal degree in theatre practice. Approved areas of specialization include acting, costume design, costume technology, lighting design, scenic design, scenic technology, sound design and technology, and stage management. Only full-time students will be admitted to the program. With departmental and Graduate College approval, up to two semesters of residency and 32 hours of coursework may be waived on the basis of the student's prior professional experience, although such cases are rare.

Code	Title	Hours
	Courses in a student's area of specialization	32
	Theatre history and dramatic literature	12
	Departmental approved electives	28
Total Hours		72

Other Requirements¹

Other requirements may overlap

A concentration is not required.

Minimum 500-level Hours Required 12

Overall:

Must be in residence six semesters

Students in the MFA Program participate continuously in the production program of the Department of Theatre, which presents six to eight productions annually at Krannert Center.

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's *Graduate Programs and the Graduate College Handbook* (<http://www.grad.illinois.edu/gradhandbook>).

Translation and Interpreting

<http://www.translation.illinois.edu/>

Center for Translation Studies
 Director: Joyce Tolliver
 4080 Foreign Languages Building
 707 South Mathews Avenue
 Urbana, IL 61801

Major: Translation and Interpreting
 Degrees Offered: M.A.

Online Program: Translation and Interpreting
 Degrees Offered: M.A.

Graduate Degree Programs

The Center for Translation Studies in the School of Literatures, Cultures and Linguistics offers a graduate program leading to the Master of Arts in Translation and Interpreting. Candidates for the master's degree may specialize in Translation for the Professions, Literary and Applied Literary

Translation, or Conference and Community Interpreting. Campus-based and online programs are available.

Admission

To be considered for admission to the Master's Program in Translation and Interpreting, the candidate should have an undergraduate major in languages, linguistics, international studies, area studies, or a related field. Applicants must have command of one or preferably two languages in addition to English and must meet the minimum admissions requirements of the Graduate College.

Language Requirement

Students must have native or near-native proficiency in English and at least one other language supported by the program. Preference will be given to applications with two other languages in addition to English. Language A (native language) should be at ILR5; Language B should be at or above ILR 3-4; language C should be at or above ILR 2-3. Definitions of ILR levels can be found at: www.govtilr.org (<http://www.govtilr.org>)

Application Procedure

Applicants should apply online (www.grad.illinois.edu/admissions/apply) and submit: (<http://www.grad.illinois.edu/admissions/apply>)

- A 500 word written statement of purpose in English that describes your background, your language and cross-cultural experience and your professional goals. We are interested in details about you that relate to your goal of becoming a translator or interpreter.
- Three letters of recommendation.
- Resume or CV.
- Transcripts (with English translations, if applicable) showing all undergraduate and graduate courses taken and grades received. Transcripts received from foreign institutions should be accompanied by a Certificate of Degree or Diploma.
- All applicants whose native language is not English are required to submit the score report of their TOEFL IBT or IELTS as evidence of their English proficiency. Applicants should have ETS send TOEFL score reports to institution code #1836. IELTS score reports can be uploaded directly to the online application. Scores required for admission to this program are at least 103 total on the TOEFL with a speaking sub-section minimum score of 24 or scores greater than 6.5 total and 6 or higher in all sub-sections on the IELTS with a speaking sub-section minimum score of 8. (See www.grad.illinois.edu/Admissions/instructions/04C (<http://www.grad.illinois.edu/Admissions/instructions/04C>)).
- A 5-7 minute oral statement of purpose (audio-file) in the student's second language. International students whose primary language is not English should submit two oral statements: one in English and one in the language for which they are applying. (Send an mp3 or wma file-50 mb or smaller-as an email attachment to slclgradservices@illinois.edu (slclgradservices@illinois.edu)).
- An online test of language and translation proficiency. The test will be administered by the University of Illinois through its Online and Continuing Education Secure Online Testing System. Details will be provided to applicants once their file is complete.

Financial Aid

Since this is a self-supporting program, no financial aid that provides tuition waivers, such as Assistantships or Fellowships, is available from

the Center or the University. Students may seek funding from FAFSA and personal loans, student employment, outside grants, and employers.

Master of Arts in Translation and Interpreting

Campus-Based Program

Students on campus must take a minimum of 12 credit hours per semester (3 courses); 2 of which should be Translation Studies required courses, to maintain full-time status. The required courses must be taken in the order in which they are offered to complete degree requirements. Campus based courses follow the 16-week calendar.

All students must follow a four-semester (Fall and Spring) schedule to complete this program. It is not possible to accelerate the program. Students who request a leave of absence from the program must apply to the department for re-entry.

Code	Title	Hours
Core requirements		
TRST 500	Translation and Interpretation: Reflective Practice	4
TRST 410	Translation Theory & Practice	4
TRST 407	Terminology and CAT	4
Specialization: Students must complete 8 hours in one specialization:		8
Translation for the Professions (TRST 405, TRST 406)		
Literary and Applied Literary Translation (TRST 501, TRST 502)		
Conference and Community Interpreting (TRST 541, TRST 542)		
See Center for Translation Studies webpage for a list of appropriate courses for each specialization.		
Elective courses: See Center for Translation Studies webpage for a list of appropriate courses.		8
TRST 540	Translation Capstone	4
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-level Hours Required 12

Overall:

Minimum GPA: 2.75

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Online Program

Students working online will take two 4-credit hour courses per semester that will be offered sequentially, for eight weeks each. The courses will be asynchronous. Interaction with the instructor and other students will be required and facilitated through the state-of-the-art course delivery platform. Online students are required to keep pace with the course schedule. The requirements are the same (p. 911) as for the campus-based program.

Master of Urban Planning in Urban Planning

The professionally accredited M.U.P. program prepares students for careers in planning practice. Such careers involve public service at all levels of government, in private consulting practice, in the nonprofit sector, and in a wide variety of organizations in need of planning services. The program also prepares students for advanced work leading to the Ph.D. degree and a career in teaching and research.

The M.U.P. curriculum consists of a focused set of core courses required of all students, concentration/elective courses, applied workshops, a recommended internship (reduces the hours needed to graduate by 4), and a capstone requirement. The program is purposely flexible so that students may design a program that builds their expertise in a concentration area of practice such as land use and environmental planning, transportation planning, community development for social justice, housing, sustainable design and development, local and regional economic development, and geographic information systems and analysis. The department also has an active international program designed to expose students to planning practices and challenges in Europe, Africa, Latin America, and Asia.

If a student has an undergraduate professional degree in urban planning, up to 16 hours may be waived by petition, and the student must take at least 30 hours of urban and regional planning courses at Illinois.

Please consult the department's website (http://www.urban.illinois.edu/academic-programs/mup/mup_overview.html) for additional information about the M.U.P. requirements.

Thesis Option

Code	Title	Hours
UP 501	Planning History and Theory	4
UP 503	Physical Planning	4
UP 504	Urban History and Theory	4
UP 505	Urban and Regional Analysis	4
UP 510	Plan Making	4
UP 511	Law and Planning	4
UP 590	Professional Internship (reduces the hours needed to graduate by 4)	0
Recommended concentration/electives		32
UP 591	Capstone Seminar (enrollment required for two semesters)	0
UP 599	Thesis Research (min/max applied toward degree)	8
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 40

Minimum 500-level Hours Required 16 (12 in UP)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Web site (<http://www.urban.illinois.edu/academic-programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
UP 501	Planning History and Theory	4
UP 503	Physical Planning	4
UP 504	Urban History and Theory	4
UP 505	Urban and Regional Analysis	4
UP 510	Plan Making	4
UP 511	Law and Planning	4
UP 590	Professional Internship (reduces the hours needed to graduate by 4)	0
Recommended concentration/electives		32
UP 591	Capstone Seminar (enrollment required for two semesters)	0
UP 598	Master's Project (min/max applied toward degree)	8
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Minimum Hours Required Within the Unit: 40

Minimum 500-level Hours Required 16 (12 in UP)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's Web site (<http://www.urban.illinois.edu/academic-programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Urban and Regional Planning

<http://urban.illinois.edu>

Interim Department Head: Daniel Schneider
 Director of the M.U.P. Program: Mary Edwards
 M.U.P. Admissions Director: Bumsoo Lee
 Director of the Ph.D. Program: Faranak Miraftab
 111 Temple Buell Hall
 611 Taft Drive
 Champaign, IL 61820
 (217) 333-3890

Major: Urban Planning
 Degrees Offered: M.U.P.

Major: Regional Planning
 Degrees Offered: Ph.D.

Joint Degree Programs: The M.U.P. in Urban Planning can be earned jointly with the J.D. in Law (p. 808), M.Arch in Architecture, M.L.A. in Landscape Architecture, or any Illinois master's degree in a related field.

Graduate Degree Programs

The Department of Urban and Regional Planning offers graduate programs leading to the degrees of Master of Urban Planning and Doctor of Philosophy in Regional Planning. Students can also apply to obtain a joint degree with another graduate degree simultaneously. The most popular joint degrees are with Architecture, Landscape Architecture, Law and Agricultural and Applied Economics. Joint degrees with any related field are possible. In addition, a small number of the department's Bachelor of Arts in Urban Studies and Planning (B.A.U.S.P.) students participate in the highly selective 4+1 program (<http://www.urban.illinois.edu/prospective-students/academic-programs/master-of-urban-planning/4-1-program>) to complete the B.A.U.S.P. and M.U.P. in five years.

Admission

We welcome applications from men and women from a wide variety of backgrounds who have demonstrated potential for extraordinary professional achievement. Students seeking a graduate degree in planning come from a diverse range of academic backgrounds. The most frequent are sociology, economics, political science, geography, environmental sciences, architecture, engineering, public administration, urban planning, and public policy, but the natural sciences, humanities, and other fields also provide excellent foundations for graduate study in planning. Prospective students must have a grade point average (GPA) of at least 3.0 computed from the last 60 hours of undergraduate work and any subsequent graduate study, but the average GPA of admitted students is considerably higher. All applicants must submit Graduate Record Examination (GRE) scores for the tests of verbal, quantitative, and analytical ability. International applicants must meet additional minimum requirements (<http://www.grad.illinois.edu/admissions/countries>) based on their country of origin, including the Test of English as a Foreign Language (TOEFL).

We place particular emphasis on each applicant's statement of purpose. Applicants should use the statement to convey information about their backgrounds, professional and personal experience, and intellectual perspectives, in the context of articulating why a Master's in Urban Planning or Ph.D. in Regional Planning from the University of Illinois will help them achieve their professional goals. We seek an applicant pool that represents a mix of racial and ethnic populations, a range of social and economic backgrounds, different philosophies and perspectives, and a variety of life experiences. We are especially interested in applicants with professional experience, though that experience need not be in planning or closely related fields.

Applicants to the Ph.D. program are admitted when they meet the standards of the Department and a faculty member prepared to serve as their mentor and, if necessary, primary source of financial support. Students interested in pursuing a Ph.D. in Regional Planning should communicate with the Director of the Ph.D. Program and faculty most closely aligned with their interests, in addition to completing the formal application process.

Consult the M.U.P. admissions (<http://www.urban.illinois.edu/prospective-students/admissions/master-of-urban-planning>) and Ph.D. admissions (<http://www.urban.illinois.edu/prospective-students/admissions/phd-in-regional-planning>) web pages for more information.

Medical Scholars Program

Applications are not being accepted at this time.

The Medical Scholars Program (<http://www.med.illinois.edu/msp>) permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including Regional Planning. Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 www.med.illinois.edu/mdphd/ (<http://www.med.illinois.edu/mdphd/>).

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the doctoral experience in this program and is strongly encouraged for those intending to pursue an academic career.

Faculty Research Interests

The mission of the Department of Urban and Regional Planning is to teach and conduct research to improve understanding of human settlements and of planning situations. The department's faculty studies the ecological, economic, social, and institutional aspects of urban and regional development, and the theory and practice of planning processes. Planning is viewed as the achievement of outcomes based on interrelated actions over time and space, and close communication and collaboration with a wide range of disciplines and professions is inherent in the department's approach. The basis of that collaboration is a faculty whose academic training and degrees are in architecture, economics, geography, history, law, political science, regional science, and zoology, in addition to planning. Planning faculty and doctoral students pursue interdisciplinary research and make scholarly contributions to planning and fields closely allied with planning.

Facilities and Resources

The Department of Urban and Regional Planning shares Temple Hoyne Buell Hall (TBH) with the Department of Landscape Architecture and the School of Architecture. The majority of urban planning classes are held in TBH. The department has a 24-hour instructional computing laboratory. Research project and doctoral student workspace is provided in Noble Hall.

The City Planning and Landscape Architecture Reference and Resource Center is located in Funk Library (<http://www.library.uiuc.edu/agx>). The planning collection is one of the finest in the world, with books and reports gathered since the collection started over eighty years ago.

Financial Aid

Students compete for departmental and Graduate College fellowships and departmental teaching and research assistantships. Selection is based on the academic achievement and qualifications of the student.

- Master of Urban Planning in Urban Planning (p. 911)

Doctor of Philosophy in Regional Planning

Students, together with their faculty advisor and program committee, select theory, methods, and specialization courses to meet the Ph.D.

requirements and prepare for a successful career of advanced research and teaching.

A successful dissertation in planning reports original research on a subject appropriate to the field, the results of which produce significant advances in knowledge. Each student takes a Preliminary Examination, which is an oral examination based on the dissertation proposal and is administered by the student's dissertation committee. Upon approval of the dissertation proposal, the candidate can proceed with the research, written analysis, and findings. When the candidate and the supervisor agree that the research and writing are complete, the candidate is ready for the final examination, which is a defense of the dissertation before the committee.

Please consult the department's website (http://www.urban.illinois.edu/academic-programs/phd/phd_overview.html) for additional information about doctoral requirements.

Entering with approved Master's Degree

Code	Title	Hours
	Planning theory (UP 501 and UP 580; UP 501 may be waived for students with a PAB-accredited master's in planning)	4-8
	Research design (min)	4
	Research methods (min)	12
	Electives including areas of specialization	28
UP 599	Thesis Research (min/max applied toward degree)	1-16
Total Hours		64

Other Requirements ¹

Other requirements may overlap

Master's Degree Required for Admission to PhD?	No
Plan of Study Required	Yes
Two Synthesis Papers Required	Yes
Qualifying Exam or Qualifying Research Paper Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Web site (<http://www.urban.illinois.edu/academic-programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Entering with approved Bachelor's Degree

Code	Title	Hours
	Planning theory (UP 501 and UP 580; UP 501 may be waived for students with a PAB-accredited master's in planning)	8
	Research design (min)	4
	Research methods (min)	12
	Electives including areas of specialization	56

UP 599	Thesis Research (min/max applied toward degree)	1-16
Total Hours		96

Other Requirements¹

Other requirements may overlap

Master's Degree Required for Admission to PhD?	No
Plan of Study Required	Yes
Two Synthesis Papers Required	Yes
Qualifying Exam or Qualifying Research Paper Required	Yes
Preliminary Exam Required	Yes
Final Exam/Dissertation Defense Required	Yes
Dissertation Deposit Required	Yes
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's Web site (<http://www.urban.illinois.edu/academic-programs>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Joint Degree Programs

Joint degree programs provide the opportunity to complete two degrees in a compressed time frame.

Master of Urban Planning and Juris Doctor in Law

Candidates admitted to the joint Master of Urban Planning and Juris Doctor must complete a minimum of 32 hours in urban planning, including core courses and capstone, plus the requirements of the law degree.

Master of Urban Planning and Master of Architecture

Candidates admitted to the Master of Urban Planning and Master of Architecture must complete a minimum of 32 hours in urban planning, including core courses and capstone, plus the requirements of the Architecture degree.

Master of Urban Planning and any other approved Master's degree

Candidates may propose joint programs combining the M.U.P. with other UIUC master's degrees (for example, but not limited to, African Studies, Agriculture and Applied Economics, Civil and Environmental Engineering, Public Health (p. 715), Economics, Landscape Architecture (p. 805), Latin American Studies, Library and Information Sciences, Natural Resources and Environmental Sciences, and Recreation, Sports and Tourism). For joint programs, at least 40 hours must be in Urban Planning, including all core courses and capstone requirements. The two programs must total a minimum of (a) 80 hours, or (b) the sum of 40 Urban Planning hours plus the required number of hours for the second degree, whichever is greater. (In the latter case, the other program may at its discretion count up to 8 hours of Urban Planning courses as electives in meeting its degree requirements as long as students are required to take no fewer than 40 additional hours in that program.) The MUP capstone requirement may be waived for a thesis completed in another program provided faculty from both programs participate on the thesis

committee. Students must be in residence in Urban Planning for at least two semesters.

Consult the department's M.U.P. joint degree (<http://www.urban.illinois.edu/prospective-students/academic-programs/master-of-urban-planning/joint-degrees>) web page for more information about the admissions process and joint degree requirements. For additional guidance, please contact the Director of the M.U.P. Program.

Veterinary Medical Science

<http://www.vetmed.illinois.edu/>

College of Veterinary Medicine

Dean of the College of Veterinary Medicine (<http://www.vetmed.illinois.edu>): Peter D. Constable

Prospective students for the Veterinary Medical Scholars Program (D.V.M./Ph.D.) may contact:

Dr. Lois Hoyer

Associate Dean for Research and Advanced Studies
2001 South Lincoln Ave.

Urbana, IL 61802

Contact: Nikki Hausmann, nhausman@illinois.edu
(217)-333-4291

www.vetmed.illinois.edu/asa/vmsp.html (<http://www.vetmed.illinois.edu/asa/vmsp.html>)

Prospective students for the D.V.M./MPH program may contact:

Dr. John Herrmann, jah1110@illinois.edu

vetmed.illinois.edu/asa/mph (<http://vetmed.illinois.edu/asa/mph>)

Major: Comparative Biomedical Sciences
Degrees Offered: Ph.D.

Joint Degree Programs

Degrees Offered: D.V.M./MPH; D.V.M./Ph.D.

Departments

- Comparative Biosciences (p. 917)
- Pathobiology (p. 918)
- Veterinary Clinical Medicine (p. 920)

College of Veterinary Medicine

Dean of the College of Veterinary Medicine (<http://www.vetmed.illinois.edu>): Peter D. Constable

Prospective students for the Veterinary Medical Scholars Program (D.V.M./Ph.D.) may contact:

Dr. Lois Hoyer

Associate Dean for Research and Advanced Studies
2001 South Lincoln Ave.

Urbana, IL 61802

Contact: Nikki Hausmann, nhausman@illinois.edu
(217)-333-4291

www.vetmed.illinois.edu/asa/vmsp.html (<http://www.vetmed.illinois.edu/asa/vmsp.html>)

Prospective students for the D.V.M./MPH program may contact:

Dr. John Herrmann, jah1110@illinois.edu

vetmed.illinois.edu/asa/mph (<http://vetmed.illinois.edu/asa/mph>)

Major: Comparative Biomedical Sciences
Degrees Offered: Ph.D.

Joint Degree Programs
Degrees Offered: D.V.M./MPH; D.V.M./Ph.D.

Doctoral Degree Program

The Doctoral Program in Comparative Biomedical Sciences (CBMS) offers the degree of Doctor of Philosophy. Areas of research focus include, but are not limited to: Cancer & Stem Cell Biology, Diagnostics & Therapeutics; Environmental & Ecological Toxicology; Infectious Disease; and Reproductive Health & Disease. The degree requires completion of core courses as well as additional "elective" coursework as deemed necessary by the student's advisory committee in consultation with the student, to complete and defend the dissertation. The opportunity to rotate through the laboratories of CBMS faculty during the first year allows doctoral students to experience the types of biomedical research taking place throughout the program and helps to ensure that each student finds a research program best suited to his or her needs and interests. Successful completion of all requirements of the PhD degree and defense of dissertation research is expected within five years.

Research Training Environment

The University of Illinois is one of the nation's premier public research universities, known for its multidisciplinary collaborative research environment. This is an ideal environment for building basic, translational and clinical research excellence in the biomedical sciences. The CVM boasts a faculty with diverse and complementary expertise and interests. Most faculty members are actively engaged in comparative biomedical education and research. There are NIH-funded research programs, notably in the areas of reproductive biology and toxicology, oncology, stem cell therapy, and viral, bacterial, parasitic and fungal infectious disease. Residency programs encompass most veterinary clinical specialties as well as pathology, pharmacology, and toxicology. As part of the flagship campus of the University of Illinois, the veterinary faculty enjoys many opportunities to collaborate with researchers in such biomedical fields as chemistry, nanotechnology, and bioengineering on newly emerging solutions to the world's health problems. Faculty members also provide extensive service to professional organizations and specialty colleges, editorial boards and scientific journals, federal research review boards, college and university governance, and public education venues. The College maintains a full-service 230,000 sq. ft. hospital for farm, companion, and exotic animals that supports, engages, and advances the teaching and research activities of the college. In 2009 the College also established the Chicago Center for Veterinary Medicine, recently renamed Medical District Veterinary Clinic, which serves as the College's headquarters for teaching, research, and public engagement initiatives in the Chicago area.

Admission

Applicants for the Doctoral Program in Comparative Biomedical Sciences must have a BS or MS degree in a STEM discipline; or a DVM, MD, or equivalent degree; or co-enrollment in the University of Illinois Professional Veterinary or Medicine Programs; and should have a minimum grade point average (GPA) of 3.0 (A = 4.0). Grade point averages of applicants will be calculated on the last 60 hours of undergraduate studies for those without a DVM, MD, or equivalent degree, or on the entire professional curriculum for those with a DVM, MD, or equivalent degree. Applicants with a GPA below 3.0 may be admitted, but will have probationary status and be required to maintain a minimum GPA of 3.0 to remain in the doctoral program. Applicants with a graduate degree, or with some graduate coursework, will be evaluated

on the basis of their graduate work as well as their undergraduate or professional records. The CBMS Doctoral Program Committee must approve qualifications of students for admission. Page 7 of 27 Applicants must either have taken the Graduate Record Examination (GRE) within five years of their application, or petition the CBMS Doctoral Program Committee to waive this requirement. The College of Veterinary Medicine is dedicated to increasing diversity in the biomedical sciences. Promoting diversity in our PhD program is therefore an important consideration in evaluating applicants. Candidates will be provided the opportunity to write an essay as to how they would add diversity to the program. International applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) academic exam. A score of at least 611 on the paper-based TOEFL, 254 on the computer-based TOEFL, 103 on the internet-based TOEFL, or greater than 6.5 on the IELTS is required for full admission. Scores must be less than two years old on the first day of class of the entry term. Students are exempt from the TOEFL or IELTS requirement if they have completed at least two academic years of full-time study at an institution where the language of instruction is English during the five-year period prior to the proposed date of enrollment. Applicants gaining admission on the basis of their academic credentials, but scoring below the minimum requirements on the TOEFL or IELTS, will be admitted on limited status and required to take the English Placement Test (EPT) upon admission. Students will remain on limited status until the EPT is passed.

Joint Degree Programs

Students accepted into the Veterinary Medical Scholars Program complete a DVM and PhD. Medical students complete an MD and PhD.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program, is required as part of the academic work of all PhD candidates in this program, and will be tailored to meet the needs, experience and professional goals of each student. Service as a teaching assistant for one semester in a CVM course is the minimum requirement of all candidates.

Faculty Research Interests

The CBMS faculty conducts research in many areas of biomedicine. Experimental models range from stem cells to rodent models to domestic animals, wildlife, and human patients. In Cancer & Stem Cell Biology, and Diagnostics & Therapeutics, researchers integrate basic science discoveries with clinical medicine to promote the development of technologies towards improving the detection and treatment of cancer. Broad faculty research expertise relevant to the field of cancer includes drug pharmacology and toxicology, nanotechnologies, stem cell biology, novel drug discovery, and comparative tumor models. In addition to cancer, research is also being carried out in other comparative areas of diagnostics and therapeutic medicine. In the area of Environmental & Ecological Toxicology researchers study the impact of environmental toxicants on the fetal development and juvenile and adulthood health in humans and animals. Cutting edge molecular biology, in vitro cell and tissue cultures, novel animal models and advanced pharmacological and epidemiological approaches are routinely used for those studies in the research laboratory, clinics and field studies. Infectious Diseases investigators are focused on improved understanding of the molecular mechanisms of host-pathogen interactions, microbial pathogenesis, epidemiology and regulation of the immune response. Areas of specialization include bacteriology, mycology, virology, parasitology, immunology, and molecular genetics. In Reproductive Health & Disease

study areas include regulatory mechanisms of hormone secretion, ovulation, implantation and embryonic development. The impact of disrupted circadian rhythms, environmental toxicants and diets on such reproductive processes are among emerging subjects of study. Research is performed at molecular to whole-body levels using cell culture and animal models, as well as human subjects in the basic laboratory setting and local clinics.

CBMS Training Opportunities and Programs

The CBMS faculty provides graduate instruction in molecular genetics, pharmacology, stem cell research, epidemiology and toxicology. They participate in interdisciplinary training programs including the NIEHS-funded Environmental Toxicology Training Program, the Infection Biology Training Program, the Interdisciplinary Environmental Toxicology Training Program, the Neuroscience Program, the Division of Nutritional Sciences, the Reproductive Biology Program, the Beckman Institute, and the Institute for Genomic Biology. After completing graduate work, the student will be able to conduct research both independently and as a team member. Training in research planning and development, and writing research proposals will give our students the ability to function with teams of scientists from various biomedical fields. Teaching experience and literature study through journal clubs will form the basis for the student's development of teaching programs within his or her discipline. For graduate veterinarians, the College of Veterinary Medicine academic departments offer a broad range of residency training programs designed to provide specialty training and certification as sanctioned by the AVMA American Board of Veterinary Specialties. The doctoral degree can be combined with residency training, or begun immediately after completing the residency. The primary goal of these combined residency and PhD programs is to prepare veterinarians for careers encompassing research and teaching in a specialty area. The additional time to complete the combined programs is usually three years (i.e., for a total of 8 years in the program), reflecting the time required to satisfy the objectives of both training programs. Residency positions are offered in Veterinary Clinical Pharmacology which prepares graduate veterinarians for the certifying examination of the American College of Veterinary Clinical Pharmacology. A residency in Veterinary Clinical Toxicology is also offered which, together with the Animal Poison Control Center in Urbana, prepares veterinarians for board certification by the American Board of Veterinary Toxicology and the American Board of Toxicology. Residency training in Veterinary Anatomic Pathology and Veterinary Clinical Pathology are also offered, and have been highly successful in preparing graduate veterinarians for the certifying examination of the American College of Veterinary Pathologists and prominent positions in academia, governmental agencies, and industry. Clinical residency positions are offered in several areas including: Anesthesiology, Dentistry, Dermatology, Emergency and Critical Care, Equine Medicine, Equine Surgery, Farm Animal Reproduction and Medicine, Imaging, Oncology, Ophthalmology, Small Animal Internal Medicine, Small Animal Surgery and Zoological Medicine. The College of Veterinary Medicine houses a fullservice teaching hospital, with facilities and equipment for studying the diseases of animals and advancement of the related concept of "One Health", which addresses the commonalities of disease mechanisms, prevention and therapy between humans and other animals. Interested students should direct inquiries about residency programs to the Office of the Dean. Details about the available veterinary residency programs will be forwarded by the appropriate departments.

Financial Aid

The majority of our doctoral students receive fellowships, or research or teaching assistantships, which pays tuition, fees, and a salary stipend.

Code	Title	Hours
Required Courses		13-15
	Ethics in Research	1
	Grantsmanship & Scientific Writing	2
	Laboratory Rotation	0 or 2
VCM 572	Clinical Epidemiology (or equivalent graduate-level biostatistics)	4
	Journal Clubs and Seminar Series	6
Electives from the following list, chosen with advice of student's advisory committee		20 maximum
Signature Electives		
	Cancer & Stem Cell Biology, Diagnostics and Therapeutics	4
CB 516	Reprod & Dev Toxicology	3
CB 520	Models in Biomedical Research	2
PATH 515	Mechanisms Microbial Infection	3 or 4
PATH 516	Epidemiology Infectious Dis	3
PATH 550	Concepts in Pathology	4
VCM 524	Effective Biomedical Teacher	3
Programmatic Electives, chosen with advice of student's advisory committee		
CB 449	Basic Toxicology	3
CB 454	(Systems Toxicology)	3
CB 467	Fund Phar Discovery & Dev	2
CB 512	Advanced Endocrinology	2
CB 514	Neurotoxicology	3
CB 540	Wildlife Ecosystem Health	1 or 2
CB 550	Detect/Anal Gene Transcripts	4
CB 551	Ecotoxicology North Hemisphere	1
CB 552	Ethics in Toxicology	1
CB 564	Comp Clinical Pharmacology	3
CB 594	Comparative Bioscience	1 to 4
CB 596	Interdisciplinary Tox Sem	1
PATH 514	Molec Mech Bact Pathogenesis	2
PATH 517	Principle/Method Epidemiology	4
PATH 519	Mechanisms Viral Pathogenesis	3
PATH 527	Parasitology/Epidemiology Sem	1
PATH 528	Multivariate Biostatistics	4
PATH 544	Immunobiological Methods	3
PATH 591	Design/Analysis Biomed Exper	4
VCM 502	Issues in Clinical Research	2
VCM 508	Trans Mol Path Veterinary Dz	3
VCM 510	Science of Animal Well-Being	1.5
VM 551	(Introductory surgery for Research)	4
VM 572	(Clinical Epidemiology)	4
General Electives (chosen with advice of student's advisory committee)		
	Letter-grade graduate-level courses drawn from appropriate biomedical fields	20 maximum
	Additional credits inside or outside biomedical fields	7 maximum

Special problems	12 maximum
Thesis research	20 maximum per semester
TOTAL HOURS REQUIRED	96

- ¹ Laboratory Rotation required of incoming students without an identified research advisor, optional but encouraged of all other students.
- ² Elective courses are subcategorized as Signature Electives, Programmatic Electives, and General Electives. The Signature Elective list highlights CVM electives that help to define the CBMS program and that students would be encouraged to consider. The Programmatic Electives course list consists of courses that are relevant to the Biomedical Sciences and taught by CVM faculty with specific expertise and knowledge of the course material. The General Electives should be selected to supply students with an educational experience personalized to meet their specific career goals and research interests. No minimum course hour requirement in any category.

Additional Requirements

Minimum GPA:	3.0
GRE required	Yes
Masters degree required for admission	No (32 hrs. credit for MS)
Stage I exam required:	Yes
Stage II exam required:	Yes
Dissertation defence required:	Yes
Dissertation deposit required?	Yes

Comparative Biosciences

<http://vetmed.illinois.edu/cb/>

Dean of the College of Veterinary Medicine: Peter D. Constable
Interim Head of the Department: Jodi Flaws
3516 VMBSB
2001 S. Lincoln Avenue
Urbana, IL 61802
(217) 333-2506
E-mail: compbiosciogradprog@vetmed.illinois.edu

Major: Veterinary Medical Science – Comparative Biosciences
Degrees Offered: M.S.

Joint Degree Program: Veterinary Medical Scholars Program
Degrees Offered: D.V.M and M.S.

Graduate Degree Programs

The Department of Comparative Biosciences offers graduate work leading to the degree of Master of Science. Areas of specialization include physiology, pharmacology, and toxicology. Each area has a core of required courses supplemented by other courses within the Department of Comparative Biosciences and from other departments of the Graduate College. Adequate laboratory and animal holding space to conduct the research of the faculty and graduate students is provided

in the Basic Sciences Building, Veterinary Teaching Hospitals, and the Veterinary Research Farm.

Admission

Applicants for graduate study in comparative biosciences must have a minimum grade point average of 3.0 (A = 4.0). Grade point averages will be calculated on the last 60 hours of undergraduate studies for those without the D.V.M. degree and on the entire professional curriculum for those with the D.V.M., or equivalent, degree. Applicants with a graduate degree or with some graduate coursework will be evaluated on the basis of their graduate work as well as their undergraduate or professional records. Qualifications of students must be approved by the department's Graduate Studies Committee.

The Graduate Record Examination (GRE) is required and must have been taken within the last five years prior to application. Candidates must score an average in the 80th percentile or higher on each of the three portions of the GRE to be eligible for consideration.

International applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL). A score of at least 600 on the paper-based test, or 250 on the computer-based test, is required. Those applicants who gain admission on the basis of their academic credentials, but score below 600 on the TOEFL, will be admitted on limited status and required to take the English Placement Test (EPT) upon their arrival. Students are exempt from the TOEFL requirement if they have completed at least two academic years of full-time study at an institution where the language of instruction is English during the five-year period prior to the proposed date of enrollment. Students also need to take the Test of Spoken English (TSE) oral exam and score at least 50. We are not accepting applications for the M.S./D.V.M. program at this time.

Joint Degree Programs

Students accepted into the Veterinary Medical Scholars Program (<http://www.vetmed.illinois.edu/asa/vmsp.html>) can complete a D.V.M. and M.S. simultaneously.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all M.S. and Ph.D. candidates in this program.

Faculty Research Interests

Experimental models range from stem cells to rodent models to domestic animals, wildlife, and human patients. Exciting research is being conducted by CB faculty in the areas of:

- endocrine/reproductive biology and toxicology
- environmental and ecological toxicology
- uterine and placental biology
- aortic mesangial stem cells
- stem cells for assessment of small molecule and nanoparticle pharmacology and toxicology
- nanodisks as platforms for the study of membrane proteins
- mouse and frog models of development
- the impact of environmental and dietary compounds on neurodevelopment and on addictive potential of substances of abuse
- circadian rhythms in animal models of shift work and jet lag

- immunopharmacology and drug allergy
- obesity and diabetes mellitus
- cancer chemotherapy
- the interplay between infectious agents and contaminants with wildlife populations
- comparative drug disposition and pharmacokinetics

Research techniques range from micro-RNA to animal and human patient epidemiology to ecological assessments.

Training Programs, Centers and Institutes

Our faculty provide graduate instruction in stem cell research, molecular genetics, pharmacology and toxicology. They also participate in interdisciplinary training programs including the NIEHS-funded Environmental Toxicology Training Program (<http://vetmed.illinois.edu/cb/nihtox>), the Interdisciplinary Environmental Toxicology Training Program (<http://vetmed.illinois.edu/ietp>), the Reproductive Biology Program (<http://mcb.illinois.edu/crri>), the Neuroscience Program (<http://neuroscience.illinois.edu>), the Nutritional Sciences Division (<http://www.nutrsci.illinois.edu>), Beckman Institute (<http://www.beckman.uiuc.edu>), and the Institute for Genomic Biology (<http://www.igb.illinois.edu>). CB faculty also lead the Veterinary Clinical Pharmacology Residency Program (<http://vetmed.illinois.edu/cb/vcpharm.html>), which prepares graduate veterinarians for the certifying examination of the American College of Veterinary Clinical Pharmacology (ACVCP). In addition, together with the Animal Poison Control Center in Urbana, we jointly offer a Veterinary Clinical Toxicology residency (<http://vetmed.illinois.edu/cb/toxres.html>) to prepare veterinarians for board certification by the American Board of Veterinary Toxicology (ABVT) and the American Board of Toxicology (ABT).

Financial Aid

A limited number of research and teaching assistantships or associate positions are available.

Master of Science in VMS Comparative Biosciences

Code	Title	Hours
Student must select from one of the following courses with the advice of his/her dissertation committee:		3-4
MCB 450	Introductory Biochemistry	
MCB 354	Biochem & Phys Basis of Life (credits cannot be used towards degree)	
MCB 401	Cell & Membrane Physiology	
MCB 402	Sys & Integrative Physiology	
MCB 410	Developmental Biology, Stem Cells and Regenerative Medicine	
MCB 480	Eukaryotic Cell Signaling	
MCB 501	Advanced Biochemistry	
Select one of the following:		4
PATH 524	Biostatistics	
VCM 572	Clinical Epidemiology	
CPSC 440	Applied Statistical Methods I	
or approved equivalent		
CB 590	Seminar	1

CB 591	Biosciences Seminar Series (may be repeated for up to 2 hours of credit)	1
CB 592	Special Problems (4 max applied toward degree)	4
Electives		5-11
CB 599	Thesis Research (min/max applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements may overlap. Students may be required to take additional courses as recommended by Advisory Committees or Department Divisions.

Minimum Hours Required Within the Unit:	8 (500 level)
Minimum 500-level Hours Required Overall:	12
Final Exam/Thesis Defense	Required
Thesis Deposit Required	
Minimum GPA:	3.00

¹ For additional details and requirements refer to the department's graduate degree requirements (http://www.vetmed.illinois.edu/vb/ms_phd.html) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

M.B.A. Joint Degree Program

Students in this unit may choose to earn their major degree and simultaneously complete an M.B.A., with 12 fewer required hours than when pursuing both degrees independently. Students must be enrolled in the M.B.A. program for three terms and complete all the requirements of their primary degree. Interested students should see the joint program requirements (p. 695) and contact the M.B.A. program and their major department office for more information.

D.V.M. and M.S. in Veterinary Medical Science – Comparative Biosciences

Students accepted into the Veterinary Medical Scholars Program (<http://www.vetmed.illinois.edu/asa/vmsp.html>) can complete a D.V.M. and M.S. simultaneously.

Pathobiology

<http://www.vetmed.illinois.edu/path/>

Dean of the College of Veterinary Medicine: Peter D. Constable
 Interim Head of the Department: Philip Solter
 Director of Graduate Studies: Dongwan Yoo
 2522 Veterinary Medicine Basic Sciences Building
 2001 South Lincoln Avenue
 Urbana, IL 61802
 (217) 333-2449
 Karen Nichols klp68@illinois.edu

Major: Veterinary Medical Science - Pathobiology
 Degrees Offered: M.S.

Graduate Degree Programs

The Department of Pathobiology offers graduate programs leading to the degree of Master of Science. Areas of specialization include epidemiology, infectious diseases, immunology, virology, bacteriology, anatomic pathology, and clinical pathology. Each specialty area has a core of required courses supplemented by other courses within the Department of Pathobiology and from other departments of the Graduate College. Adequate laboratory and animal holding space to conduct the research of the faculty and graduate students is provided in the Basic Sciences Building, Veterinary Teaching Hospitals, and the Veterinary Research Farm.

Admission

Applicants for graduate study in the Department of Pathobiology must have a minimum grade point average of 3.0 (A = 4.0). Grade point averages will be calculated on the last 60 hours of undergraduate studies for those without the D.V.M. degree and on the entire professional curriculum for those with the D.V.M., or equivalent, degree. Applicants with a graduate degree or with some graduate coursework will be evaluated on the basis of their graduate work as well as their undergraduate or professional records. Qualifications of students must be approved by the department's Graduate Admissions Committee.

The Graduate Record Examination (GRE) is required and must have been taken within the last five years prior to application. Usually, successful candidates score an average in the 80th percentile or higher on each of the three portions of the GRE to be eligible for consideration.

International applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL). A score of at least 600 on the paper-based test, or 250 on the computer-based test, is required. Those applicants who gain admission on the basis of their academic credentials, but score below 600 on the TOEFL, will be admitted on limited status and required to take the English Placement Test (EPT) upon their arrival. Students are exempt from the TOEFL requirement if they have completed at least two academic years of full-time study at an institution where the language of instruction is English during the five-year period prior to the proposed date of enrollment. Students also need to take the Test of Spoken English (TSE) oral exam and score at least 50. We are not accepting applications for the M.S./D.V.M. program at this time.

Specialization in Infectious Diseases

The Department of Pathobiology offers an area of specialization in infectious diseases. The program is flexible and provides the student with proficiency in several areas of epidemiology, immunology, parasitology, virology, bacteriology and molecular pathogenesis of infectious disease and ecology of infectious diseases. Students electing this area should have completed coursework in basic genetics, biochemistry, and microbiology. The program of study for each student in the specialization is decided individually. Interested students should direct inquiries and applications to the department.

Specialization in Anatomic, Clinical and Zoo Pathology

The Department of Pathobiology offers an area of specialization in anatomic, clinical, and zoo pathology. These programs are residency programs available to qualified graduate veterinarians. Veterinarians entering this specialization will be specifically trained in pathology so they can function as competent and innovative professionals and

assume leadership roles in academia, government, and industry. Students electing this area must have completed coursework in the D.V.M. curriculum. The program of study for each student in these specializations is decided individually. Interested students should direct inquiries and applications to the department. Students completing the specialization will be qualified to take the ACVP Board examinations during the program.

Faculty Research Interests

Expertise in the Department of Pathobiology spans epidemiology, immunology, parasitology, virology, bacteriology and comparative pathology. Through its multidisciplinary approach, the department addresses complex problems in biomedical and veterinary sciences. Research emphasizes multi-host disease systems, with the goal of improving human and animal health at the individual and population levels in a broad social and environmental context. Specific areas of research interest include:

- Molecular mechanisms of infection, host-pathogen interactions, and immunity
- Strategies for vaccine design and disease control
- Experimental pathology
- Molecular virology
- Bacteriology
- Cancer biology
- Spatial and contextual aspects of health and illness, combining human, animal, and ecosystem health
- Mathematical modeling of infectious diseases to promote disease control
- Foreign animal disease prevention, preparedness, and response

Training Programs, Centers and Institutes

Our faculty provide undergraduate and graduate instruction in molecular virology, infectious diseases, epidemiology, bacteriology, parasitology and anatomic and clinical pathology. They also participate in interdisciplinary training programs including the Emergent Behaviors of Integrated Cellular Systems (EBICS) Center, the Division of Nutritional Sciences (<http://www.nutrsci.illinois.edu>), Beckman Institute (<http://www.beckman.uiuc.edu>), and the Institute for Genomic Biology (<http://www.igb.illinois.edu>). Pathobiology faculty also lead the Anatomical and Clinical Pathology Residency Program (<http://vetmed.illinois.edu/cb/vcpharm.html>), which prepares graduate veterinarians for the certifying examination of the American College of Veterinary Pathologists (ACVP).

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all M.S. candidates in this program.

Financial Aid

A limited number of teaching and research assistantships or associate positions are available.

Master of Science in VMS Pathobiology

Thesis Option

Code	Title	Hours
PATH 590	Seminar	1
PATH 524	Biostatistics	4
Electives		0-27
PATH 599	Thesis Research (0 min applied toward degree)	0
Total Hours		32

Other Requirements¹

Other Requirements may overlap

Final comprehensive examination

Minimum 500-level Hours Required 12 (8 in PATH)

Overall:

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Non-Thesis Option

Code	Title	Hours
PATH 590	Seminar	1
PATH 524	Biostatistics	4
Electives		27
Total Hours		32

Other Requirements¹

Other Requirements may overlap

A publishable manuscript

Minimum 500-level Hours Required 12 (8 in PATH)

Overall:

Final comprehensive examination

Minimum GPA: 3.0

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Veterinary Clinical Medicine

<http://www.vetmed.illinois.edu/vcm/>

Dean of the College of Veterinary Medicine (<http://www.vetmed.illinois.edu>): Peter D. Constable

Head of the Department: Dennis D. French

Director of Graduate Studies: Timothy M. Fan

242 Small Animal Clinic
1008 West Hazelwood Drive

Urbana, IL 61802
(217) 333-5310

Major: Veterinary Medical Science – Veterinary Clinical Medicine

Degrees offered: M.S.

Joint Degree Program: Veterinary Medical Scholars Program

Degrees Offered: D.V.M and M.S.

Admission

Admission requirements include a doctor of veterinary medicine (D.V.M.) degree or equivalent. By petition, non-D.V.M.s may be admitted. Applicants for graduate study in veterinary clinical medicine must have a minimum grade point average of 3.0 (A = 4.0). Admission averages are computed from the entire professional curriculum or from the last 60 hours of undergraduate studies for those without the D.V.M. degree. Applicants with a grade point average between 2.5 and 3.0 may be considered for admission on limited status on the basis of individual merit. Applicants who have a prior graduate degree or who have completed some graduate course work will be evaluated on the basis of their graduate work as well as their under-graduate or professional records. Acceptance of students must be approved by the department's Graduate Committee.

International applicants must submit evidence of satisfactory performance on TOEFL or other tests designed to test proficiency in English. International students must also submit evidence of financial support.

We are not accepting applications for the M.S./D.V.M. program at this time.

Graduate Degree Programs

The Department of Veterinary Clinical Medicine offers a graduate program leading to the degree of Master of Science. The primary goal of graduate programs in veterinary clinical medicine is to prepare students for careers involving research and/or teaching in a specialty area. Graduate work in veterinary clinical medicine may be pursued in several areas, including:

- anesthesiology
- equine medicine and surgery
- equine theriogeneology
- farm animal reproduction (theriogenology)
- medicine
- surgery
- imaging/radiation therapy
- small animal medicine (emergency and critical care, internal medicine)
- small animal surgery
- specialty medicine (cardiology, dentistry, dermatology, oncology, ophthalmology)
- zoological medicine

The department, with the teaching hospital, has facilities and equipment for studying the health and diseases of animals.

After completing graduate work, the student will be able to conduct research both independently and as a team member. Adequate training in planning research projects and writing research proposals will give the student the ability to function with teams of scientists from various areas of the biomedical field. Experience in clinical teaching and literature study will form the basis for the student's development of teaching programs within his or her discipline.

A residency program, designed to train a veterinarian for specialty clinical practice, can be combined with the graduate program. While a graduate program can be accomplished in a shorter time period, the duration of

combined programs is usually three years, reflecting the time required to satisfy the objective of each program. Details of the residency program can be obtained from the Program Secretary of the Department of Veterinary Clinical Medicine.

Graduate Teaching Experience

Experience in teaching is considered a vital part of the graduate program and is required as part of the academic work of all M.S. candidates in this program.

Financial Aid

A limited number of research associate positions are available.

At this time the Master of Science in VMS Veterinary Clinical Medicine is not accepting applications.

Master of Science in VMS Veterinary Clinical Medicine

The requirements for this degree include completion of a thesis that conforms to the requirements of the Department of Veterinary Clinical Medicine. The non-thesis option requires departmental approval.

The candidate must complete all requirements of the department and the Graduate College and pass the stipulated examinations. The final M.S. examination consists of a presentation of the thesis in the form of a departmental seminar (VCM 590). The seminar is followed by an oral examination administered by the candidate's committee and the department head. The student must demonstrate the ability to design and conduct independent research in order to be granted the M.S. degree.

Thesis Option

Code	Title	Hours
One statistics course		
VCM 590	Seminar	1
Graduate electives at the 400 or 500 level in consultation with your advisor		
VCM 592	Special Problems (optional, max 12)	12
VCM 593	Adv Topics Vet Clin Med (optional, max 8)	8
VCM 599	Thesis Research (min/max applied toward degree)	0-12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-Level Hours Required 8

Within the Unit:

Minimum 500-level Hours Required 12 (not including 599 or 590)

Overall:

Teaching experience is required

Oral exam

Minimum Cumulative GPA in VCM 3.0

M.S. program:

A thesis submitted to the Graduate College

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Manuscript Based (Non-thesis) Option

Code	Title	Hours
One statistics course		
VCM 590	Seminar	1
Graduate electives at the 400 or 500 level in consultation with your advisor		
VCM 592	Special Problems (optional, max 12)	12
VCM 593	Adv Topics Vet Clin Med (optional, max 8)	8
VCM 598	Manuscript Research (min/max applied toward degree)	12
Total Hours		32

Other Requirements ¹

Other requirements may overlap

Minimum 500-Level Hours Required 8

Within the Unit:

Minimum 500-level Hours Required 12 (not including 598 or 590)

Overall:

Manuscript submitted and accepted for publication

Teaching experience is required

Oral exam

Minimum Cumulative GPA in VCM 3.0

M.S. program:

¹ For additional details and requirements refer to the department's graduate degree requirements and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Writing Studies, Center for

<http://www.cws.illinois.edu/>

Center Director and Director of Graduate Studies: Spencer Schaffner
288 English Building
608 South Wright Street
Urbana, IL 61801
(217) 333-3251
Email: tbertram@illinois.edu

Graduate Concentration: Writing Studies

Participating Programs: Art Education (PhD only), Art History (PhD only), Communication (PhD only), Curriculum & Instruction (PhD only), English (PhD only), Library and Information Science (PhD only)

Graduate Degree Programs

The Center for Writing Studies (CWS) facilitates research and promotes graduate study in the areas of rhetoric, written composition, language, and literacy. CWS offers graduate students pursuing doctoral degrees in participating departments a program leading to a concentration in Writing Studies. Graduate students pursuing the concentration may be enrolled in the participating departments of English, Communication, Art and Design, Curriculum and Instruction, Library and Information

Science, or other departments from across campus with the approval of the student's home department.

Graduate students may elect to pursue a concentration in Writing Studies at the PhD level. Students take two foundational courses for the concentration to introduce them to the field, along with two methodology courses to ready them for their research. The first pair of requirements (ENGL 505/CI 563; and one of the following theme-focused courses: ENGL 506/CI 564, ENGL 583/CI 566, ENGL 584/CI 569 or a 500-level course approved for this requirement by the CWS Graduate Programs Committee provides a historical background in Writing Studies while at the same time assuring knowledge of current issues through the reading and analysis of texts that mark the field. The second pair of requirements (ENGL 582/CI 565 and a second approved methodology course) introduces students in depth to strands of writing studies research - historical, empirical, and theoretical. In addition, graduate students take two courses from across the university that focus on the study of writing but that also open up avenues for interdisciplinary inquiry, a key dimension of this area of study. English, Anthropology, Curriculum and Instruction, Library and Information Science, Educational Policy Studies, Sociology, Communication, and Art and Design are among the departments from which students commonly select courses.

Admission

Students are admitted into graduate study through their home departments and the Graduate College. Students may petition to add the concentration at the point of admission or after they have begun graduate study. The petition to add the concentration must be approved by the Center for Writing Studies, the home department, and the Graduate College. (Please note that the Department of English offers separate MA and PhD tracks specializing in Writing Studies; see the Department of English for admission requirements to these degree programs.) Graduate students planning to concentrate in Writing Studies must fulfill the degree requirements of their home department in addition to the Writing Studies' requirements. In consultation with the home department, students determine whether the Writing Studies' concentration is appropriate for their plan of study. Students should meet with a faculty advisor in their own department and also set up a meeting to discuss their program of concentration with the Director of the Center for Writing Studies.

Faculty Research Interests

Specific faculty interests include research in literacy studies, digital media, rhetorical studies, globalization and language, disability studies, cultural-historical activity theory, feminist theory and pedagogy, genre theory, technical communication and other areas of study related to the development of language and policy.

Facilities and Resources

CWS has a multidisciplinary group of core and affiliated faculty. It is home to the campus's Writing across the Curriculum Program and the Writers Workshop, a campus-wide tutorial facility; and sponsor of an electronic discussion group on writing across the curriculum and the University of Illinois Writing Project (UIWP), a site of the National Writing Project. It also houses Computers and Composition, an international journal that explores issues related to digital media and Research in the Teaching of English, a publication of the National Council of Teachers of English.

Financial Aid

Graduate students may receive assistantships as consultants in the Writers Workshop, as teacher trainers in the Writing Across the Curriculum program, as assistant to the CWS director, and as research assistants to CWS faculty.

Graduate Concentration in Writing Studies

Code	Title	Hours
Theme-focused Writing Studies		8
ENGL 505 & ENGL 583 or ENGL 584	Writing Studies and Topics Writ Pedagogy & Design Topics Discourse and Writing	
Or 500-level course approved for this requirement by the CWS Graduate Programs Committee		
Methods Courses		8
ENGL 582	Topics Research and Writing	
& one other methods course approved by the Director of the Center for Writing Studies		
Elective hours from approved CWS list in consultation with your advisor		8
Total Hours		24

Other Requirements ¹

Other requirements may overlap

Students must prepare and deliver a lecture based on their research to faculty and students for the CWS Colloquium Series: Graduate Research Forum.

The dissertation must demonstrably focus on Writing Studies (with a topic approved by the CWS Director) and be guided by CWS-affiliated faculty that serve on the dissertation committee.

¹ For additional details and requirements refer to the department's concentration requirements (<http://www.cws.illinois.edu/graduate/phd>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Minors

For more information about graduate minors, please see the Graduate College (<http://www.grad.illinois.edu/gradhandbook>).

- Accountancy (p. 636)
- African American Studies (p. 644)
- African Studies (p. 647)
- American Indian and Indigenous Studies (p. 923)
- Art History (p. 665)
- Asian American Studies (p. 923)
- Balkan Studies (p. 884)
- Cinema Studies (p. 924)
- College Teaching (p. 745)
- Corporate Governance & International Business (p. 689)

- Dance (p. 736)
- European Union Studies (p. 761)
- Finance (p. 763)
- Gender and Women's Studies (p. 924)
- Gender Relations in International Development (p. 890)
- Global Studies (p. 925)
- Heritage Studies (p. 926)
- Information Technology and Control (p. 689)
- Latina/Latino Studies (p. 926)
- Latin American and Caribbean Studies (p. 808)
- Museum Studies (p. 660)
- Queer Studies (p. 925)
- Religion (p. 882)
- Russian, East European and Eurasian Studies (p. 885)
- Statistics (p. 904)
- Supply Chain Management (p. 690)

American Indian Studies Program

<http://www.ais.illinois.edu>

Interim Director: Adrian Burgos, Jr.
1204 W. Nevada Street
Urbana, IL 61801
(217) 265-9870

Graduate Minor: American Indian and Indigenous Studies

Graduate Degree Programs

The American Indian and Indigenous Studies graduate minor is grounded by a strong commitment to the worlds, histories, representations, and political struggles of indigenous peoples internationally, and uses interdisciplinary methods of critical inquiry as a means through which students engage research and scholarship in their major.

Admission

Applicants to the graduate minor must be in good standing in a masters or doctoral program at the University of Illinois at Urbana-Champaign. Applications must include a statement of purpose that describes how the student's graduate work and/or research interests intersect with American Indian and Indigenous studies. The intent to pursue the graduate minor must be approved by the student's major advisor and graduate program director in their home department.

Graduate Minor in American Indian and Indigenous Studies

The student must successfully petition the Graduate College to add the American Indian and Indigenous Studies graduate minor to their academic records and transcripts.

Code	Title	Hours
AIS 501	Indigenous Critical Theory	4
or AIS 502	Indigenous Decolonial Methods	
or AIS 503	Seminar in Indigenous Studies	

Elective hours selected from a list of approved courses maintained in the Program office by the AIS advisor, 4 of which must be at the 500 level.

Total Hours 12

¹ For additional details and requirements refer to the department's program information online (<http://www.ais.illinois.edu/programs/grad/minor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Asian American Studies

<http://www.aasp.illinois.edu>

Department Head: Soo Ah Kwon

Associate Head: Fiona Ngô

1208 W. Nevada Street
Urbana, IL 61801
(217) 244-9530

Graduate Minor: Asian American Studies

Graduate Degree Program

The Asian American Studies Program offers a graduate minor in Asian American Studies that is interdisciplinary in nature. The graduate minor is designed to complement the graduate work of the students' area of concentration.

Admission

Students must be in good academic standing in a graduate or professional program at the University of Illinois at Urbana-Champaign and demonstrate an interest in Asian American Studies. Those wishing to apply to the minor must submit a written statement indicating why they wish to pursue the minor, demonstrate successful completion of one course in Asian American Studies at the undergraduate or graduate level, and provide written approval to pursue the minor from their graduate advisor and graduate program director. The written statement should specifically discuss how the student's prior academic training and/or work experiences are related to Asian American Studies, how a graduate minor in Asian American Studies fits in to their major academic program on campus, as well as how the minor would contribute to future professional development. The written statement and other supporting material must be submitted to the Director of the Asian American Studies Program.

Graduate Minor in Asian American Studies

For the Graduate Minor in Asian American Studies to appear on the academic transcript, the student must successfully petition the Graduate College to add the Graduate Minor in Asian American Studies to their academic records.

Code	Title	Hours
AAS 501	Theory and Methods in AAS	4
or AAS 561	Race and Cultural Critique	
AAS 590	Asian Am Studies Seminar	4

Two graduate courses from an approved list of Asian American Studies courses at either the 400 or 500 level.	8
Total Hours	16

¹ For additional details and requirements refer to the department's Graduate Program's Web page (<http://www.asianam.illinois.edu/academics/grad-minor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Cinema Studies

<http://media.illinois.edu/macs/>

Director of Graduate Study: C.L. Cole
228 Gregory Hall
810S. Wright St.
Urbana, Illinois 61801
Phone: (217) 333-1549
Fax: (217) 244-7695
E-mail: clcole@illinois.edu

Graduate Minor: Cinema Studies

The Graduate Minor in Cinema Studies promotes the graduate-level study of cinema and related screen media and their cultural and institutional contexts and offers formal recognition of such work, undertaken alongside and in conjunction with Illinois graduate students' primary fields of study. The Department of Media and Cinema Studies administers the Minor.

Admission

Applicants to the Graduate Minor program must be in residence and in good standing in a qualifying master's or doctoral program at Illinois and must designate Cinema Studies as a field/area of concentration for the master's or the doctoral degree and have that designation formally accepted by the student's home department.

Applications to the Associate Head are accepted on a rolling basis. The Associate Head will monitor students' advancement toward completion of the Minor.

Graduate Minor in Cinema Studies

Code	Title	Hours
MACS 503	Historiography of Cinema	4
MACS 504	Theories of Cinema	4
Two graduate courses in cinema or related media, chosen with the prior approval of the Minor Advisor. (One of the two electives may be satisfied by an independent study course or by an approved graduate-level course taken at another institution.)		6-8
Total Hours		14-16

Other Requirements ¹

The student's master's examination (if applicable) or preliminary / qualifying examination must include a Cinema Studies topic.

If the student's master's thesis or doctoral dissertation deals in whole or in part with a Cinema Studies or related screen media topic, a member of the Department of Media and Cinema Studies must be a formal member of the student's committee.

¹ For additional details and requirements refer to the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Gender and Women's Studies

<http://www.gws.illinois.edu>

Interim Department Chair: Mimi Nguyen
Program Office: 911 South Sixth Street
Champaign, IL 61820
(217) 333-2990

Graduate Minor: Gender and Women's Studies, Queer Studies

Graduate Degree Programs

The graduate minor in Gender & Women's Studies offers sophisticated training in feminist theory and methodology to graduate students who want to incorporate gender & women's studies into their degree work. Because gender has become a central category of analysis in many disciplines and fields, the graduate minor strengthens students' formal credentials and offers a versatile area of specialization. Please see our website for more information, www.gws.illinois.edu (<http://www.gws.illinois.edu>).

The graduate minor in Queer Studies offers students the opportunity to gain expertise in queer theory and methodology as part of their graduate degree work. The graduate minor in queer studies offers students a versatile interdisciplinary framework to complement and strengthen their research and pedagogy in their chosen field of study. Please see our website for more information, www.gws.illinois.edu (<http://www.gws.illinois.edu>).

Admission

Applicants must be in good standing in a graduate or professional program at the University of Illinois at Urbana-Champaign. The Department required a formal application, including a personal statement about how the student's graduate work and/or research interests intersect with gender and women's studies. Students must also have signed approval of the graduate director of their program.

- Gender and Women's Studies (p. 924)
- Queer Studies (p. 925)

Graduate Minor in Gender and Women's Studies

Code	Title	Hours
GWS 550	Feminist Theories & Methods	4
GWS 590	Topics in GWS	4

An additional 400 or 500 level GWS course selected from a list of approved courses maintained in the department office by the GWS advisor. An independent study in GWS may also serve as the additional course.

Total Hours 12

¹ For additional details and requirements refer to the department's Graduate Minor (<http://www.gws.illinois.edu/student/grad/minor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Graduate Minor in Queer Studies

Code	Title	Hours
GWS 580	Queer Theories & Methods	4
GWS 581	Topics in Queer Studies	4

One additional 400 or 500 level course selected from a list of approved courses maintained in the department office by the GWS Advisor. An independent study in GWS may, with the approval of the GWS Advisor, also serve as the additional course.

Total Hours 12

¹ For additional details and requirements refer to the department's Graduate Minor (<http://www.gws.illinois.edu/student/grad/queer-studies-minor>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Global Studies

<http://cgs.illinois.edu/>

Interim Director: Steve W. Witt
 303 International Studies Building
 910 South Fifth Street
 Champaign, IL 61820
 (217) 265-5186
 Fax: (217) 244-4809
 E-mail: global-studies@illinois.edu

Graduate Minor: Global Studies

Graduate Program

The Center for Global Studies, with the assistance of an all-campus Faculty Advisory Committee, administers an interdisciplinary and inter-professional Graduate Minor in Global Studies in cooperation with 25 units across 8 colleges as well as the School of Labor and Employment Relations and the Graduate School of Library and Information Science. The Minor develops awareness and knowledge of globalization and the relevance of this process to student degree programs and career objectives. It is intended to serve three constituencies of students: those seeking to integrate their specialized skills within the broader intellectual and public policy demands of a global society; those proceeding to disciplinary or professionally-based doctoral work; and those for whom the Minor enhances their disciplinary and professional credentials in seeking public or private employment for posts relevant to global studies and policy-making.

4 Graduate Minor in Global Studies

There are no prerequisites for the Graduate Minor. Students must be in good standing as a graduate student and should demonstrate an interest in globalization and the issues that this process poses for the world's populations. Students must submit an online admission form, indicating the courses that the student proposes to enroll in, the approval of the student's primary advisor and graduate program director, and a brief statement outlining the relation of the Graduate Minor to the student's degree and career objectives. The student's department must review the request and approval must be provided by the student's primary advisor and departmental authorized signatory. For the Graduate Minor in Global Studies, students must complete one of two core courses, either GLBL 500 (4 hours) or GLBL 501 (4 hours) and two additional courses (8 hours) relevant to the student's proposed minor. There is no language requirement for the Minor, but advanced language competence is strongly encouraged.

Code	Title	Hours
GLBL 500	Global Society	4
or GLBL 501	Perspectives on Global Studies	

Two courses relevant to a student's proposed minor as approved by the Director of the Center for Global Studies. At least of one the courses must be at the 500-level and only one can be from the student's home department.

Total Hours 12

¹ For additional details and requirements refer to the unit's web site (<http://cgs.illinois.edu/academics/gradminor>), and the Graduate College Handbook (<http://www.grad.uiuc.edu/gradhandbook>).

Heritage Studies

<http://champ.anthro.illinois.edu/academics/>

Head of Steering Committee: D. Fairchild Ruggles
 Department of Landscape Architecture
 101 Temple Hoyne Buell Hall, MC- 620
 Champaign, Illinois 61820
 Phone: (217) 333-9279
 E-mail: dfr1@illinois.edu

Graduate Minor: Heritage Studies

Graduate Degree Program

The Heritage Studies Minor (HSM) is pursued at the graduate level in a student's home department through completion of four courses (4 hours each) plus a culminating project arising out of normal coursework undertaken in consultation with the HSM Committee Head.

Admission

Admission for the Heritage Studies Minor is contingent upon the approval of the home department. Students are admitted to the graduate program of the particular academic department in which they will pursue their Master's or PhD degree. A student interested in the HSM should clearly indicate this in the application statement to the University and, upon matriculation, should inform the HSM Committee of the intent to pursue the Minor and begin planning how to satisfy the requirements. The HSM Steering Committee reviews student progress in consultation with the student's academic advisor. Students must be admitted to the graduate program of an academic department in order to participate in the HSM.

Students already enrolled in one of the University of Illinois at Urbana-Champaign graduate programs may also apply for admission to the HSM at any time, but are advised to do so in their first year of study.

There are no prerequisites for admission to the HSM other than admission to a university graduate program. The HSM does not require prior practical experience in heritage work for admission. However, the HSM will encourage students to obtain such practical experience during their graduate work at the University of Illinois.

Faculty Research Interests

The HSM courses offer broad coverage of different approaches to heritage theory and practice, including interdisciplinary perspectives from Anthropology, Landscape Architecture, Urban and Regional Planning, Architecture, History, Geography, Education, and other fields. Faculty work collaboratively with each other and across the globe, focusing on a range of cultures and time periods from prehistoric to contemporary.

Financial Aid

The Minor itself does not provide financial aid. Financial aid may be requested from the admitting graduate program of the particular academic department.

Graduate Minor in Heritage Studies

Code	Title	Hours
Take two from the following list:		6 or 8
ANTH 460	Heritage Management (4 hours)	
LA 594	Cultural Heritage (2 or 4 hours)	
RST 570	Cultural Aspects of Tourism (4 hours)	
Additional course(s) from an approved list, chosen by the student and the H.S.M. committee head, must also be completed.		4 or 6
Total Hours		12

Other Requirements ¹

A culminating project (fulfilled by a project, paper, or design: choice is determined in consultation with the Minor's Steering Committee) is required.

¹ For additional details and requirements refer to the program information online (<http://champ.anthro.illinois.edu/academics>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Latina/Latino Studies

<http://www.lls.illinois.edu>

Department Chair: Jonathan X. Inda
1207 West Oregon
Urbana, IL
Phone: (217) 265-0370

Graduate Minor: Latina/Latino Studies

Graduate Degree Program

The graduate minor offers a comprehensive program of study in Latina/Latino Studies research, theories and methodologies to graduate

students who wish to structurally incorporate Latina/Latino Studies into their degree work. As U.S. Latina/os have become a central category of analysis in theories of ethnicity, race, gender, sexuality, and class in many disciplines and fields, the graduate minor strengthens students' formal credentials and offers a versatile area of specialization. The graduate minor provides students with a theoretical and methodological foundation and a firm background in the history and culture of Latinas and Latinos in the United States from the perspective of the humanities, the social sciences, and other fields. The program will allow students to assess how historical and cultural processes affect U.S. Latina/os in contemporary society. Furthermore, the transdisciplinary and transnational nature of the program will provide students, whether or not they focus their graduate studies on Latina/o Studies, with the breadth of research and approaches taken by scholars in the field.

Admission

Applicants must be in good academic standing in a graduate or professional program at the University of Illinois at Urbana-Champaign and demonstrate a proven interest and commitment in Latina/Latino Studies. Interested students must submit an application to the Department of Latina/Latino Studies and receive approval to pursue the minor from their graduate or professional program. Application materials can be obtained at the Latina/Latino Studies Program office and at the Program's website (<http://www.lls.illinois.edu>).

Graduate Minor in Latina/Latino Studies

Code	Title	Hours
LLS 577	Perspectives in LLS	4
Two courses from approved departmental list.		8
Total Hours		12

Other Requirements ¹

Only 4 hours of credit may be cross listed with the student's disciplinary unit.

¹ For additional details and requirements refer to the department's program information (<http://www.lls.illinois.edu/education/graduate>) and the Graduate College Handbook (<http://www.grad.illinois.edu/gradhandbook>).

Online and Site-Based Graduate Programs

Many graduate programs are offered completely online or in a format of online with some campus visits required. Some programs are offered at site-based locations throughout Illinois. Click on the programs below for more details.

- Accountancy, iMSA (p. 636)
- Aerospace Engineering, M.S. (p. 641)
- Agricultural Education, M.S. (p. 647)
- Bioengineering, M.Eng. (p. 680)
- Business Administration, Executive M.B.A. (p. 693)
- iMBA, Executive M.B.A. (p. 693)
- Civil Engineering, M.S. (p. 704)
- Communication, M.A. (p. 712)
- Computer Science, M.C.S. (p. 722)
- Crop Sciences, M.S. (p. 726)

- Education Policy, Organization and Leadership, M.Ed., EdD. (p. 747)
- Educational Psychology, Ed.M. (p. 747)
- Food Science and Human Nutrition, M.S. (p. 766)
- Health Communication, M.S. (p. 713)
- Human Resources and Industrial Relations, MHRIR (p. 802)
- Information Management, M.S. (p. 815)
- Library and Information Science, M.S., C.A.S. (p. 812)
- Mechanical Engineering, M.S. (p. 828)
- Natural Resources and Environmental Sciences, M.S. (p. 853)
- Recreation, Sport and Tourism, M.S. (p. 879)
- Social Work, M.S.W. (p. 889)
- Special Education, Ed.M. (p. 897)
- Strategic Brand Communication, M.S. (p. 690)
- Taxation, M.S. (p. 638)
- Teaching of Biological Science, M.S. (p. 907)
- Translation and Interpreting, M.A. (p. 910)

Teacher Education

Chris Roegge, Executive Director
505 E. Green Street, Suite 203
Champaign, IL 61820

PH: 217-333-7195
FX: 217-265-5188
<http://cote.illinois.edu>

The Council on Teacher Education formulates, modifies, implements, and monitors compliance with policies related to the education of future educators. The Council also facilitates communication and promotes collaboration among all participants involved in the preparation and continuing professional development of educators. The Council is the designated unit responsible for the coordination of teacher, school support personnel, and administrator education curricula at the Urbana campus and serves as the liaison between the campus and state educator licensure and program approval authorities.

Six colleges and two schools of the University of Illinois at Urbana-Champaign offer degree programs in teacher, school support personnel, and administrator education: the Colleges of Agricultural, Consumer and Environmental Sciences; Applied Health Sciences; Education; Fine and Applied Arts; Liberal Arts and Sciences; and the Graduate College in addition to the School of Information Sciences and the School of Social Work. The list of educator preparation curricula can be found at the end of this section.

Candidates may consult their educator preparation advisers or the Council for additional information about academic regulations and other policies affecting educator preparation. Consult the Executive Director of the Council for information about the Grievance Policy and Procedures for Students Enrolled in Educator Preparation Programs under the purview of the Council on Teacher Education.

Licensure requirements are subject to change without notice as a result of new mandates from the Illinois State Board of Education (ISBE) or the Illinois General Assembly.

Requirements

Admissions

Applicants to educator preparation programs must meet the admission requirements of the colleges and departments offering the chosen curricula. Council policy mandates candidates pass an ISBE approved test of basic skills before they may be admitted to an educator preparation program. Candidates may use an ACT or SAT score to meet the test of basic skills if it meets the ISBE requirements for substitution. See www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf (http://www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf) for information regarding specific requirements.

Applicants are advised that certain felony convictions, enumerated in Articles 10-21.9 and 21B-80 of the School Code of Illinois (<http://www.ilga.gov/legislation/ilcs/ilcs3.asp?ActID=1005&ChapAct=105%C2%A0ILCS&160;5/ChapterID=17&ChapterName=SCHOOLS&ActName=School+Code.html>), prohibit licensure or employment in public schools. Questions pertaining to this matter should be addressed to the Council.

Continuation in an Educator Preparation Program

To be eligible for continuation in an educator preparation program, candidates must satisfy all requirements of the applicable Common Assessment Plan (CAP), which includes maintaining University of Illinois at Urbana-Champaign and overall grade point averages of 2.5 (A = 4.0) or higher. In addition, candidates must meet the content area and professional education grade-point requirements specific to their programs. The full text of the three Common Assessment Plans is available on the Council website (<http://www.cote.illinois.edu/about/professional/cap.html>). The Council on Teacher Education reviews each candidate's academic progress after the fall and spring semesters. Candidates who do not meet the criteria of the appropriate CAP will receive a warning letter from the Council advising them that their continuation in the program, entry into student teaching, and receiving a recommendation for licensure from the University are at risk. Candidates will be directed to their college deans for more information. Candidates may be dropped from licensure programs by the Council if they fail to meet the criteria of the appropriate CAP after receiving an initial warning letter.

Teaching effectiveness is influenced not only by academic proficiency, but also by the dispositions and professional behaviors of the candidate. Therefore, faculty members take these characteristics into account as they evaluate candidates' progress in the program. Teaching effectiveness can also be influenced by the candidate's health. For this reason, the University provides counseling and medical services for all students. A candidate wishing additional information about these services may call or visit the Council office.

Because it is essential that counseling and medical services be offered as soon as the need becomes apparent, educator preparation advisers and faculty members are asked to recommend for assistance or examination any candidate about whom they feel concern. A candidate who is recommended for assistance or examination will receive a written request to make an appointment to discuss the situation. It is a requirement of the Council on Teacher Education that a candidate who receives such a request must respond. Failure to do so will jeopardize the candidate's continuation in their educator preparation program. During the appointment, the candidate will be informed of the counseling (<http://www.counselingcenter.illinois.edu>) and medical services ([http://](http://www.counselingcenter.illinois.edu)

www.mckinley.illinois.edu) available at the University. The candidate's use of these services is usually optional. In exceptional cases, however, the Council may require a candidate to satisfactorily complete a mental health or physical examination with one of the campus services. Candidates who wish to continue in teacher education must comply with such referrals.

Student Teaching

State law mandates candidates pass the appropriate content area test prior to student teaching. Students who have not passed the appropriate content area test will not be permitted to student teach. Student teaching application forms are available in the college clinical experiences office that houses each program. (Candidates may obtain referrals to the appropriate office by contacting the Council.) A candidate seeking placement in student teaching should contact the appropriate program's clinical experiences office no later than October 1 of the academic year preceding the desired placement to determine departmental deadlines and meeting dates. Departments may set earlier deadlines. Candidates who apply after their departments' deadlines cannot be guaranteed a student teaching assignment during the next academic year. A candidate who will not be on campus during the fall semester, but who expects to enroll in educational practice (student teaching) during the next school year, should secure an application form from his or her program's clinical experiences office before leaving campus. A candidate who has submitted an application will receive a student teaching assignment pending verification that he or she has completed all requirements of the appropriate Common Assessment Plan.

Only those candidates officially registered in teacher education curricula are eligible for student teaching placements. The Council reserves the right to deny student teaching placement to candidates who have not met all requirements of the appropriate Common Assessment Plan. Candidates may also be denied a student teaching placement for health reasons.

Candidates in teacher education should anticipate and plan for student teaching assignments. For most candidates, additional expense will be incurred during the semester in which student teaching is scheduled. Candidates cannot be guaranteed assignments in local schools. Student teaching is a full-time commitment on the part of teacher candidates. Teacher candidates should not plan to take additional coursework outside their program during student teaching, nor should they plan to be employed. School districts have the right to not accept a candidate and therefore, the Council cannot guarantee each candidate a placement.

However, each program will exhaust every effort to seek a placement for each candidate.

Candidates are expected to complete all field experiences, including student teaching, at the University of Illinois at Urbana-Champaign. A candidate who wishes to complete student teaching through another university, yet receive a University of Illinois at Urbana-Champaign degree and recommendation for licensure, must secure the prior approval of his or her adviser, clinical experiences program coordinator, college, and the Council on Teacher Education via petition. The petition must be supported by verification from the other university that it will accept the candidate as a student teacher and will comply with all Council on Teacher Education requirements. Approvals of such arrangements are rare, and candidates should expect to incur additional costs. Consult the Council for additional information.

Teacher Licensure

A candidate who completes all of the coursework and other requirements in a program approved for purposes of licensure by the Illinois State

Board of Education is entitled to receive the recommendation of the University for the appropriate license and endorsement(s), provided the candidate has met all of the requirements of the appropriate Common Assessment Plan and has passed all licensure tests and assessments required by the State of Illinois. In addition, all professional education and content-area coursework that forms part of an application for licensure, endorsement, or approval must have been passed with a grade no lower than "C" or equivalent in order to be counted towards fulfillment of the applicable requirements. CR/NC and proficiency credit may not be used toward licensure, endorsement, or approvals. However, AP credit may be used.

In some instances a candidate may be denied a recommendation for licensure but be granted a degree by his or her college. A candidate who believes that the recommendation for licensure has been withheld unjustly may seek redress through the grievance policy established by the Council on Teacher Education.

General Education

Candidates for licensure are required to complete coursework that includes the theoretical and practical understanding generally expected of a liberally educated person. General education includes developing knowledge related to the arts, communications, history, literature, mathematics, philosophy, sciences, and the social studies from multicultural and global perspectives. This requirement is satisfied by the University of Illinois general education pattern incorporated into all undergraduate teacher education programs.

Licensure Tests

All candidates for licensure as teachers, school administrators, and school support personnel must pass tests mandated by the Illinois State Board of Education as a condition for licensure. Illinois law requires that applicants to all educator preparation programs pass a test in basic skills (reading, writing, grammar, and mathematics) and a separate test in their major area. All candidates in programs leading to teaching must also pass a teacher performance assessment (edTPA). Candidates for Learning Behavior Specialist I licensure must pass a fourth test: Special Education General Curriculum.

State law requires prospective candidates for licensure as school administrators or school support personnel pass a test of basic skills, as determined by the State, if the Illinois Test of Basic Skills was not passed previously. If the basic skill tests was not already taken and passed, the Test of Academic Proficiency must be passed prior to admission to the educator preparation program. In addition, candidates must pass the appropriate content-area test. Candidates may use an ACT or SAT score to meet the test of basic skills if it meets the ISBE requirements for substitution. See www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf (http://www.cote.illinois.edu/certification/documents/act_procedures_for_admission.pdf) for information regarding specific requirements.

Time Limit on Licensure

Because licensure requirements are subject to change at any time as a result of new mandates from the Illinois State Board of Education and the Illinois General Assembly, the University is unable to guarantee a recommendation for licensure to anyone who does not apply for licensure immediately upon completion of licensure requirements. A candidate completing an approved program is strongly encouraged to apply for licensure during his or her last term on campus and claim said license on the Educator Licensure Information System (ELIS) once it has been entitled. Applications for licensure are available on the candidate's

student portal or in the Council office. Failure to claim a license through the Educator Licensure Information System once it has been entitled could result in additional requirements should candidate seek to claim license at a later date.

Background Investigation of Applicants for Field Placement and Employment

State law mandates that all candidates for public school licensure in programs under the purview of the Council on Teacher Education complete a criminal background check and checks of the Statewide Sex Offender Database and Statewide Child Murderer and Violent Offender Against Youth Database before they may be placed in schools. Candidates are responsible for all fees connected with this procedure.

Final decisions regarding the placement of candidates in schools are made in agreement between the relevant department/college/program and the school/district.

The criminal background check is typically conducted at the time a candidate enters the program and before student teaching or internship.

Each applicant for employment, which includes student teaching, in an Illinois school district is required to authorize the employing school district to initiate a criminal background check which will include a request for fingerprints. A school district may employ a person, or host a student teacher, only after a background check has been initiated and may not knowingly employ a person, or host a student teacher, who has been convicted of a felony or of attempting to commit certain offenses enumerated in The School Code of Illinois. This criminal background check is in addition to that required for field placements at the University of Illinois at Urbana-Champaign.

Curricula

A candidate seeking licensure must complete the requirements of both his or her chosen curriculum, Council on Teacher Education requirements, and all additional State mandated requirements. Teacher education, school support personnel, and administrator curricula and the colleges and departments that offer them are listed below. All curricula have been approved by the Illinois State Board of Education.

Candidates are advised that licensure requirements may be altered at any time by the Illinois State Board of Education or the legislature. In such cases, candidates may be compelled to satisfy the new requirements to qualify for the University's recommendation for licensure.

College of Agriculture, Consumer and Environmental Sciences (p. 3)

- Agricultural Education¹

College of Applied Health Sciences (p. 87)

- Physical Education¹

College of Education (p. 125)

- Early Childhood Education, Birth - Grade 2 (Includes Early Childhood Special Education Approval)⁴
- Elementary Education, Grades 1-6²
- Learning Behavior Specialist I¹
- Teacher Education Minor in Secondary School Teaching²

College of Fine and Applied Arts (p. 241)

- Music Education¹
- Visual Arts Education¹

College of Liberal Arts and Sciences (p. 320)

- English Language Arts
- Foreign Language: Chinese (Mandarin)¹
- Foreign Language: French¹
- Foreign Language: German¹
- Foreign Language: Latin¹
- Foreign Language: Spanish¹
- Mathematics
- Science: Biology
- Science: Chemistry
- Science: Earth and Space Science
- Science: Physics
- Social Science: History

Graduate College

Graduate-level licensure programs are offered in the areas listed below. For additional information, contact the Council on Teacher Education or departmental office indicated.

Agricultural Education¹

- College of Agricultural, Consumer and Environmental Science Office of Academic Programs

Director of Special Education

- Department of Special Education

Early Childhood Education⁴

- Department of Curriculum and Instruction

Elementary Education²

- Department of Curriculum and Instruction

Foreign Language: Latin¹

- Department of Classics

Foreign Language: Spanish¹

- Department of Spanish, Italian, and Portuguese

Learning Behavior Specialist I¹

- Department of Special Education

Learning Behavior Specialist II¹

- (Options: Curriculum Adaptation, Behavior Interventions, Multiple Disabilities, Transition Specialist)
- Department of Special Education

Library Information Specialist¹

- Graduate School of Library and Information Science

Music¹

- School of Music

Principal

- Department of Education Policy, Organization and Leadership

Reading Specialist

- Department of Curriculum and Instruction

School Social Worker

- School of Social Work

Secondary Education (English Language Arts, Mathematics, Sciences, Social Science: History)³

- Department of Curriculum and Instruction

Speech-Language Pathologist: Non-teaching

- Department of Speech and Hearing Science

Superintendent⁵

- Department of Education Policy, Organization and Leadership

Teacher Leader

- Department of Education Policy, Organization and Leadership

¹ Individuals completing these programs who wish to be able to teach departmentalized subjects in grades five through eight must complete additional coursework and receive the endorsement prior to January 1, 2018. Contact the Council on Teacher Education for additional information.

² Individuals who entered the Elementary Education program Fall 2014 or after will be entitled for grades 1-6 upon completion of all requirements. Individuals who were admitted Fall 2013 or before will be entitled for K-9 upon completion of all requirements if their program is completed by September 1, 2018 and a license is claimed prior to September 1, 2019. Candidates in this category who wish to be able to teach departmentalized subjects in grades five through eight must complete additional coursework and receive the endorsement prior to January 1, 2018. Contact the Council on Teacher Education for additional information.

³ This minor is a required component of the teaching option within the following Science and Letters majors in the College of Liberal Arts and Sciences: biology, chemistry, English, geology, history, mathematics, and physics. It is available only to students registered in these programs.

⁴ Per State rules, no candidates may be admitted into this program on or after September 1, 2017. Individuals entering this program must complete program no later than August 31, 2019.

⁵ Per State rules, no candidate may be admitted into this program on or after September 1, 2016.

Teacher Education Minors

- English as a second language (must be able to obtain ESL endorsement no later than August 31, 2018 as requirements are changing.)
- Mathematics: Grades 9-12

Candidates should be aware that the state recognizes teaching fields that are not listed above. Candidates may obtain subsequent teaching endorsements for any fields for which they satisfy the state minimum requirements. Contact the Council on Teacher Education for additional information regarding the endorsement fields available and the qualifications for each. Endorsement requirements (<http://www.cote.illinois.edu/certification/Endorsements.html>) are also listed on the Council on Teacher Education Web site. (<http://cote.illinois.edu>) Further questions may be directed to the Council on Teacher Education.

COURSES OF INSTRUCTION

Accountancy (ACCY)

ACCY Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ACCY>)

Courses

ACCY 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

ACCY 200 Fundamentals of Accounting credit: 3 Hours.
Survey course in the principles of accounting for students registered in schools and colleges other than the College of Business. Credit is not given for both ACCY 200 and either ACCY 201 or ACCY 202. Prerequisite: Sophomore standing.

ACCY 201 Accounting and Accountancy I credit: 3 Hours.
Introduction to the role of accounting information in establishing organization objectives and goals and identification of strategies to best achieve such objectives and goals. Topics focus on the utility of information necessary for the formation, execution and monitoring of the variety of contracts embedded in organization strategies. Projects facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Credit is not given for both ACCY 201 and ACCY 200. Prerequisite: ECON 102, and credit or concurrent enrollment in ECON 103.

ACCY 202 Accounting and Accountancy II credit: 3 Hours.
Continuation of ACCY 201 with focus on strategic management of economic resources, together with acquisition of such resources, and financial and non-financial measures of organizational performance. Credit is not given for both ACCY 202 and ACCY 200. Prerequisite: ACCY 201 or equivalent.

ACCY 211 Understanding Financial Statements credit: 3 Hours.
Provides a basic understanding of financial statements. Topics include financial statement components and their meaning, the broader purpose of financial statements, and the role of accounting in producing financial statements. Emphasizes the ability to read and, to some extent, interpret real-world financial statements. Credit is not given for ACCY 211 if credit has been given for ACCY 200, ACCY 201, and/or ACCY 202. ACCY 211 does not count toward undergraduate degree requirements for degrees offered through the College of Business or toward the Business Minor. Prerequisite: Intended for non-business majors.

ACCY 212 Understanding Accounting for Business Decisions credit: 3 Hours.

This course provides a fundamental understanding of how accounting facilitates and influences decisions made by owners, managers, and employees within an organization. Accounting provides information for all types of decisions, ranging from everyday operational and procedural decisions to decisions about the long-term strategy and direction of the firm. Course topics include pricing, product selection, resource planning and allocation, and operational and strategic performance measurement. Credit is not given for ACCY 212 if credit has been given for ACCY 200, ACCY 201, and/or ACCY 202. ACCY 212 does not count toward undergraduate degree requirements for degrees offered through the College of Business or toward the Business Minor. Prerequisite: Intended for non-business majors.

ACCY 290 Prof Internship in Accountancy credit: 0 to 3 Hours.
Formalized learning experience in combination with practice of accounting while engaged in an internship with a public accounting firm, business, or other off-campus organization; prior approval of learning plan and a summary report of learning experience are required. Approved for Letter and S/U grading. May be repeated in subsequent terms to a maximum of 3 hours. Prerequisite: Open to Department of Accountancy students; completion of ACCY 201 and ACCY 202 (or equivalent); and consent of department.

ACCY 301 Atg Measurement & Disclosure credit: 3 Hours.
Introduction to measurement and reporting of organizational performance for strategic and operational purposes with a focus on a variety of financial and non-financial performance measures suitable for both internal and external decision-making. Projects, together with a series of practical workshops, facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent and concurrent enrollment in ACCY 302 by students majoring in accountancy (recommended for non-accountancy majors); or consent of department.

ACCY 302 Decision Making for Atg credit: 3 Hours.
Decision making implications of information provided to organization managers and to external stakeholders such as investors, creditors, customers, and regulators. Concepts from economics, statistics, and psychology emphasize the use of quantitative techniques to comprehend uncertainty and risk. Projects, together with a series of practical workshops, facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent; ECON 203 or equivalent or concurrent enrollment; and concurrent enrollment in ACCY 301 by students majoring in Accountancy (recommended for non-Accountancy majors); or consent of department.

ACCY 303 Atg Institutions and Reg credit: 3 Hours.
Regulation theory and practice as applied to accounting information. A general framework for regulation of accounting procedures is developed. This framework is applied to reporting, taxation, and regulated business activities. Projects facilitate self-discovery of knowledge and the development of professional attitudes and skills with emphasis on professional research. Prerequisite: ACCY 301 and ECON 302 and FIN 221; or consent of department.

ACCY 304 Accounting Control Systems credit: 3 Hours.
Broad perspective on accounting and control that considers attainment of all goals of an organization, including those concerned with financial objectives. Topics include the conceptual foundations of control and application of practical, analytical tools to the evaluation of an organization's control environment. Cases, class discussion and field research projects emphasize independent thinking, group processes, and communication. Prerequisite: ACCY 301 and ACCY 302 and BADM 310; or consent of department.

ACCY 312 Principles of Taxation credit: 3 Hours.
Introduction to the United States federal income tax system with an emphasis on income tax determination and the taxation of property transactions. Topics include the tax environment, tax provisions relevant to businesses, employees and business owners. Projects facilitate self-discovery of knowledge and development of a variety of professional skills and attitudes. Prerequisite: ACCY 202 or equivalent.

ACCY 321 Principles of Public Policy credit: 3 Hours.
Same as ACE 321, BADM 303, and PS 321. See PS 321.

ACCY 352 Database Design and Management credit: 3 Hours.
Same as BADM 352. See BADM 352.

ACCY 353 Info Sys Analysis and Design credit: 3 Hours.

Same as BADM 353. See BADM 353.

ACCY 398 Practical Problems in Atg credit: 0 to 16 Hours.

Course covers the professional standards relating to corporate financial reporting, taxation, auditing and public sector reporting. Serves as a review course for the Uniform Certified Public Accountant (CPA) Examination. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated up to 16 hours in separate terms, if topics vary. Credit is not given towards degree requirements. Prerequisite: Consent of the Department. Intended for students enrolled in the BS in Accountancy, Certificate in Accountancy, MAS, and MSA programs. Students from other UIUC programs must demonstrate that they have taken courses in financial accounting (beyond introductory level), cost/managerial accounting (beyond introductory level), auditing, and taxation.

ACCY 405 Assurance and Attestation credit: 3 Hours.

Conceptual introduction to diverse means by which assurers improve the quality of information used by third parties for contracting purposes, with emphases on the credibility- and relevance-enhancement properties of assurers' services. Topics include the economics of assurance and attestation, and concepts including independence, risk, evidence, and control. Projects facilitate self-discovery of knowledge and development of professional skills and attitudes. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACCY 304 or consent of department.

ACCY 410 Advanced Financial Reporting credit: 3 or 4 Hours.

Current authoritative accounting standards and applications to accounting practice. Topics do not represent the full range of financial reporting issues, but are selected based on relevance of the underlying business transaction, complexity of the topic, consistency of applicable standard with underlying reporting concepts, and transferability of the standard to other accounting issues. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACCY 303 or consent of department.

ACCY 415 Auditing Stds and Practice credit: 3 Hours.

Framework for understanding and evaluating the professional auditing standards for assurance services. Model of financial reporting provides an overview of the types of information disseminated by companies to external users, and provides the basis for identifying professional standards areas for future standards' development. 3 undergraduate hours. No graduate credit. Credit is not given for both ACCY 415 and ACCY 515. Prerequisite: ACCY 304 or consent of department.

ACCY 451 Advanced Income Tax Problems credit: 3 or 4 Hours.

Introduction to the U.S. federal income taxation of corporations, their shareholders and owners, as well as entities receiving flow-through treatment under U.S. federal tax law e.g., Subchapter S corporations, partnerships and limited liability companies). 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Senior standing and ACCY 312.

ACCY 499 Senior Research credit: 2 to 4 Hours.

Research and readings course for students majoring in accountancy. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Cumulative grade-point average of 3.0., honors in the junior year, or consent of department; senior standing.

ACCY 500 Accounting Measurement, Reporting, and Control credit: 2 or 4 Hours.

A managerial perspective of the nature and role of accounting in organizational measurement, reporting and control processes. 2 or 4 graduate hours. No professional credit. Prerequisite: Enrollment in a non-accountancy masters program in business or consent of department.

ACCY 501 Accounting Analysis I credit: 2 or 4 Hours.

Uses of accounting information; collection, processing, and communication of accounting information; measurement of assets, liabilities, equities, and income; and accounting system design. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: Enrollment in graduate degree program or consent of department.

ACCY 502 Accounting Analysis II credit: 2 or 4 Hours.

In-depth study of accounting valuation processes, accounting income measurement, and special reporting problems of multiple-entity organizations. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: ACCY 501 or equivalent; enrollment in graduate degree program or consent of department.

ACCY 503 Managerial Accounting credit: 2 or 4 Hours.

Introduction to management accounting as part of the firm's information system, in terms of modern cost accounting and budgetary systems for planning and controlling business operations. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: Credit or concurrent registration in ACCY 501 or equivalent; enrollment in graduate degree program or consent of department.

ACCY 504 Auditing credit: 2 or 4 Hours.

Introduction to conceptual and applied material in the field of auditing. Emphasizes the audit process, reporting, and professional responsibilities. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: Credit or concurrent registration in ACCY 502, or equivalent; enrollment in graduate degree program or consent of department.

ACCY 505 Federal Taxation credit: 2 or 4 Hours.

Introduction to historical and conceptual as well as applied material in the accounting area of federal taxation; emphasizes the provisions of the tax law relevant to accounting measurement methods. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Credit is not given for both ACCY 505 and ACCY 312. Prerequisite: Enrollment in graduate degree program or consent of department.

ACCY 506 Advanced Topics in Accounting credit: 2 or 4 Hours.

Financial accounting principles related to entities other than the "single" corporate entity. These other organizational forms include the consolidated corporate entity and the partnership entity. Topics include consolidated financial statements, intra-entity asset transactions, segment and interim reporting, foreign currency transactions and hedging foreign exchange risk, translating foreign currency financial statements, formation and operation of partnerships, and the development of worldwide financial reporting standards. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Credit is not given for both ACCY 410 and ACCY 506. Prerequisite: ACCY 501, and credit or concurrent enrollment in ACCY 502.

ACCY 507 Taxation of Business Entities credit: 2 or 4 Hours.

This course provides an introduction to the U.S. federal income tax treatment of corporations and pass-through entities, including Subchapter S corporations, partnerships, and limited liability companies. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Credit is not given for both ACCY 507 and ACCY 451. Prerequisite: ACCY 505 or equivalent.

ACCY 510 Financial Reporting Standards credit: 4 Hours.

Stakeholders' needs for reliable and relevant information about the performance of firms, as well as managers; economic self-interests, influence managers' selection of accounting policies and financial reporting methods. This course selectively surveys both academic research and professional standards to focus on the measurement, classification and disclosure of financial transactions. Cases, class discussion and research projects emphasize independent thinking, group processes, and communication. 4 graduate hours. No professional credit. Prerequisite: ACCY 410 and enrollment in the BS/MAS in Accountancy program or consent of department.

ACCY 511 External Risk Measurement and Reporting credit: 4 Hours.

Application of the concepts of risk and uncertainty to the financial management of organizations in achieving business objectives and strategies, with an emphasis on the role of accounting measurement and reporting in the management of such risks. Focuses on integrating knowledge acquired from behavioral, economic, finance, and accounting perspectives. 4 graduate hours. No professional credit. Prerequisite: ACCY 410 and FIN 300, or equivalent, and enrollment in graduate accounting degree program; or consent of department.

ACCY 512 Internal Risk Measurement and Reporting credit: 4 Hours.

Application of the concepts of risk and uncertainty to the operational management of organizations in achieving business objectives and strategies, with an emphasis on the role of accounting measurement and reporting in the management of such risks. Focuses on integrating knowledge acquired from behavioral, economic, organizational, and accounting perspectives. Prerequisite: Enrollment in graduate accounting degree program or consent of department.

ACCY 515 Auditing & Assurance Standards credit: 4 Hours.

Role of professional and ethical standards in the conduct of auditing and assurance services and the role of auditing and assurance services in corporate governance. This course selectively surveys both academic and professional literature to focus on the conduct of auditing and assurance services. Cases, class discussion and research projects emphasize the importance of independent thinking, group processes, and communication for professional accounting practice. Prerequisite: ACCY 405 and enrollment in the BS/MS in Accountancy program or consent of department.

ACCY 517 Financial Statement Analysis credit: 4 Hours.

Examines tools and techniques of financial statement analysis from the perspective of investors and creditors; emphasizes theoretical and empirical properties of financial ratios. 4 graduate hours. No professional credit. Prerequisite: ACCY 410 or concurrent enrollment; or ACCY 500 or equivalent; or ACCY 502 or equivalent; and enrollment in graduate degree program or consent of department.

ACCY 518 Financial Statement Fraud credit: 4 Hours.

Introduction to fraud examination with an emphasis on financial statement fraud. The course provides a comprehensive introduction to fraud examination. The topics addressed in the course include the unique characteristics of fraud examinations and a comparison to financial statement audits, the characteristics that should be possessed by fraud examiners, an overview of the fraud examination process, the nature and extent of fraud, an introduction to the taxonomy of financial statement frauds, techniques for evidence collection including interview techniques, Benford's law, and the development of fraud reports. 4 graduate hours. No professional credit. Prerequisite: Enrollment in graduate accounting degree program or consent of the department. This class is restricted to MAS and MSA students: Accountancy-UIUC.

ACCY 550 Multistate Taxation credit: 2 Hours.

Covers the state and local taxation of business entities including examining issues relating to jurisdiction, nexus, and mergers & acquisitions. 2 graduate hours. No professional credit. Prerequisite: Restricted to students enrolled in the MS in Taxation Program.

ACCY 551 Corporate Income Taxation credit: 4 Hours.

Analyzes the tax treatment, problems, planning techniques, and underlying governmental policies involving corporations and their shareholders; coverage includes formations, operations, distributions, liquidations, reorganizations, and affiliations. 4 graduate hours. No professional credit. Prerequisite: ACCY 451, credit or concurrent enrollment in ACCY 556, or equivalent or consent of department.

ACCY 552 Partnership Income Taxation credit: 4 Hours.

Analyzes the tax treatment, problems, planning techniques, and underlying governmental policies involving partnerships and their partners, including Subchapter S corporations and their shareholders. 4 graduate hours. No professional credit. Prerequisite: ACCY 451, credit or concurrent enrollment in ACCY 556, or equivalent or consent of department.

ACCY 553 Selected Topics in Fed Tax credit: 2 to 4 Hours.

Seminar on federal tax topics of current interest in specialized areas; topics include international taxation, deferred compensation, problems of closely-held businesses, estate planning, taxation of trusts, and new developments. May be repeated with the consent of the department. Prerequisite: ACCY 451 or consent of department.

ACCY 554 International Taxation credit: 4 Hours.

This course analyzes the tax treatment, issues, planning techniques and underlying government policies involved in doing business internationally. The course incorporates concepts learned in all of the tax courses as they relate to the impact on cross border transactions, including source of income, inbound and outbound transfers, foreign tax credits, foreign currency transactions, controlled foreign corporations, Subpart F income, foreign taxpayers with US activities, treaties, and transfer pricing. 4 graduate hours. No professional credit. Prerequisite: ACCY 451, credit or concurrent enrollment in ACCY 556; or equivalent, or consent of department. Restricted to students enrolled in the MS Tax Program or MAS with Tax Concentration.

ACCY 555 Income Tax Accounting credit: 2 Hours.

This course analyzes the underlying concepts for Accounting for Income Taxes. The course covers all aspects of financial statement income tax accounting including ASC 740, contingency reserves, purchase accounting; IFRS, footnote disclosures, and interim reporting. 2 graduate hours. No professional credit. Prerequisite: Restricted to students enrolled in the MS in Taxation Program.

ACCY 556 Tax Research credit: 1 to 4 Hours.

Provides the student with a working knowledge of tax research methodology utilized by accountants in public practice. Aims to develop the student's capacity for either solving or defending his/her position with respect to a particular tax issue. 1 to 4 graduate hours. No professional credit. May be repeated with consent of the department. Prerequisite: Credit or concurrent enrollment in ACCY 451, or equivalent or consent of department.

ACCY 557 Accounting Periods and Methods credit: 2 Hours.

Covers federal income tax rules concerning the choice, utilization, and changes regarding tax accounting periods and methods, including the following: overall methods of accounting, revenue recognition, deductions, capitalization, accounting periods, and certain other special tax accounting concepts available to taxpayers. 2 graduate hours. No professional credit.

ACCY 558 Taxation of Closely-Held Bus. credit: 4 Hours.

The course analyzes the taxation and planning opportunities associated with all types of closely-held business entities and their stakeholders, including the tax impact of operating as an S corporation, converting from a C corporation to an S corporation, distributions, redemptions, liquidations, and termination of entities, at risk limitations, compensation vs. dividends, and fringe benefits. It also covers tax-exempt organizations.

ACCY 559 Tax Policy credit: 2 Hours.

A normative analysis of the structure and design of the tax system including the tenets of good tax policy; and the theoretical and empirical analysis of the impact of taxation on the economic system. 2 graduate hours. No professional credit.

ACCY 560 Information in Value Creation credit: 1 to 4 Hours.

Introduction to the role of information in processes employed by organizations to create value in market settings, including concepts and theories from strategic management, economics of organization, and systems theory and the relevance of such theories to the concepts and practices of accounting and auditing. This course is for graduate accountancy students who did not earn a BSA at University of Illinois at Urbana-Champaign. 1 to 4 graduate hours. No professional credit. May be repeated in the same or separate terms to a maximum of 4 hours with consent of the department. Prerequisite: Enrollment in graduate accounting degree program and consent of department.

ACCY 561 Taxes and Business Strategy credit: 4 Hours.

To be a complete tax professional, one must understand both the tax law and how the law interacts with a broad spectrum of factors affecting business decisions. To this end, the course integrates concepts from finance, economics and tax law to develop a complete understanding of the role of taxes in business strategy. It also provides a platform to allow students to explore specific areas of tax law more deeply than a traditional course would permit. Prerequisite: Concurrent enrollment with ACCY 557 or consent of instructor.

ACCY 562 Tax Procedures credit: 2 Hours.

An in-depth analysis of IRS Procedures including the processes through which tax laws are enacted, interpreted, administered and applied, along with the remedies available to taxpayers within the tax controversy framework of the IRS, Federal government and the court system. 2 graduate hours. No professional credit.

ACCY 563 Consolidated Returns credit: 2 Hours.

Analyzes the technical tax law governing consolidated tax returns. Designed to further develop concepts discussed in the Corporate and Closely-Held Business courses. 2 graduate hours. No professional credit.

ACCY 564 Reorganizations credit: 2 Hours.

Analyze the technical tax law governing corporate reorganizations. Designed to further develop concepts discussed in the Corporate Tax, Closely-Held Business as well as the Taxes ad Business Strategies courses. 2 graduate hours. No professional credit.

ACCY 570 Data Analytics Foundations for Accountancy credit: 2 or 4 Hours.

Concepts and foundations underlying data analytics for accountancy. Provides fundamental knowledge of how to acquire, organize, synthesize and analyze large volumes of data to address questions and problems. After completing this course, students should (1) have a foundational understanding of the techniques underlying data analytics, (2) recognize scenarios and identify appropriate tools for various types of data analysis and (3) use common computer-based tools to perform data analysis. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: Enrollment in graduate accounting program or consent of the department.

ACCY 571 Statistical Analyses for Accountancy credit: 2 or 4 Hours.

Fundamental knowledge of how to perform statistical analyses useful for leveraging accounting information to solve business problems. After completing this course, students should (1) have a foundational understanding of the statistical analyses underlying data analytics, (2) recognize scenarios and identify appropriate statistical tools for various types of data analysis and (3) use common computer-based tools to perform statistical analyses. 2 or 4 graduate hours. No professional credit. May be repeated up to 4 hours for iMSA and online students that complete the first part of the course content in a 2-hour section (part A) and then complete the remainder of the class in a second 2-hour section (part B). Prerequisite: Enrollment in graduate accounting program or consent of the department.

ACCY 575 Data Analytics Applications in Accountancy credit: 4 Hours.
Develops knowledge regarding the role, methods, and implications of business and data analytics in accounting. Building on prior coursework on the fundamentals of statistical analysis and business/data analytics, this course provides the opportunity to apply related theoretical and practical principles to a variety of accounting scenarios, including audit, tax, fraud identification and detection, financial reporting, and managerial accounting. 4 graduate hours. No professional credit. Prerequisite: ACCY 570 and ACCY 571.

ACCY 585 Constructs in Atg Research credit: 4 Hours.
Examines the role of information in economic and behavioral models of decision making under uncertainty; presents major paradigms underlying contemporary accounting research. Interdisciplinary approach; readings drawn from the accounting, behavioral, economics, and finance literature. Prerequisite: MATH 463 and ECON 502.

ACCY 590 Adv Prof Internship in ACCY credit: 0 to 4 Hours.
A formalized learning experience in combination with practice of accounting while engaged in an internship with a public accounting firm, business, or other off-campus organization; prior approval of learning plan and a summary report of learning experience required. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: Open only to accountancy majors enrolled in the department's integrated bachelor/master program or students with graduate standing in accountancy; completion of 300-level accountancy courses appropriate to internship learning plan; and consent of department.

ACCY 592 Intro to ACCY Research credit: 4 Hours.
Comparative study of alternative methodologies and conceptual frameworks and their application to selected current research issues central to the development of accounting thought, both theoretical and empirical. Prerequisite: ACCY 511 and ACCY 512 and courses in behavioral science, mathematics, and economics; or equivalent background and admission to the accountancy Ph.D. program; or consent of department.

ACCY 593 Special Research Problems credit: 1 to 8 Hours.
Individual investigations or research projects selected by the students, subject to approval by the graduate adviser and the executive officer of the Department. May be repeated in the same or separate terms. Prerequisite: Enrollment in graduate accounting degree program or consent of department.

ACCY 594 Doctoral Research Seminar credit: 4 Hours.
Seminars in various accounting areas designed to enhance the research abilities of doctoral students and to assist them in preparing research proposals; these include Behavioral Dimensions, Public Sector, Tax, Auditing, Managerial, and others announced in the Class Schedule. May be repeated. Prerequisite: Credit or concurrent registration in ACCY 592 or consent of department.

ACCY 595 Models of Decision and Choice credit: 4 Hours.
Same as PSYC 534. See PSYC 534.

ACCY 599 Thesis Research credit: 0 to 16 Hours.
Individual direction and guidance in writing theses; seminar discussion of progress made. Approved for S/U grading only. May be repeated.

Advertising (ADV)

ADV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ADV>)

Courses

ADV 150 Introduction to Advertising credit: 3 Hours.
Introduction to the practice and profession of advertising. Course material covers various functional areas of advertising and integrated brand promotion, including account planning, creative, media, research, consumer behavior, sales promotion and interactive advertising. Topics also include how advertising relates to society in cultural, social, ethical and regulatory contexts. Open to all undergraduate majors.

ADV 199 Undergraduate Seminar credit: 1 to 5 Hours.
May be repeated to a maximum of 12 hours in separate semesters, if topics vary.

ADV 281 Advertising Research Methods credit: 3 Hours.
Introduces students to the wide spectrum of qualitative and quantitative research techniques that are commonly used in the advertising industry. In addition to examining the principles, methods and techniques of advertising research, the course will address issues such as when research should and should not be conducted, analyzing data sets, forming meaningful research questions, figuring out how to answer the questions, and presenting the answers to these questions in a clear and compelling manner. Credit is not given for ADV 281 if credit for ADV 481 has been earned. Prerequisite: ADV 150, STAT 100 or equivalent.

ADV 283 Advertising and Brand Strategy credit: 3 Hours.
Designed to help students acquire brand decision-making skills. Advertising and marketing theories, practical problems and traditional cases will be studied as they learn to build a strong brand strategy that will lead to a strong brand advertising strategy. This encompasses every facet of making advertising decisions for a brand. This involves understanding the content a consumer requires, how the consumer will come in contact with the brand, and what is the goal of the connection between consumer and content/contact. Prerequisite: ADV 150, ADV 281.

ADV 284 Consumer Insight credit: 3 Hours.
Course focuses on methods of eliciting consumer insight. In particular, this class introduces the process and applied outcomes of consumer insight in terms of building brand strategy. Techniques for persuasive presentation of insight will also be introduced. Prerequisite: ADV 281.

ADV 290 Special Topics in Advertising credit: 1 to 3 Hours.
Designed to offer freshmen and sophomores opportunity to take courses in advertising's most recent developments. May be repeated to a maximum of 12 hours in separate terms, if topics vary.

ADV 305 Digital Advertising Content, Technologies and Concepts credit: 3 Hours.
This introductory course systematically examines a wide range of topics related to the proliferation and use of digital media in a networked world, including psychology, social relationships, culture, economics, politics, and philosophy. It is designed to prepare students for living and working in an increasingly mediated society in which digital technologies are omnipresent, yet ubiquitous. While the scope of this course is highly interdisciplinary, its emphasis will be placed on specialist knowledge for media professions such as advertising and journalism. Prerequisite: ADV 150. Restricted to students with sophomore and junior standing.

ADV 310 Intro to Public Relations credit: 3 Hours.
Introduces the student to the practice and profession of public relations. Course material covers topics such as the history of public relations, the role of law and ethics in public relations, and theories that guide public relations research and practice. The course will also introduce roles played by public relations practitioners within organizations, such as media relations, consumer relations, employee relations, community relations, and investor relations.

ADV 311 Classic Campaigns credit: 3 Hours.

Analyzes the most recognized and successful direct mail, print, radio, television and digital advertising campaigns of the 20th and early 21st centuries. Includes particular attention to their strategy and development as well as their social, cultural, and economic impact.

ADV 312 Advertising History credit: 3 Hours.

In this course, you will develop a rich knowledge base of advertising and the advertising industry as it has evolved in the United States over the last two centuries. Included will be an analysis of the key events, forces, people and technology.

ADV 315 Emerging Media credit: 3 Hours.

Same as AGCM 315. See AGCM 315.

ADV 350 Writing for Public Relations credit: 3 Hours.

Focuses on the strategy of crafting and delivering PR messages to various audiences with special emphasis on pre-writing, preparation, revision and presentation. Prerequisite: ADV 310.

ADV 390 Content Creation credit: 3 Hours.

Explores theories of creativity; situates creativity and creative practices within the social structure of organizations that develop creative content; examines the relationship between creative strategy, creative concepts and creative executions; exposes students to the practice of creating content for traditional and non-traditional media vehicles. Prerequisite: ADV 284.

ADV 393 Advertising and Society credit: 3 Hours.

Provides a critical understanding of advertising's role in modern society. Advertising will be studied as a cultural force and social institution. Its role will be examined in relation to communications, economics, and political and legal systems. Credit is not given for ADV 393 if credit for ADV 493 has been earned.

ADV 396 Research Experience in Advertising credit: 1 to 3 Hours.

Supervised participation in research and scholarly activities, usually as an assistant to an investigator. Approved for Letter and S/U grading. May be repeated to a maximum of 9 hours. Prerequisite: ADV 150, ADV 281, or written consent of instructor.

ADV 399 Advertising Study Abroad credit: 1 to 5 Hours.

Provides credit toward undergraduate degree for undertaking study and/or a research project through faculty led programs or from an accredited foreign institution or approved overseas program. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 18 hours. Final determination of appropriate credit will be made upon completion of the work done abroad and/or on campus. Prerequisite: One academic year (or one semester in the case of transfer students) in residence at UIUC, good academic standing, completion of at least thirty semester hours toward the bachelor's degree, and prior approval of the Department of Advertising. Some programs have additional requirements.

ADV 400 Special Problems credit: 0 to 3 Hours.

Special projects, research, and independent reading in advertising for students capable of individual work under the guidance of a faculty adviser. 0 to 3 undergraduate hours. No graduate credit. May be repeated in the same or in multiple semesters, if topics vary. Prerequisite: Written research proposal and consent of department.

ADV 409 Media Entrepreneurship credit: 3 Hours.

Introduces students to the foundations of entrepreneurship and evolving business models for media. Students are introduced to the foundation and context of entrepreneurship. The course will cover the skills and practices necessary for new entrepreneurial ventures, as well as the processes of evaluating an idea, assessing the market, and implementing a new venture. Finally, students will examine business case studies for both successful and unsuccessful media start-ups. 3 undergraduate hours. No graduate credit. Prerequisite: Junior or senior standing in the College of Media.

ADV 410 Public Relations Strategies credit: 3 Hours.

Examines the intersection of public relations strategies and communication tactics used by organizations to meet reputation and relationship management objectives with relevant publics and stakeholder groups, such as journalists, consumers, employees, investors, government officials and agencies and community members. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 310.

ADV 452 Creative Concepts I credit: 3 or 4 Hours.

Planning and execution of advertising across media, with emphasis on the creation of campaigns 3 undergraduate hours. 4 graduate hours. Prerequisite: ADV 390 and consent of instructor (required).

ADV 454 Creative Concepts II credit: 3 Hours.

This portfolio-oriented course builds upon the core competencies acquired in ADV 452 and applies them to solving real-world advertising problems with integrated creative consumer communications efforts than span traditional and new media. 3 undergraduate hours. 3 graduate hours. Prerequisite: ADV 452.

ADV 460 Innovation in Advertising credit: 3 Hours.

This course is intended to improve creative and critical thinking skill in advertising planning by understanding the core technology and perspective of digital and other innovative media in the context of integrated communication. This will allow students to understand how consumers perceive and process digital advertising messages; to research critical questions in digital consumer behavior; to learn how to utilize digital and non-digital media in the context of integrated communication; to apply knowledge of digital communication technology to the real-world advertising cases. 3 undergraduate hours. 3 graduate hours. Credit is not given for ADV 460 if credit for the Digital Advertising section of ADV 490 has been earned. Prerequisite: ADV 283, ADV 284.

ADV 461 Computational Advertising credit: 3 Hours.

This class will survey the emerging landscape of computational advertising. It will provide students with a thorough understanding of the technologies including web-search, auctions, behavioral targeting, and mechanisms for viral marketing that underpin the display of advertisements on a variety of locations. These locations include web pages (banner ads), on prominent search engines (text ads), on social media platforms, as well as cell phones. The students shall also learn about new research areas in computational advertising including electronic billboards, moving objects (banners atop taxi cabs) and algorithmic synthesis of personalized advertisements. This class will also discuss issues related to consumer privacy. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 460, ADV 483. Junior or senior standing required.

ADV 475 Multicultural Advertising credit: 3 Hours.

Examines the role of multicultural issues upon advertising both as a practice and as an industry. Incorporates historical perspectives to understand the foundational role race, age, and sexual orientation has played in advertising and marketing and will address current issues of racial imagery in advertising, racial diversity in the industry, and a variety of topics related involving multicultural advertising and marketing. 3 undergraduate hours. 3 graduate hours.

ADV 476 Global Advertising credit: 3 Hours.

Explores theories of culture and communication and applies them to advertising issues in the context of globalization. Through case studies and an applied research paper, students will develop strategies for advertising and communicating messages to local and global audiences. 3 undergraduate hours. 3 graduate hours. Prerequisite: ADV 150 or equivalent.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

ADV 478 Psychology of Advertising credit: 3 Hours.

Course is designed to familiarize students with theory and research at the intersection of advertising and psychology. Explores issues pertaining to advertising psychology, including: basic research methodology, the emergence of trends, attitudes and persuasion, human and brand personality, cross-cultural advertising, implicit consumer cognition, judgment and decision making, and others. 3 undergraduate hours. No graduate credit. Credit is not given for ADV 478 if credit for the Psychology of Advertising section of ADV 490 has been earned. Prerequisite: ADV 281 or equivalent.

ADV 481 Advertising Research Methods credit: 3 Hours.

Overview of basic concepts of research methodology with particular emphasis on advertising research. Computer analysis and interpretation of actual data sets; measurement with both structured and unstructured techniques; principles of survey and experimental design. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 150 and a specified course in statistical methods.

ADV 482 Qualitative Analysis in Advert credit: 3 Hours.

Provides students with an understanding of the multiple qualitative methods used in advertising and consumer research; a deeper examination of design and analysis issues are covered with focus on analysis of texts to uncover consumer insights and test advertising strategy. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 150 and ADV 281 or equivalent.

ADV 483 Audience Analysis credit: 3 Hours.

Analyzes audiences and matches consumer insights with strategic ideas for brand communication, contact, and connection. 3 undergraduate hours. No graduate credit. Prerequisites: ADV 283 and ADV 284.

ADV 484 Quantitative Research Methods credit: 3 Hours.

Advanced undergraduate course on quantitative research methods in advertising and consumer behavior. In-depth coverage of descriptive research, experimental research, descriptive and inferential statistics, and computer analysis and interpretation of actual data. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 281.

ADV 490 Advanced Special Topics in Advertising credit: 1 to 3 Hours.

Covers current issues in various advertising areas not studied extensively in other courses. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: Announced separately for each topic.

ADV 491 Advertising Management Plan credit: 3 Hours.

Application of analytical planning concepts to advertising planning and decision making; covers all of the decision making areas of advertising. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 290, ADV 483.

ADV 492 Tech and Advertising Campaigns credit: 3 Hours.

With the maturation of the internet as an advertising and media channel, advertising, journalism, and communications students need to know more about technology and how that impacts their messages and designs. Likewise, computer scientists could benefit from knowledge of what the end user is looking for when designing web content, applications and other web-based media. Students in this course will gain design knowledge as well as a hands-on experience in completing a technology-driven advertising campaign. Students will participate in engineering, advertising and project management activities with individual as well as team responsibilities. Same as CS 468. 3 undergraduate hours. No graduate credit. Credit is not given for ADV 492 and ADV 498. Prerequisite: CS 225 or consent of instructors. Junior or senior standing in Advertising or Computer Science.

ADV 494 Persuasion Consumer Response credit: 3 Hours.

Addresses what makes a mass-mediated message persuasive by reviewing theories of mass communication and persuasion, consumer information-processing, and advertising effectiveness measures. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 281.

ADV 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved professional, industry related internship. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours or 2 graduate hours. May be repeated in subsequent terms to a maximum of 3 undergraduate hours or 3 graduate hours. Prerequisite: Consent of instructor.

ADV 496 UG Research Project credit: 1 to 3 Hours.

Supervised investigation of student-driven research on special topics related to advertising in individual or collaborative format. Topic and nature of research may vary. Capstone paper required. Type of course: Lecture-discussion 1 to 3 undergraduate hours. No graduate credit. May be repeated up to 3 hours in the same term or 6 hours in separate terms, if topics vary. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Restricted to majors only. Not available to freshman.

ADV 497 Colloquium in Advertising credit: 1 Hour.

Current topics, cases, and research in advertising are presented in a forum that fosters critical thinking and engagement. Weekly presentation and discussion of current research and cases by faculty, undergraduate/graduate students, visiting scholars and visiting professionals. 1 undergraduate hour. No graduate credit. Approved for S/U grading only. May be repeated up to 2 hours in separate terms, if topics vary. Prerequisite: ADV 281 and consent of instructor.

ADV 498 The Sandage Project credit: 3 Hours.

This course is named after the founder of the Advertising Department, Charles H. Sandage (known as the "father of advertising education"). His vision of educating the future of the industry was grounded in theoretical and foundational courses emphasizing the "why of advertising" - not just the "how." In this course, students will integrate the concepts, experiences, and skills that have been learned in the curriculum with a service-learning project. 3 undergraduate hours. No graduate credit. Prerequisite: ADV 283, ADV 390 and ADV 460 or consent of instructor.

ADV 509 Media Entrepreneurship credit: 3 Hours.

Introduces students to the foundations of entrepreneurship and evolving business models for media. Students are introduced to the foundation and context of entrepreneurship. The course will cover the skills and practices necessary for new entrepreneurial ventures, as well as the processes of evaluation an idea, assessing the market, and implementing a new venture. Finally, students will examine business case studies for both successful and unsuccessful media start-ups. 3 graduate hours. No professional credit. Credit is not given for both ADV 409 and ADV 509. Prerequisite: Limited to MS Advertising students.

ADV 550 Foundations of Advertising credit: 3 Hours.

Explores the development of American advertising through the 20th and into the early 21st century. Analyzes and evaluates American advertising through these primary areas: ethics, advertising philosophies, advertising structure, advertising education, its broader social impact, the role of media and technologies, and its place within a global framework. Prerequisite: Consent of department.

ADV 580 Advertising Theory credit: 3 Hours.

Reviews classic and contemporary theories used in advertising research and practice with multidisciplinary emphasis. Through reading, discussion and independent research, students will understand how basic social science and humanities research and advertising scholarship are related; how theories and concepts are applied, adapted, constrained and combined when applied to advertising and other communication issues; and how research evolves over time.

ADV 581 Quanti Research Methods in Adv credit: 3 Hours.

Provides students with an overview of quantitative research methodology in advertising and consumer behavior. Students will learn appropriate uses and techniques for conducting exploratory (e.g., focus groups, literature searches), descriptive (e.g., observational techniques, surveys), and casual (randomized- and quasi-experiments) research. Ethical considerations in research, and limitations of quantitative research will play an important role throughout the course. Students will learn basic descriptive and inferential statistical analyses to help analyze, and make sense of quantitative data. Prerequisite: Basic statistics course.

ADV 582 Qualitative Rsrch in Advert credit: 3 Hours.

Treatment of basic research concepts and procedures in the social sciences with emphasis on advertising. Prerequisite: Consent of the department.

ADV 587 Graduate Seminar I credit: 3 Hours.

Provides advertising students and faculty the opportunity to interact on significant topics. It draws on a wide range of perspectives to explore not only foundational theories and research in advertising, but also current issues, contemporary analytical approaches, and emerging trends in advertising scholarship and practice. Prerequisite: Consent of department.

ADV 588 Graduate Seminar II credit: 3 Hours.

Students write research proposals in this course. Prerequisite: The grade of B or better in ADV 587.

ADV 590 Special Topics in Advertising credit: 1 to 4 Hours.

May be repeated in the same or in multiple semesters if topics vary. Prerequisite: Consent of department.

ADV 594 Advanced Topics in Advertising credit: 4 Hours.

This seminar explores topics associated with advertising theory and research. Topics will vary across different course offerings. They will include classic elements of advertising theory (e.g. persuasion, attitudes, cognition, emotion, motivation), as well as current research frontiers (e.g. decision-making, computational advertising, psychophysiology, gaming, social media). 4 graduate hours. No professional credit. May be repeated up to 12 hours, if topics vary. Prerequisite: Ph.D. student or instructor approval.

ADV 597 Proseminar in Advertising credit: 1 Hour.

Current topics, cases, and research in advertising are presented in a forum that fosters critical thinking and engagement. Weekly presentation and discussion of current research and cases by faculty, undergraduate/graduate students, visiting scholars and visiting professionals. Approved for S/U grading only. May be repeated up to 4 graduate hours in separate terms.

ADV 598 Professional Project credit: 0 or 6 Hours.

This course serves as a capstone, requiring the student to demonstrate a mastery of knowledge in the primary areas of advertising. Approved for S/U grading only. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: A grade of B or better in ADV 588.

ADV 599 Thesis Research credit: 0 to 6 Hours.

Approved for S/U grading only. May be repeated in separate terms. Prerequisite: ADV 588 and consent of the department.

Aerospace Engineering (AE)

AE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AE>)

Courses

AE 100 Intro to Aerospace Engineering credit: 2 Hours.

Introduction to the Aerospace Engineering curriculum and career. Typical section topics include aircraft and rocket design and flight. Overviews of the topics are presented along with theory to be experimentally verified.

AE 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Undergraduate Open Seminar. Approved for Letter and S/U grading. May be repeated.

AE 202 Aerospace Flight Mechanics credit: 3 Hours.

Fundamental principles of aerospace flight mechanics applied to spacecraft and aircraft. Orbital mechanics, rocket propulsion, and dynamics and control applied to spacecraft design. Aerodynamics, maneuvering, stability and flight performance applied to aircraft design. MATLAB examples and assignments. Prerequisite: Credit or concurrent registration in TAM 212.

AE 298 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. See class schedule for topics and prerequisites. May be repeated if topics vary.

AE 302 Aerospace Flight Mechanics II credit: 3 Hours.

Fundamentals of aircraft and spacecraft dynamics and orbital mechanics; aircraft performance in various flight attitudes; aircraft stability and control; spacecraft attitude dynamics and control; the two-body problem of orbital mechanics; orbit transfer. Prerequisite: AE 352.

AE 311 Incompressible Flow credit: 3 Hours.

Equations of motion for incompressible flow, both inviscid and viscous; potential flow theory, inviscid airfoil theory: two- and three-dimensional, Navier-Stokes equations, laminar boundary layer and transition to turbulence. Prerequisite: Credit or concurrent registration in AE 202 and MATH 241.

AE 312 Compressible Flow credit: 3 Hours.

Dynamics of compressible fluid; conservation of mass, momentum, and energy; one-dimensional and quasi-one-dimensional flow; oblique shock waves & Prandtl-Meyer expansion fans; unsteady wave motion; linearized theory. Application to nozzles, diffusers, airfoils, shock tubes and other geometries. Prerequisite: AE 202 and MATH 285. Credit or concurrent registration in ME 300.

AE 321 Mechs of Aerospace Structures credit: 3 Hours.

Fundamental concepts in the linear theory of elasticity, including stress, strain, equilibrium, compatibility, material constitution and properties. Failure mechanisms and criteria. Application to plane stress-strain problems, beams in extension and bending, and shafts in torsion. Prerequisite: MATH 285 and TAM 210.

AE 323 Applied Aerospace Structures credit: 3 Hours.

Fundamental concepts of stress, strain, equilibrium, compatibility, material constitution and properties. Analysis of beams and shafts of monocoque and semi-monocoque construction. Energy methods. Prerequisite: AE 321, MATH 241, MATH 285, and TAM 210.

AE 352 Aerospace Dynamical Systems credit: 3 Hours.

Particle kinematics and dynamics; Lagrange's equations; vibration of multiple degree-of-freedom systems; rotational kinematics and dynamics of rigid bodies. Credit is not given for both AE 352 and TAM 412. Prerequisite: MATH 225, MATH 285, and TAM 212.

AE 353 Aerospace Control Systems credit: 3 Hours.

Modeling of linear dynamic systems; Laplace transform techniques; linear feedback control systems; stability criteria; design techniques. Credit is not given for both AE 353 and either GE 320 or ME 340. Prerequisite: MATH 225, MATH 285, and TAM 212.

AE 370 Aerospace Numerical Methods credit: 3 Hours.

Numerical methods used in aerospace engineering. Numerical integration, curve fitting, root finding, numerical solution of ODE, solution of linear systems of equations. Finite difference. Rayleigh-Ritz, and Finite element methods. Applications to simple structural mechanics and aerodynamics problems encountered in aerospace engineering. Prerequisite: Credit or concurrent registration in AE 311 or AE 312; credit or concurrent registration in AE 321 or AE 323.

AE 395 Honors Project credit: 1 to 4 Hours.

Special aerospace engineering project or reading course for James Scholars in engineering. Prerequisite: Consent of instructor.

AE 396 Honors Seminar credit: 1 to 4 Hours.

Special lecture sequences or discussion groups arranged each term to bring James Scholars in engineering into direct contact with the various aspects of engineering practices and philosophy. Prerequisite: Consent of instructor.

AE 397 Independent Study credit: 1 to 3 Hours.

Independent theoretical and experimental projects in aerospace engineering. May be repeated. Prerequisite: Consent of instructor.

AE 398 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. See class schedule for topics and prerequisites. May be repeated if topics vary.

AE 402 Orbital Mechanics credit: 3 or 4 Hours.

Analysis of orbits in an inverse-square gravitational field; elementary rocket dynamics, impulsive orbit transfer and rendezvous, and Lambert's Theorem with applications; patched-conic trajectories, planetary gravity-assist maneuvers, and linearized orbit theory with application to simplified analytical models; perturbations. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 202.

AE 403 Spacecraft Attitude Control credit: 3 or 4 Hours.

Theory and applications of spacecraft attitude dynamics and control; Euler angles, direction cosines, quaternions, and Gibbs-Rodrigues parameters; attitude sensors and control actuators; spin, three-axis active, reaction wheel, control moment gyro, and gravity gradient control systems; environmental effects. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 352 and AE 353.

AE 410 Computational Aerodynamics credit: 3 or 4 Hours.

Computational technologies as solution tools for various aerodynamic problems; modeling and solution of one-and two-dimensional, incompressible and compressible, steady and unsteady inviscid external flow fields. Computational laboratory for practical experience. Same as CSE 461. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 311; credit or concurrent enrollment in AE 312.

AE 412 Viscous Flow & Heat Transfer credit: 4 Hours.

Momentum and thermal transport in wall boundary-layer and free shear flows, solutions to the Navier-Stokes equations for heat conducting laminar and turbulent shear flows; similarity concepts; thermal boundary layers in ducts and high-speed aerodynamic boundary layers. Same as ME 411. 4 undergraduate hours. 4 graduate hours. Prerequisite: AE 311 or ME 310.

AE 416 Applied Aerodynamics credit: 3 or 4 Hours.

Two-dimensional and finite wing theory with emphasis on the mechanisms of lift and drag generation; Reynolds number and Mach number effects; drag analysis; high-lift wing systems; propeller and rotor aerodynamics; control surface design; application of V/STOL aerodynamics. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 311.

AE 419 Aircraft Flight Mechanics credit: 3 or 4 Hours.

Steady and quasi-steady aircraft flight performance; take-off and landing, climbing and diving, cruise, level turn, and energy methods; longitudinal, directional, and lateral static stability and control; longitudinal and lateral motion and dynamic stability. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 202 and AE 353.

AE 420 Finite Element Analysis credit: 3 or 4 Hours.

Same as CSE 451 and ME 471. See ME 471.

AE 427 Mechanics of Polymers credit: 3 Hours.

Same as MSE 454 and TAM 427. See TAM 427.

AE 428 Mechanics of Composites credit: 3 Hours.

Same as MSE 456 and TAM 428. See MSE 456.

AE 433 Aerospace Propulsion credit: 3 or 4 Hours.

Fundamentals of rocket and airbreathing jet propulsion devices electric propulsion; prediction of thrust, combustion reactions, specific fuel consumption, and operating performance; ramjets; turbojets; turbofans; turboprops; aerothermodynamics of inlets, combustors, and nozzles; compressors, turbines; component matching, fundamentals of electrothermal, electromagnetic elastostatic thrusters, and solar sails. 3 undergraduate hours. 4 graduate hours. Prerequisite: AE 312 and PHYS 212.

AE 434 Rocket Propulsion credit: 3 or 4 Hours.

Basic principles of chemical rocket propulsion and performance, rocket component design, liquid rockets, solid rocket motors, combustion processes, combustion instability. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 312 and AE 433.

AE 435 Electric Propulsion credit: 3 or 4 Hours.

Elements of electric propulsion as applied to near-earth and deep-space missions; impact on spacecraft design; physics of ionized gases; plasmadynamics; electrothermal, electromagnetic, and electrostatic acceleration of gases to high velocity; high-impulse thruster design and performance; the resistojet, arcjet, ion engine, Hall thruster, MPD arc thruster, and plasma gun. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 433.

AE 442 Aerospace Systems Design I credit: 3 Hours.

Principles of systems engineering as they apply to the design process for aerospace flight systems; general design methodology; application of these concepts to the initial sizing of both aircraft and spacecraft systems. Intensive technical writing. 3 undergraduate hours. No graduate credit. AE 442 and AE 443 taken in sequence fulfill the Advanced Composition Requirement. Prerequisite: Credit or concurrent registration in AE 311, AE 323, and AE 352.

AE 443 Aerospace Systems Design II credit: 3 Hours.

Continuation of AE 442. Conceptual design project of either an aircraft or spacecraft flight system to satisfy a given set of requirements. Project team organization. Emphasis on sizing, trade studies and design optimization, subsystem integration, and technical communication skills. 3 undergraduate hours. No graduate credit. To fulfill the Advanced Composition Requirement, credit must be earned for both AE 442 and AE 443. Prerequisite: AE 442.

This course satisfies the General Education Criteria for: Advanced Composition

AE 451 Aeroelasticity credit: 3 or 4 Hours.

In-depth examination of aerodynamic and dynamic structural phenomena associated with flexible airplanes and missiles; divergence of linear and nonlinear elastic lifting surfaces; effect of elastic and inelastic deformations on lift distributions and stability; elastic flutter of straight and swept wings; equations of disturbed motion of elastic and inelastic aircraft; dynamic response to forces, gusts, and continuous atmospheric turbulence; creep divergence of lifting surfaces; flutter in the presence of creep; effect of temperature on inelastic divergence and flutter. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AE 352 or TAM 412; TAM 251.

AE 454 Systems Dynamics & Control credit: 3 or 4 Hours.

Examination of the common core of dynamics and control theory. Fundamental concepts of Lagrangian dynamics, state space representations, Hamiltonian and modern dynamics, stability theory, and control of dynamical systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: AE 353.

AE 456 Global Nav Satellite Systems credit: 4 Hours.

Same as ECE 456. See ECE 456.

AE 460 Aerodynamics & Propulsion Lab credit: 2 Hours.

Theory and application of experimental techniques in aerospace engineering with emphasis on fluid dynamic, aerodynamic, thermal, combustion, and propulsion phenomena. 2 undergraduate hours. No graduate credit. Prerequisite: AE 311; credit or concurrent registration in AE 433.

AE 461 Structures & Control Lab credit: 2 Hours.

Theory and application of experimental techniques in aerospace engineering with emphasis on structural mechanics, vibrations, dynamics, and control systems. 2 undergraduate hours. No graduate credit. Prerequisite: AE 321 and AE 352. Credit or concurrent registration in AE 323 and AE 353.

AE 468 Optical Remote Sensing credit: 3 Hours.

Same as ECE 468. See ECE 468.

AE 482 Introduction to Robotics credit: 4 Hours.

Same as ECE 470 and ME 445. See ECE 470.

AE 483 Unmanned Aerial Vehicle (UAV) Navigation and Control credit: 3 Hours.

Design, analysis, and application of decision algorithms to modern aerospace systems: global positioning systems, air traffic control systems, unmanned aerial vehicles, imaging and communication satellites, and planetary ground vehicles. 3 undergraduate hours. No graduate credit. Prerequisite: AE 202, AE 352, AE 353, AE 370, IE 300, and PHYS 212.

AE 497 Independent Study credit: 1 to 4 Hours.

Independent theoretical and experimental projects in aerospace engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

AE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in aerospace engineering intended to augment the existing curriculum. See Class Schedule or department course information for topics and prerequisite. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 undergraduate hours or 12 graduate hours.

AE 502 Advanced Orbital Mechanics credit: 4 Hours.

Circular-restricted three-body problem; surfaces of zero velocity, libration points, and halo orbits; perturbed two-body motion; Gauss and Lagrange planetary equations, Hamilton's principle, canonical equations and Delaunay variables; application to artificial Earth satellites; orbit determination. Prerequisite: AE 402.

AE 504 Optimal Aerospace Systems credit: 4 Hours.

Formulation of parameter and functional optimization problems for dynamic systems; applications of optimization principles to the control and performance of aerospace vehicles, including optimal flight paths, trajectories, and feedback control. Prerequisite: AE 352.

AE 508 Optimal Space Trajectories credit: 4 Hours.

Optimal rocket trajectories in inverse-square and linearized gravitational fields; orbital transfer, intercept, and rendezvous; high-thrust (impulsive) and low-thrust (continuous) trajectories; primer vector theory and applications; cooperative rendezvous. Prerequisite: Credit or concurrent registration in AE 504.

AE 510 Advanced Gas Dynamics credit: 4 Hours.

Same as ME 510. See ME 510.

AE 511 Transonic Aerodynamics credit: 4 Hours.

Fundamentals of transonic flows; transonic characteristics and flow modeling, shock wave development, properties of shock wave, transonic similarity, shock-boundary layer interactions, three-dimensional effects, transonic solution techniques, transonic design, and transonic testing. Prerequisite: ME 410.

AE 512 Molecular Gas Dynamics credit: 4 Hours.

The course focuses on the molecular description of physical and chemical processes in gases. The molecular viewpoint is essential to promote the understanding of physical processes occurring at very high temperatures and low pressures. These conditions are typically encountered in high speed and non-equilibrium gas flows. After a brief review of the fundamental concepts of statistical mechanics and chemical thermodynamics, the course focuses on the fundamentals of kinetic theory of gases, equilibrium chemistry, non-equilibrium kinetics and non-thermal radiation. 4 graduate hours. No professional credit. Prerequisite: AE 311, AE 312, ME 300.

AE 514 Boundary Layer Theory credit: 4 Hours.

Boundary layer concept at high Reynolds numbers; self-similar solutions of incompressible and compressible boundary layers; stability of parallel and nearly-parallel wall-bounded viscous flows; transition to turbulence; turbulent boundary layers; high-speed boundary layers; strong Reynolds analogy; Morkovin's hypothesis. Prerequisite: AE 412.

AE 515 Wing Theory credit: 4 Hours.

Theoretical analysis of the aerodynamic characteristics of two- and three-dimensional wings and multiple-body systems in subsonic and supersonic flows. Prerequisite: AE 416.

AE 521 Fracture and Fatigue credit: 4 Hours.

Same as CEE 575. See CEE 575.

AE 522 Dynamic Response of Materials credit: 4 Hours.

One-dimensional stress waves; three-dimensional longitudinal and shear waves, reflection and refraction of plane waves; Rayleigh and Love waves; wave guides; spherical waves, inelastic wave propagation and shock waves; dynamic fracture and shear bandings of solids; wave propagation in anisotropic media; experimental techniques; acoustic emission, ultrasounds, split Hopkinson (Kolsky) bar, plate impact experiments, optical techniques in dynamic fracture, and high-speed photography. Prerequisite: TAM 451 or TAM 551.

AE 523 Nanoscale Contact Mechanics credit: 4 Hours.

Short- and long-range dipole and electronic interactions; particle- and surface-force interactions; contact mechanics of rigid and nonrigid media; continuum adhesion models; principles of Atomic Force Microscopy (AFM); artifacts and remedies in AFM imaging; force and scale calibration; dynamics of AC-AFM imaging; force spectroscopy; instrumented nanoindentation. Prerequisite: TAM 451 or TAM 551.

AE 525 Advanced Composite Materials credit: 4 Hours.

An extension of TAM 428. Advanced analysis of composite materials. Anisotropic elasticity; micromechanical theories; behavior of composite plates and beams under bending, buckling, and vibration; advanced elasticity solution techniques; hygrothermal behavior of polymer composites; strength prediction theories and failure mechanisms in composites; processing of metal, ceramic, and polymer composites; analysis of residual stresses. Prerequisite: TAM 428.

AE 526 Composites Manufacturing credit: 4 Hours.

Manufacturing methods for polymer-matrix composite materials; analysis of fiber processing techniques, interfacial treatments, and composites fabrication methods; analytical treatment of process modeling including heat transfer, cure kinetics, resin flow, and residual stresses. Term project. Prerequisite: TAM 428.

AE 527 Multi-Scale Modeling of Materials credit: 4 Hours.

This course introduces the theoretical foundation of multi-scale methods, and provides students with hands-on modeling and simulation experience. Students will be introduced to a variety of modeling techniques covering the full spectrum of length-scales from atomistics to continuum. The emphasis will be in the use of continuum-based concepts, such as the Principle of Virtual Work and conservation integrals, as bridging techniques to link atomistics and the continuum. The goal is to enable interpretation of material phenomena across different length-scales. 4 graduate hours. No professional credit. Prerequisite: TAM 451, AE 420, and CSE 401, or equivalent.

AE 528 Nonlinear Continuous Media credit: 4 Hours.

Fundamental concepts of large deformations in nonlinear elasticity and inelasticity with applications: generalized tensors, finite deformations, stress-strain relations in terms of strain energy functions, inverse problems, solutions of tension, shear and bending problems, finite plane strain, theory of successive approximations, fiber-reinforced beams, plates and cylinders, thermodynamics of deformable media, stability considerations, and constituent relations for inelasticity. Prerequisite: AE 321 or TAM 451.

AE 529 Viscoelasticity Theory credit: 4 Hours.

Fundamental concepts of viscoelasticity with applications: elastic-viscoelastic analogies, creep and relaxation functions, Poisson's ratio, thermomechanical reciprocity relations, variational principles, model fitting, shear center motion, thick-walled cylinders under pressure and inertia loads with material annihilation, sandwich plates, propagation of viscoelastic waves, vibration of bars, plates and shells, nonlinear elastic-viscoelastic analogy, properties of nonlinear viscoelastic stress-strain laws, creep rupture, and torsion of nonlinear bars and shells. Same as TAM 529. Prerequisite: AE 321 or TAM 451.

AE 538 Combustion Fundamentals credit: 4 Hours.

Same as ME 501. See ME 501.

AE 542 Aerospace Syst Engineering I credit: 4 Hours.

Aerospace systems engineering principles, processes and practices for the definition of spacecraft, aircraft, launch and associated systems, and the application of the systems approach across the development life cycle. Prerequisite: Any of AE 442, AE 443, ME 470, ECE 445, ECE 411; CS 492, CS 493, or CEE 465.

AE 543 Aerospace Syst Engineering II credit: 4 Hours.

Fundamental aerospace industry methods for control of an engineering development effort of a complex aerospace system typical in development of spacecraft, launch vehicles, aircraft, remotely controlled vehicles, and associated supporting infrastructure system in current acquisition environments. Standards and techniques to control risk, integration of technologies, and exploration of "design-to" process tailoring and systematically make design decisions. Prerequisite: AE 542.

AE 550 Nonlinear Aeroelasticity credit: 4 Hours.

Integrated fundamental treatment of the physical and mathematical aspects of nonlinear aeroelasticity. Fluid-solid interactions of unsteady aerodynamics and flexible structures and their components with applications to air-space-land vehicles, wind mills, solar sails, and gossamer structures. Physical and mathematical modeling; solution protocols to nonlinear problems; self-excited nonlinear oscillators; torsional divergence, loss of stability and control due to structural flexibility; chordwise and un-symmetric bending; viscous and structural damping, motion control; straight and swept-wind flutter; stall divergence and flutter; panel flutter; aerodynamic noise; chaotic motion; gust loads; limit cycles. Prerequisite: AE 451.

AE 551 Elastodynamics and Vibrations credit: 4 Hours.

Same as TAM 514. See TAM 514.

AE 554 Dynamical Systems Theory credit: 4 Hours.

Fundamental concepts of nonlinear oscillations, structural stability, local and global bifurcations in the context of ordinary and partial differential equations; dynamic systems, structural stability and Lyapunov-Schmidt Reduction, bifurcations of equilibrium points, limit cycles and tori, the center manifold and Poincare normal forms, co-dimension two and higher order bifurcations, bifurcation theory of maps, the Birkhoff-Smale homoclinic theorem and horseshoes, Melnikov's method and Silnikov phenomena, period doubling, and other routes to chaos. Applications to engineering problems, such as aircraft at high angles of attack, pipes conveying fluid, and panel flutter. 4 graduate hours. No professional credit. Prerequisite: AE 352 or TAM 412 and AE 454.

AE 555 Multivariable Control Design credit: 4 Hours.

Frequency-response design specifications; algebraic and analytic constraints in scalar systems; uncertainty representation; Nyquist stability theory, small gain condition, and multi-input multi-output systems; singular value decomposition; robustness and u -function; linear quadratic regulator based design; recovery of LQ Design properties; Kalman filter; Riccati equations; H-infinity based design; reduction; balanced truncation; Hankel singular values; coprime factor reduction; loop shaping. Same as SE 521. 4 graduate hours. No professional credit. Prerequisite: ECE 515.

AE 556 Robust Control credit: 4 Hours.

Signal and system spaces; stability, robustness, and the small gain theorem; factorization and parameterization of all stabilizing controllers; performance and achievable closed loop maps; model matching; design of optimal single-input single-output systems in H-infinity, H₂, L₁ senses; extensions to multi-output systems; structured and unstructured uncertainty; robust performance analysis and synthesis; multi-objective control. Prerequisite: ECE 515 and MATH 446.

AE 560 Fracture Mechanics Laboratory credit: 4 Hours.

Experimental and physical aspects of fracture mechanics including elastic crack tip stress field, thermoelasticity, thermoplasticity, optical techniques, J-integral, toughening mechanisms, dynamic fracture, and fatigue. Laboratory experiments illustrate concepts. Prerequisite: TAM 451 or TAM 551.

AE 564 Advanced Aero Propulsion Lab credit: 4 Hours.

Theory and application of advanced diagnostic techniques used in aerodynamics and propulsion research with an emphasis placed on wind tunnel testing and advanced optical and laser-based techniques. Experience with aircraft performance measurement, wind tunnel testing, schlieren/shadowgraph photography, interferometry, spectroscopy, laser Doppler velocimetry, particle and molecular-based scattering, particle image velocimetry, pressure/temperature/shear sensitive paint, and other recently developed techniques provided through lectures and laboratory exercises. Prerequisites: AE 311, AE 312, AE 433, AE 460.

AE 583 Advanced Robotic Planning credit: 4 Hours.

Same as ECE 550. See ECE 550.

AE 590 Seminar credit: 0 Hours.

Presentation by graduate students, staff, and guest lecturers of current topics in aerospace engineering. Approved for S/U grading only.

AE 597 Independent Study credit: 1 to 4 Hours.

Independent theoretical and experimental projects in aerospace engineering. May be repeated. Prerequisite: Consent of instructor.

AE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in aerospace engineering intended to augment existing formal courses. Topics and prerequisites vary for each section. See Class Schedule or departmental course information for both. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours.

AE 599 Thesis Research credit: 0 to 16 Hours.

Research in the various areas of aerospace engineering. Approved for S/U grading only. May be repeated.

African American Studies (AFRO)

AFRO Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AFRO>)

Courses

AFRO 100 Intro to African American St credit: 3 Hours.

Interdisciplinary introduction to the basic concepts and literature in the disciplines covered by African American studies; surveys the major approaches to the study of African Americans across several academic disciplines including economics, education, psychology, literature, political science, sociology and others.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AFRO 101 Black America, 1619-Present credit: 3 Hours.

Sociohistorical survey of African American experiences from the West African background to North America, from the 17th century to the present. Same as HIST 174.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 102 Researching the African Am Exp credit: 3 Hours.

Introduction to research and documentation of the African American experience. Approved for both letter and S/U grading.

AFRO 103 Black Women in the Diaspora credit: 3 Hours.

Explores the historical, social, economic, cultural and political realities of black women in the African diaspora with an emphasis on the U.S., Canada, Britain, Africa and the English speaking Caribbean. How macro structures such as slavery, imperialism, colonialism, capitalism, and globalization shaped and continue to circumscribe the lives of black women across various geographic regions. Discussion of the multiple strategies/efforts that black women employ both in the past and present to ensure the survival of the self and the community. Same as AFST 103 and GWS 103.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 105 Black Literature in America credit: 3 Hours.

Survey of the literary work of Black Americans from 1746 to the present. Exploration of the social, cultural, and political contexts that have shaped the Black American literary tradition by analyzing not only poetry, drama, autobiographical narratives, short stories, and novels, but also folktales, spirituals, and contemporary music. Same as ENGL 150.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AFRO 106 Hist Arch Americas credit: 3 Hours.

Same as ANTH 106. See ANTH 106.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 132 African American Music credit: 3 Hours.

Survey of African American music, from its origins to the present with a focus on understanding details of musical performance and the ways in which music interacts with its social and political context. Examines genres such as spirituals, the blues, jazz, R&B, soul, and hip-hop. No previous musical background is necessary.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AFRO 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

AFRO 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AAS 201, LLS 201, and PS 201. See PS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AFRO 211 Intro to African-American Film credit: 3 Hours.

Same as MACS 211. See MACS 211.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 212 Intro African American Theat credit: 3 Hours.

Same as THEA 263. See THEA 263.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AIS 295, GWS 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AFRO 220 Intro to Research Methods AfAm credit: 3 Hours.

Introduction to various methodologies to be employed in the interdisciplinary field of African American/Africana studies. Prerequisite: AFRO 100.

AFRO 221 History of the Prison credit: 3 Hours.

Same as HIST 219 and LA 221. See LA 221.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

AFRO 224 Humanist Persp of Afro-Am Exp credit: 3 Hours.

Presents the Afro-centric world view as it was manifested in traditional African society and in the Afro-American slave community. Shows that this world view merged with European notions of art and humanity, as revealed in modern Afro-American literature, art, and music. Same as CWL 226. Approved for both letter and S/U grading. Prerequisite: AFRO 100 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AFRO 226 Black Women Contemp US Society credit: 3 Hours.

Sociological perspective of the experience of African American women in the contemporary United States. Specifically, an examination of relationships between the economy, state policy, culture, work and motherhood for this demographic group. Same as GWS 226 and SOC 223.

AFRO 227 Studies in Black Television credit: 3 Hours.

Explores topics in black television in order to a) analyze the economic and political factors that lead to successful series; b) historicize black television of the Diaspora, including the U.S., Caribbean, UK, Canada, and Nigeria; c) identify conventions and define a "black aesthetic;" d) determine how black series in one genre (such as sitcoms or dramas) aid in mapping other genres; and e) discuss how these series navigate stereotypes and cultural shifts. Same as MACS 227.

AFRO 228 Hip Hop Music: History and Culture credit: 3 Hours.

A study of hip-hop from its beginnings in the post-industrial South Bronx of the 1970s to the global present. By focusing on the work of specific artists and movements, we will compare and contrast the production and consumption of hip-hop with other forms of popular music (including jazz, rock, disco, and pop). This course shows how musicians and listeners use hip-hop to express ideas about topics such as economics, nationalism, black power, feminism, and violence.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AFRO 231 Lang Diff Dis: American Persp credit: 3 Hours.

Discusses the interaction of culture, ethnicity/race and language among American minorities. Emphasizes language difference theory as related to social and regional dialects and bilingualism/multilingualism. Distinguishes language differences from language disorders through examination of assessment and treatment approaches for different aged populations. Same as SHS 231.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 243 Pan Africanism credit: 3 Hours.

Same as AFST 243, PS 243, and SOC 267. See PS 243.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

AFRO 250 Introduction to Health and Wellness in the Black Community credit: 3 Hours.

An introduction for understanding health-related issues and disparities affecting the African American community. We will explore health status across the lifespan, social and environmental challenges, chronic diseases, lifestyle behaviors, and intervention, research and policy implications. Students will learn how to integrate and situate these complexities in a broader systemic framework and understand how this population exhibits resiliency in the face of these adversities.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AFRO 259 Afro-American Literature I credit: 3 Hours.

Same as CWL 259 and ENGL 259. See ENGL 259.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 260 Afro-American Literature II credit: 3 Hours.

Same as CWL 260 and ENGL 260. See ENGL 260.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AFRO 261 Intro to the African Diaspora credit: 3 Hours.

Introduction to the origin, development, and maturation of the African diaspora in the Americas and the Caribbean, beginning with the transatlantic slave trade and up to the end of the 20th century. Same as ANTH 261.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 272 Minority Images in Amer Film credit: 3 Hours.

Same as ENGL 272. See ENGL 272.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

AFRO 275 Afro-American History to 1877 credit: 3 Hours.

Same as HIST 275. See HIST 275.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 276 Afro-American Hist Since 1877 credit: 3 Hours.

Same as HIST 276. See HIST 276.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 281 Constructing Race in America credit: 3 Hours.

Same as AAS 281, HIST 281, and LLS 281. See HIST 281.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 287 African-American Women credit: 3 Hours.

Same as GWS 287 and HIST 287. See HIST 287.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AFRO 290 Af Am Urban Hist Since 1917 credit: 3 Hours.

Examination of the changing interaction among black urban communities, the broader urban citizenry, municipal government, the local and national urban-industrial economy, and federal policy over time, giving particular attention to discourses about the black "ghetto" as both a physical space and set of social conditions. Same as HIST 284. Prerequisite: AFRO 101, HIST 276, HIST 172, SOC, 225, or PS 201.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 298 Spec Topics African-Am Studies credit: 3 Hours.

Seminar on selected topics with particular emphasis on current research trends. May be repeated to a maximum of 6 hours. Prerequisite: AFRO 100 or AFRO 101, or consent of instructor.

AFRO 310 Race and Cultural Diversity credit: 4 Hours.

Same as AAS 310, EPS 310, and LLS 310. See EPS 310.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - US Minority

AFRO 312 Psychology of Race & Ethnicity credit: 3 Hours.

Same as PSYC 312. See PSYC 312.

AFRO 315 African American Politics credit: 3 Hours.

Same as PS 315. See PS 315.

AFRO 340 Dancing Black Popular Culture credit: 3 Hours.

Same as DANC 340. See DANC 340.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AFRO 341 Gov & Pol in Africa credit: 3 Hours.

Same as PS 341. See PS 341.

AFRO 342 Black Men and Masculinities credit: 3 Hours.

The sociological study of African American men in the contemporary U.S. Specifically, black manhood and masculinities and the experiences of this demographic group as it relates to the economy, state, policy, and institutions such as family, criminal justice system, and education. Same as SOC 325. Prerequisite: Introductory social science course.

AFRO 372 Class Politics & Blk Community credit: 3 Hours.

Exploration of the complex history of class relations among African Americans during the twentieth century, examining both the internal and external shapers of black class stratification. Considers the historical development of contemporary black "underclass", and the parallel expansion of the black middle class today. Same as HIST 384. Prerequisite: AFRO 101, HIST 276, or SOC 225 or consent of instructor. This course satisfies the General Education Criteria for:
Advanced Composition

AFRO 373 AfAm Cultr Politic Mid20C credit: 3 Hours.

Focusing on African American culture and history from World War II until the early 1960's, topics include citizenship, migration, urban life, the African Diaspora, Civil Rights Movement, and art forms. Approved for both letter and S/U grading. Prerequisite: AFRO 100 and AFRO 101, AFRO 261, ENGL 260 or HIST 276.

AFRO 378 Race and Revolutions credit: 3 Hours.

Focus on the relationship between race and slavery during the revolutions in American and Haiti, respectively. We will seek to understand how the themes of slavery, revolution and race affected blacks, whites and indigenous Americans. We will learn about life during the Revolutionary era by reading the biographies, political pamphlets and personal letters of former slaves, Revolutionaries and everyday men and women as well as historical scholarship. Same as HIST 389. Prerequisite: One African American Studies or History course at either the 100- or 200-level or the consent of instructor.

AFRO 380 Black Women Hist & Cultures credit: 3 Hours.

Same as GWS 380. See GWS 380.

AFRO 381 Black Women and Film credit: 3 Hours.

An examination of the contribution of Black women film directors to cinema. The study of documentary, experimental, animated, fictional shorts, and feature films will reveal their unique approach to constructions of the intersection of race and gender. Starting from the 1920's up to the present, the course considers themes, aesthetics, historical contexts, and ideological discourses presented in the films. Same as MACS 381. Prerequisite: College level film course or consent of instructor.

AFRO 382 African Amer Families in Film credit: 3 Hours.

Uses film as case studies to examine the diverse structures, social classes, and internal dynamics among African American families. Critical family processes such as family formation patterns, dating mate selection, parenting, male-female/gender relations, child adolescent, and adult development, family routines and practices, family communication, and family stress and coping will be examined. Also considers how families interact within larger contexts, such as the local neighborhood and key institutions (school, workplace, social service agencies). Films will be supplemented with readings drawn for diverse disciplines (African American Studies, Anthropology, Family Studies, History, Psychology, and Sociology) that allow us to examine key substantive, theoretical, methodological, and policy issues in the study of African American families. Same as HDFS 324.

AFRO 383 Hist of Blk Women's Activism credit: 3 Hours.

Examination of the history of twentieth century black women's activism, specifically concerned with how African American female activists have been critical to building, sustaining and leading black freedom movements. Same as GWS 383 and HIST 383. Prerequisite: AFRO 100 or AFRO 101 or AFRO 103 or consent of instructor.

AFRO 398 Spec Topics Afro-Am Studies credit: 3 Hours.

Advanced seminar on selected topics with particular emphasis on current research trends. May be repeated to a maximum of 6 hours. Prerequisite: Junior status and one of the following: AFRO 224, or HIST 275 or HIST 276, or ENGL 259 or ENGL 260.

AFRO 400 African Diasporic Lit Americas credit: 3 or 4 Hours.

Critical examination of the contributions of writers of African descent from the Caribbean (English, French, Spanish) and the United States. Major works of fiction, poetry, drama and essays from Cuba, Guadeloupe, Guyana, Haiti, St. Lucia, the United States and other countries are analyzed within a post-colonial theoretical framework. Same as CWL 400. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 224 or AFRO 259 or AFRO 260 or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AFRO 407 Slavery & Race in Latin Am credit: 2 to 4 Hours.

Same as HIST 407. See HIST 407.

AFRO 410 Hate Crimes credit: 3 Hours.

Hate crimes represent the manifestation of intergroup bias and aggression. Examples of these crimes will be examined while analyzing longstanding theories in social psychology. Same as PSYC 410. 3 undergraduate hours. 3 graduate hours. Prerequisite: PSYC 201 or consent of instructor.

AFRO 411 African American Psychology credit: 3 or 4 Hours.

Introduction to the research, theories, and paradigms developed to understand the attitudes, behaviors, and psychological and educational realities of African Americans. Same as PSYC 416. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or one psychology course.

AFRO 415 Africana Feminisms credit: 3 or 4 Hours.

Explores readings and research from the perspective of feminists throughout the African diaspora, with a focus on Black feminist thought emanating from the United States. Same as AFST 420 and GWS 415. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 103 and an additional 300 or 400-level African American Studies course or consent of the instructor.

AFRO 421 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as EPS 421, HDFS 424, and SOC 421. See EPS 421.

AFRO 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, GWS 435, LLS 435 and MACS 432. See LLS 435.

AFRO 453 Plantation Soc in Americas credit: 3 or 4 Hours.

Comparative and interdisciplinary approach to study of the development of New World societies with focus on plantation agriculture from the 15th to 19th centuries. Course considers Portuguese, Spanish, British, French, and Dutch colonization. Students will study the relative importance of culture versus economy and demography in determining social structure. Same as HIST 470. 3 undergraduate hours. 4 graduate hours. Prerequisite: A survey course in early United States history and/or western civilization; junior status, or consent of the instructor.

AFRO 460 Slavery in the United States credit: 3 or 4 Hours.

Examination of slavery in the U.S. using primary sources (slave narratives, songs and tales, plantation records, laws and newspapers) from the 18th century through emancipation. Same as HIST 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or AFRO 101 and one 300-level AFRO course.

This course satisfies the General Education Criteria for:
Advanced Composition

AFRO 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AAS 465, GWS 465, and LLS 465. See LLS 465.

AFRO 466 Race, Science, and Medicine credit: 3 or 4 Hours.

Examines the development of race in medical and scientific thought; how public health and medical institutions deploy the concept; and the process by which race emerged as a valid though controversial topic of scientific and biomedical inquiry. Also addressed is the relationship between slavery and nineteenth-century medicine, the birth of the eugenics movement, legacies of medical exploitation and mistrust, trends in genetic medicine, and contemporary disparities in health outcomes and health care delivery. Same as HIST 483. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 or AFRO 101 and one 300-level AFRO course.

AFRO 474 Black Freed Move, 1955-Present credit: 3 or 4 Hours.

Presents the struggle of African Americans for self-definition, self-development, and self-determination from the inception of the civil rights movement to the contemporary period. Same as HIST 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 101, HIST 276, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

AFRO 481 Urban Communities & Public Pol credit: 3 or 4 Hours.

Examination of how public policy has shaped urban communities and the life chances (i.e., the social, economic, mental and physical well-being) of families of color. Emphasizes the theoretical, political, and economic context of public policy making and specifically address urban issues of housing, communities and families, employment, welfare, and poverty. This course will draw on scholarship by sociologists, historians, policy analysts, race theorists, and economists. Same as SOC 472 and UP 481. 3 undergraduate hours. 4 graduate hours.

AFRO 482 Immersion Journalism credit: 3 or 4 Hours.

Same as JOUR 482. See JOUR 482.

AFRO 490 Theory in African American St credit: 3 or 4 Hours.

Introduction to various theories and methodologies rising out of the study of the Black world based on African American intellectual traditions. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 and one additional 400-level AFRO course, or consent of instructor.

AFRO 491 Methodology in African Amer St credit: 3 or 4 Hours.

Introduction to various methodologies to be employed in the interdisciplinary field of African American/Africana studies. Access to personal computer SPSS software is required. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFRO 100 and AFRO 220 and an additional 300 or 400-level African American Studies course or consent of instructor.

AFRO 495 Senior Thesis Seminar credit: 3 Hours.

3 undergraduate hours. No graduate credit. Prerequisite: AFRO 100 and AFRO 220 or AFRO 490.

AFRO 498 Spec Topics African Am Studies credit: 3 or 4 Hours.

Seminar on selected topics with particular emphasis on current research trends. 3 undergraduate hours. 4 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Upper level AFRO course (300 or above) or consent of instructor.

AFRO 500 Core Probs African-Am Studies credit: 4 Hours.

Introduction for grad students to the central concepts, theories, methodologies, and paradigms in Black Studies. Students will also be introduced to the key critical scholars, seminal works and emerging trends in Black Studies. Prerequisite: Graduate standing.

AFRO 501 Problems African American Hist credit: 4 Hours.

Same as HIST 575. See HIST 575.

AFRO 502 Researching Black Families, Communities, and Neighborhoods credit: 4 Hours.

A critical examination of social scientific approaches to the study of black families, communities, and neighborhoods. Students are introduced to the methodological, epistemological, and ethical challenges of conducting research on this population. The class will be a learning community working together through the research process from the development of a research problem to the dissemination of results. 4 graduate hours. No professional credit. Prerequisite: Graduate standing.

AFRO 503 Social Mvmts & Knowledge Prod credit: 4 Hours.

Analysis of the literature of Black and Latino radical social movements of the 1960s, and the history of anti-racists campaigns to transform the key social and political institutions, including the university. The use of Black and Latino research and scholarship to reconfigure history of racialized communities. The relationship between university sanctioned knowledge and community empowerment. Prerequisite: Graduate standing.

AFRO 504 Black Women's Studies credit: 4 Hours.

The study of black women and gender within critical discourses of history, the social sciences, and the humanities. Students are introduced to interdisciplinary and Black Women's Studies paradigms as means to study and understand the experiences of black women in the U.S. and other racialized women's groups.

AFRO 505 Proseminar I credit: 1 Hour.

Provides PhD students in African American Studies a review of the responsibilities of professional African American Studies scholars. This part introduces students to current debates and issues in the discipline, program requirements and expectations. Approved for S/U grading only. Prerequisite: Doctoral students in African American Studies only.

AFRO 506 Proseminar II credit: 1 Hour.

The second of three proseminars for PhD students in African American Studies. Provides students with a review of the responsibilities of professional African American Studies scholars and emphasizes processes of Master Paper development, writing, and conference presentations. Approved for S/U grading only. Prerequisite: AFRO 505 or consent of advisor and instructor.

AFRO 507 Proseminar III credit: 1 Hour.

The final of three proseminars for PhD students in African American Studies. Provides students with a review of the responsibilities of professional African American Studies scholars and emphasizes issue of pedagogy, research, and publication in the discipline of African American Studies. Approved for S/U grading only. Prerequisite: AFRO 506 or consent of advisor and instructor.

AFRO 508 Dissertation Design Practicum credit: 1 Hour.

Facilitate the development of dissertation proposals for PhD students in African American Studies. Approved for S/U grading only. Prerequisite: Completion of African American Studies PhD course work and Proseminar Series.

AFRO 531 Race and Cultural Critique credit: 4 Hours.

Same as AAS 561, ANTH 565, GWS 561, and LLS 561. See AAS 561.

AFRO 550 Blk Community & Class Politics credit: 4 Hours.

Exploration of the complex history of class relations within African American urban communities during the "long" twentieth century, and the relationship of these internal dynamics to external structures of racial control. Examination of the multiple processes through which both the urban black working class and a middle class formed, and were transformed, over time.

AFRO 552 Ethnography Urban Communities credit: 4 Hours.

Addresses substantive, theoretical, methodological, and policy issues within the field of urban community studies. Focusing primarily on African American urban communities, with comparisons to other racial-ethnic group communities (e.g. Euro-American, Latino, immigrant), ethnographic case studies are used to explore community processes (formation, ghettoization, gentrification, transnationalism), their relationship to historical, economic, social, and political factors, and how these processes are influenced by ethnicity, class, gender and developmental cycle. Attention will also be given to how empirical studies can be used to inform public policies affecting urban communities. Interdisciplinary readings draw primarily from anthropology, education, and sociology. Same as HDF5 543, SOC 578, and UP 578. 4 graduate hours. No professional credit.

AFRO 560 African Diaspora Seminar credit: 4 Hours.

Study of the key political, social, economic and cultural developments of the African Diaspora in Asia, Europe and the Americas. Using an interdisciplinary framework, students will examine recent scholarship in history, women's studies, political science, sociology and anthropology to understand the experiences and challenges faced by people of African descent. Same as AFST 560.

AFRO 562 Archaeology and Racialization credit: 4 Hours.

Same as ANTH 562. See ANTH 562.

AFRO 595 Directed Independent Readings credit: 1 to 4 Hours.

Primarily but not exclusively for students who are completing a minor or concentration in African American Studies. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Consent of instructor.

AFRO 597 Problems in African-Am Studies credit: 4 Hours.

Focused reading and study of special problems in African American Studies. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing, AFRO 500 or equivalent, or consent of instructor.

AFRO 598 Res Sem in African-Am Studies credit: 4 Hours.

Graduate seminar on special topics based on current research trends. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing, AFRO 500 or equivalent, or consent of instructor.

AFRO 599 Thesis Research credit: 0 to 16 Hours.

Individual direction in research and guidance in writing theses and dissertations for advanced degrees. Approved for S/U grading only. May be repeated in separate terms.

African Studies (AFST)

AFST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AFST>)

Courses

AFST 103 Black Women in the Diaspora credit: 3 Hours.

Same as AFRO 103 and GWS 103. See AFRO 103.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AFST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

AFST 201 Elementary Bamana I credit: 5 Hours.

Same as BMNA 201. See BMNA 201.

AFST 202 Elementary Bamana II credit: 5 Hours.

Same as BMNA 202. See BMNA 202.

AFST 209 Constr Afr and Carib Identity credit: 3 Hours.

Same as CWL 225, FR 240, and LAST 240. See FR 240.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 210 Intro to Mod African Lit credit: 3 Hours.

Significant contemporary African writings depicting the history and cultural traditions of African peoples. Same as CWL 210 and ENGL 211.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

AFST 211 Elementary Lingala I credit: 5 Hours.

Same as LGLA 201. See LGLA 201.

AFST 212 Elementary Lingala II credit: 5 Hours.

Same as LGLA 202. See LGLA 202.

AFST 213 African Muslim Cultures credit: 3 Hours.

Same as HIST 213 and REL 215. See HIST 213.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

AFST 222 Introduction to Modern Africa credit: 3 Hours.

Interdisciplinary introduction to Africa dealing with basic themes and problems in the politics, economics, sociology, anthropology, and history of Africa. Same as ANTH 222, PS 242, and SOC 222.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 231 Elementary Swahili I credit: 5 Hours.

Same as SWAH 201. See SWAH 201.

AFST 232 Elementary Swahili II credit: 5 Hours.

Same as SWAH 202. See SWAH 202.

AFST 241 Elementary Wolof I credit: 5 Hours.

Same as WLOF 201. See WLOF 201.

AFST 242 Elementary Wolof II credit: 5 Hours.

Same as WLOF 202. See WLOF 202.

AFST 243 Pan Africanism credit: 3 Hours.

Same as AFRO 243, PS 243, and SOC 267. See PS 243.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

AFST 251 Elementary Zulu I credit: 5 Hours.

Same as ZULU 201. See ZULU 201.

AFST 252 Elementary Zulu II credit: 5 Hours.

Same as ZULU 202. See ZULU 202.

AFST 254 Economic Systems in Africa credit: 3 Hours.

Same as ACE 254. See ACE 254.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

AFST 266 African Film and Society credit: 3 Hours.

Same as ANTH 266. See ANTH 266.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

AFST 267 Memoirs of Africa credit: 3 Hours.

Same as ANTH 267. See ANTH 267.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - Non-West

AFST 312 Central African Art credit: 3 Hours.

Same as ARTH 312. See ARTH 312.

AFST 313 Modern and Contemp African Art credit: 3 Hours.

Same as ARTH 313. See ARTH 313.

AFST 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, ASST 325, EURO 325, INFO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

AFST 403 Intermediate Bamana I credit: 4 Hours.

Same as BMNA 403. See BMNA 403.

AFST 404 Intermediate Bamana II credit: 4 Hours.

Same as BMNA 404. See BMNA 404.

AFST 405 Topics Swahili Lang & Lit I credit: 3 Hours.

Same as SWAH 407. See SWAH 407.

AFST 406 Topics Swahili Lang & Lit II credit: 3 Hours.

Same as SWAH 408. See SWAH 408.

AFST 407 Adv Topics Swahili Lang&Lit I credit: 3 or 4 Hours.

Same as SWAH 409. See SWAH 409.

AFST 408 Adv Topics Swahili Lang&Lit II credit: 3 or 4 Hours.

Same as SWAH 410. See SWAH 410.

AFST 410 Modern African Fiction credit: 3 or 4 Hours.

Examines selected major African novels along thematic and formal lines; literary responses to colonialism and political independence and the crises that accompanied both in Africa; and study of critical approaches to the African novel and African characteristics of and contribution to the novel as a genre. Readings in English. Same as CWL 410, ENGL 470, and FR 410. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFST 210 or AFST 222, or junior standing.

AFST 412 Lang in African Culture & Soc credit: 3 or 4 Hours.

Same as LING 412. See LING 412.

AFST 413 Intermediate Lingala I credit: 4 Hours.

Same as LGLA 403. See LGLA 403.

AFST 414 Intermediate Lingala II credit: 4 Hours.

Same as LGLA 404. See LGLA 404.

AFST 415 Advanced Lingala I credit: 3 Hours.

Same as LGLA 405. See LGLA 405.

AFST 416 Advanced Lingala II credit: 3 Hours.

Same as LGLA 406. See LGLA 406.

AFST 417 Topics Lingala Lang & Lit I credit: 3 Hours.

Same as LGLA 407. See LGLA 407.

AFST 418 Topics Lingala Lang & Lit II credit: 3 Hours.

Same as LGLA 408. See LGLA 408.

AFST 420 Africana Feminisms credit: 3 or 4 Hours.

Same as AFRO 415 and GWS 415. See AFRO 415.

AFST 421 Sacred African Diaspora Arts credit: 3 or 4 Hours.

Same as ARTH 413. See ARTH 413.

AFST 425 Southern Africa Race & Power credit: 3 or 4 Hours.

Same as HIST 412. See HIST 412.

AFST 431 Advanced Bamana I credit: 3 Hours.

Same as BMNA 405. See BMNA 405.

AFST 432 Advanced Bamana II credit: 3 Hours.

Same as BMNA 406. See BMNA 406.

AFST 433 Intermediate Swahili I credit: 4 Hours.

Same as SWAH 403. See SWAH 403.

AFST 434 Intermediate Swahili II credit: 4 Hours.

Same as SWAH 404. See SWAH 404.

AFST 435 Advanced Swahili I credit: 3 Hours.

Same as SWAH 405. See SWAH 405.

AFST 436 Advanced Swahili II credit: 3 Hours.

Same as SWAH 406. See SWAH 406.

AFST 437 Egypt Since World War I credit: 2 to 4 Hours.

Same as HIST 438. See HIST 438.

AFST 443 Intermediate Wolof I credit: 4 Hours.

Same as WLOF 403. See WLOF 403.

AFST 444 Intermediate Wolof II credit: 4 Hours.

Same as WLOF 404. See WLOF 404.

AFST 445 Advanced Wolof I credit: 3 Hours.

Same as WLOF 405. See WLOF 405.

AFST 446 Advanced Wolof II credit: 3 Hours.

Same as WLOF 406. See WLOF 406.

AFST 447 Topics Wolof Lang & Lit I credit: 3 Hours.

Same as WLOF 407. See WLOF 407.

AFST 448 Topics Wolof Lang & Lit II credit: 3 Hours.

Same as WLOF 408. See WLOF 408.

AFST 451 Intermediate Zulu I credit: 4 Hours.

Same as ZULU 403. See ZULU 403.

AFST 452 Intermediate Zulu II credit: 4 Hours.

Same as ZULU 404. See ZULU 404.

AFST 453 Advanced Zulu I credit: 3 Hours.

Same as ZULU 405. See ZULU 405.

AFST 454 Advanced Zulu II credit: 3 Hours.

Same as ZULU 406. See ZULU 406.

AFST 467 Kinship-Culture-Power-Africa credit: 2 or 4 Hours.

Same as ANTH 469. See ANTH 469.

AFST 468 Religions of Africa credit: 3 or 4 Hours.

Same as ANTH 468 and REL 468. See ANTH 468.

AFST 469 Structure of Semitic Languages credit: 3 or 4 Hours.

Same as LING 469. See LING 469.

AFST 478 African Immigrants in Europe credit: 3 or 4 Hours.

Same as ANTH 478 and EURO 478. See ANTH 478.

AFST 484 African Urbanization credit: 3 or 4 Hours.

Same as SOC 484. See SOC 484.

AFST 490 Independent Study credit: 1 to 4 Hours.

Supervised readings and research in selected fields in consultation with the instructor. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms up to 9 undergraduate hours or 12 graduate hours, if topics vary. Prerequisite: Consent of the Center for African Studies.

AFST 509 Seminar in African Art credit: 4 Hours.

Same as ARTH 510. See ARTH 510.

AFST 510 Problems in African History credit: 4 Hours.

Same as HIST 510. See HIST 510.

AFST 511 Seminar in African History credit: 4 Hours.

Same as HIST 511. See HIST 511.

AFST 515 Practicum in African Studies credit: 2 Hours.

A supervised practicum that emphasizes participation in the Center's educational activities and includes organizing conferences and outreach to K-12 educators, the media, and the community. Approved for S/U grading only. Prerequisite: Enrollment in graduate African Studies program or related Ph.D. programs, or consent of instructor.

AFST 522 Development of African Studies credit: 4 Hours.

Examines the development of Africanist scholarship during the 20th century and the changing paradigms in African Studies; focuses on the rise of the area studies model and its influences on the major Social Science and Humanities disciplines. Prerequisite: Graduate student status and approval of instructor.

AFST 550 Special Topics credit: 2 or 4 Hours.

Topics vary with the disciplinary focus. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

AFST 555 Mult Educ/Global Perspectives credit: 4 Hours.

Same as CI 512. See CI 512.

AFST 560 African Diaspora Seminar credit: 4 Hours.

Same as AFRO 560. See AFRO 560.

AFST 599 Thesis Research credit: 0 to 8 Hours.

Individual direction in research and guidance in writing theses for advanced degrees. Approved for S/U grading only. May be repeated to a maximum of 8 hours.

Agr & Consumer Economics (ACE)

ACE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ACE>)

Courses

ACE 100 Agr Cons and Resource Econ credit: 4 Hours.

Principles of microeconomics; demand, production, supply, elasticity, markets, and trade are presented and used in the analysis of decisions of individuals relating to agricultural production, food and textile consumption, and natural resource use. Macroeconomic concepts are also introduced. Credit is not given for ACE 100 if credit for ECON 102 has been earned.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ACE 161 Microcomputer Applications credit: 3 Hours.

Instruction and practice in solving data-related problems with microcomputers and general purpose software packages.

ACE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in agricultural and consumer economics. Topic may not be repeated except in accordance with the Code. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated up to 5 hours in a semester, to a maximum of 12 hours.

ACE 210 Environmental Economics credit: 3 Hours.

Economic issues surrounding environmental quality, including: costs and benefits of environmental protection; economics of environmental policies (such as those dealing with toxics, water, and air pollution, and municipal solid waste); and economics of international environmental problems (such as ozone depletion and climate change). Same as ECON 210, ENVS 210, NRES 210, and UP 210.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ACE 222 Agricultural Marketing credit: 3 Hours.

Examines factors affecting the size of the market for agricultural products and the scope of marketing activities; functions and services performed; pricing agricultural products, including the nature and causes of price fluctuations; and costs of marketing and efforts to reduce costs and improve the marketing system. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

ACE 231 Food and Agribusiness Mgt credit: 3 Hours.

Overview of management in the food and agribusiness sector. Major topics covered include: introduction to the food and agribusiness sector; the environment of the firm; fundamentals, structural design, and change in organizations; leadership, motivation, communication; and planning and control. Coverage is at the introductory level with a focus on textbook material and current issues. Prerequisite: Sophomore standing and ACE 100 or ECON 102.

ACE 232 Management of Farm Enterprises credit: 3 or 4 Hours.

Economic principles are applied to the management of farms using budgeting system analysis, record analysis, financial management, and lease analysis. Problems related to resource appraisal and business organization are also addressed. Three hours credit without home farm problem, or four hours credit with home farm problem. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

ACE 240 Personal Financial Planning credit: 3 Hours.

Examines principles of financial planning applied to individuals and households, with attention to organizing and analyzing financial information, budgeting, acquiring financial assets, managing credit, planning for taxes, investments, risk management, retirement, and estate planning. Prerequisite: Sophomore standing or consent of instructor.

ACE 251 The World Food Economy credit: 3 Hours.

Examination of global food production, consumption, and trade; problems of hunger and population; the role of agricultural development, trade, and aid in relieving hunger. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ACE 254 Economic Systems in Africa credit: 3 Hours.

Examines systems of production and exchange in Africa. Through lectures, discussions, readings and films participants will study the ways African people interact in local markets and the impact of national and international markets on their welfare. Same as AFST 254.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ACE 255 Econ of US Rural Poverty & Dev credit: 3 Hours.

Examination of rural poverty and development issues in the United States, with particular attention to current anti-poverty policies and programs and alternative programs. Topics include measurement of poverty; causes of rural poverty; income maintenance, education, and employment policies and their consequences; and rural development strategies. Prerequisite: ACE 100 or ECON 102 or consent of instructor.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ACE 261 Applied Statistical Methods credit: 4 Hours.

Statistical methods and computer applications for agricultural and consumer economics, including descriptive statistics, probability distribution, interval estimation, hypothesis testing, analysis of variance, simple and multiple regression, and non-parametric methods. Credit is not given for ACE 261 if credit for any of ECON 202, CPSC 440, STAT 100, or equivalent has been earned. Prerequisite: MATH 124 or MATH 125.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

ACE 270 Consumer Economics credit: 3 Hours.

Introduction to the study of the consumer in the American economy; sources of consumer information and consumer protection; and examination of current consumer issues within an economic framework. Prerequisite: Sophomore standing or consent of instructor.

ACE 291 Ag Policy & Leadership credit: 3 Hours.

Current policy issues affecting agriculture and the legislative and rulemaking process that determines those policies will be studied. A trip to Washington, DC during spring break will give the students an opportunity to interact with legislators, federal agencies, organization leaders and representatives of the national and international agricultural policy community to better understand the policy making process and the issues moving through it. Student participation will focus on developing leadership skills and having an opportunity to meet with leaders who are actively engaged in creating and changing public policy. Additional fees may apply. See Class Schedule. Prerequisite: Junior or Senior standing required or the approval of the instructor.

ACE 292 Farm, Food & Environmental Policy credit: 3 Hours.

This course seeks to broaden students' understanding of the breadth and complexity of agriculture in the United States and the challenges and opportunities to be found in the U.S. food and agricultural system. It includes a week-long trip to an area outside of Illinois (such as California) during spring break where students will meet with farm, food and environmental leaders who are deeply involved in driving the issues shaping farm, food, and environmental policy. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore, Junior or Senior standing required AND approval of the instructor.

ACE 293 Off-Campus Internship credit: 1 to 4 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in agricultural and consumer economics. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated up to 4 hours in a semester, to a maximum of 10 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the internship is arranged, and consent of instructor.

ACE 294 On-Campus Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated up to 4 hours in a semester, to a maximum of 10 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the internship is arranged, and consent of instructor.

ACE 295 Independent Study credit: 1 to 4 Hours.

Individual or small group research, special problems, or other studies under the supervision of an appropriate member of the faculty. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms as topics vary. May be repeated up to 4 hours in a semester, but no more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

ACE 306 Food Law credit: 3 Hours.

Explores the legal and political dimensions of food law, policy and trade in the United States and major trading partners. Examines the development of major national and state laws that apply to production, distribution and retail sale of food. Evaluates current issues in food regulation, including: biotechnology, organics, health labeling claims, food safety and products liability litigation. Discusses food regulation in other countries within the context of international treaties such as the World Trade Organization and United Nations.

ACE 310 Natural Resource Economics credit: 3 Hours.

Economic principles are used to analyze a broad range of natural resource policy and management issues. Economic concepts developed include public goods, social welfare, discounting, dynamic efficiency, and resource scarcity. Natural resources examined include biodiversity, fisheries, forests, minerals, soil, and water resources. Same as ENVS 310 and NRES 310. Prerequisite: ACE 100 or ECON 102.

ACE 321 Principles of Public Policy credit: 3 Hours.

Same as ACCY 321, BADM 303, and PS 321. See PS 321.

ACE 335 Food Marketing and Behavior credit: 3 Hours.

This course will explore the food choices consumers make and what this means in the food and agribusiness industries. Students will also learn how to conduct basic research related to consumer behavior, including developing a research question, designing high quality surveys/experiments, and analyzing data.

ACE 341 Issues&Careers in Applied Econ credit: 1 or 2 Hours.

Students study contemporary issues and career opportunities associated with various concentrations in the Department of Agricultural and Consumer Economics. An in-depth dialogue with industry professionals helps develop an understanding of the skill sets needed to succeed in each of the different career paths discussed. May not be repeated for credit.

ACE 345 Finan Decision Indiv Sm Bus credit: 3 Hours.

Introduction to financial decision-making for small businesses and individuals. Examines financial statement preparation and analysis; capital structure (use of debt and equity); investment analysis and portfolio theory; time value of money; interest rates and term structure; asset markets (pricing theories); evaluation of financial risk and insurance concepts, and an introduction to credit markets and financial capital suppliers. In addition, there is a class project involving a visit to either a lender or a financial planner/advisor, and other experiences to introduce students to services and careers in financial sectors. Prerequisite: ACCY 201 or equivalent, or consent of instructor.

ACE 346 Tax Policy and Finan Planning credit: 3 Hours.

Explores the federal tax system, including income, social security, Medicare, and estate taxes, and state and local tax systems. Students learn basic tax principles, public policy issues embedded in the tax systems, and how tax law influences financial plans and decisions. Helps students make wiser financial decisions through increased understanding of the tax impacts of those decisions, participate knowledgeably in public debates surrounding tax policy, and prepare for careers as financial planners. Prerequisite: Sophomore standing.

ACE 360 Spreadsheet Models & Applic credit: 2 Hours.

Spreadsheet development and modeling skills intended for economics and finance applications. Advanced uses of spreadsheet software, development of user-defined functions, use of Visual Basic and comparable external interface languages, data query designs, and advanced data analyses, summary and presentation skills are stressed. Intended to serve as a prerequisite for advanced modeling courses in specific disciplinary areas. Prerequisite: ACE 100 or equivalent, ACE 161 or CS 105, and completion of ACE 261 or ECON 203 or equivalent.

ACE 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms as topics vary. May be repeated up to 4 hours in a semester, but no more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

ACE 398 Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in agricultural and consumer economics. Approved for both letter and S/U grading. May be repeated to 3 hours in a semester, up to a maximum of 12 total hours. Prerequisite: Junior standing and consent of instructor.

ACE 403 Agricultural Law credit: 3 to 4 Hours.

Relation of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing.

ACE 406 Environmental Law credit: 3 to 4 Hours.

Examination of environmental law issues. Topics include common-law pollution control; role of administrative agencies and courts; federal and state power; air and water pollution; regulation of toxic substances; protection of land, soil and other natural resources. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 403, or BADM 300, or BADM 301 recommended.

ACE 410 Energy Economics credit: 3 or 4 Hours.

Use of economics tools to understand and evaluate public policy issues surrounding energy markets and related environmental markets. Focus is on the economic drivers of energy production and use, biofuel policy, transportation and storage of energy commodities, regulation of energy markets, and policies designed to mitigate the impact of energy production and consumption on the environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ACE 411 Environment and Development credit: 3 to 4 Hours.

Relationship between economic development and environmental sustainability through application of cost-benefit analysis and environmental economics. Developing and developed country issues are considered with an emphasis on hands-on applications of project appraisal, social benefit-cost analysis, green accounting, and non-market valuation. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ACE 427 Commodity Price Analysis credit: 3 Hours.

A comprehensive and in-depth survey of commodity price analysis with emphasis on the fundamental factors affecting prices of agricultural products; sources of information relating to production and demand factors; government activities as they relate to prices of agricultural products; technical analysis of agricultural product prices; and market efficiency and forecasting. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 100 or ECON 102; ACE 261, or equivalent.

ACE 428 Commodity Futures and Options credit: 3 Hours.

Development of futures trading; operation and governance of commodity exchanges; economic functions of futures trading; operational procedures and problems in using futures markets; public regulation of futures trading; evaluation of market performance. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 222 or FIN 300 or equivalent.

ACE 430 Food Marketing credit: 3 Hours.

Performance of the food system; marketing margins; transportation, advertising, and retailing of food products; structure, conduct, and performance of food marketing firms and industries; government and public interest in the food system. Same as FSHN 425. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 100 or ECON 102, ACE 222 recommended.

ACE 431 Agri-food Strategic Management credit: 3 Hours.

Process of strategic decision-making in food and agribusiness firms; methods for analysis of business and regulatory environment; organizational issues in strategy choice for firms and supply chains. Same as BADM 438. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 231, BADM 320, or ACE 222; or consent of instructor.

ACE 432 Farm Management credit: 3 or 4 Hours.

Students develop expertise in evaluating and making decisions similar to those faced by farm operators and managers. 3 undergraduate hours. 4 graduate hours. Prerequisite: ACE 232; credit or concurrent registration in ACE 360 or equivalent.

ACE 435 Global Agribusiness Management credit: 3 Hours.

Examination of the economic and strategic management of food, textile, and agribusiness firms within a global business environment; topics include the global business environment and its institutions, organizational strategies and policies, and business operations in global agricultural, food and textile industries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ACE 231, ACE 222, or BADM 320 or consent of instructor.

ACE 436 Intl Business Immersion credit: 4 Hours.

Provides participants an in-depth, experiential immersion into the complex issues and constraints that confront international marketing channel participants. Contextually grounded and themed in a specific industry, the course combines on-campus lectures with an intensive international immersion experience to Europe, Asia, or Latin America. By following the complete marketing channel from raw materials procurement to final consumption, participants gain first-hand knowledge of the necessary managerial decision-making skills required to successfully operate in today's global business environment. Same as BADM 436. 4 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 undergraduate and/or 8 graduate hours. Prerequisite: Consent of instructor.

ACE 440 Finan Plan for Professionals credit: 3 or 4 Hours.

Capstone course applies financial planning principles and concepts in realistic case studies of specific planning needs, requires a comprehensive financial planning exercise, and covers professional ethics and responsibilities. 3 undergraduate hours. 4 graduate hours. Prerequisite: Concurrent enrollment in or completion of ACE 345, ACE 346, ACE 444, and ACE 449.

ACE 444 Finan Serv & Invest Plan credit: 3 or 4 Hours.

Advanced skills in and understanding of asset pricing, equity and debt investment, portfolio theory and diversification, asset allocation, financial risk management, and financial intermediation and regulation emphasizing applications in financial planning and agricultural finance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 240, ACE 345, or FIN 221, and ECON 302 or consent of instructor.

ACE 445 Intermediate Personal Fin Plan credit: 4 Hours.

Financial planning philosophies, techniques, and procedures. Course uses case studies and problem-solving activities to construct financial plans for individuals and families in various life cycle stages and family structures. 4 undergraduate hours. 4 graduate hours. Prerequisite: ACE 240, ECON 302, and junior standing or consent of instructor; FIN 230 is recommended.

ACE 446 Modeling App's Finan Plan credit: 2 Hours.

Improves ability to make effective financial plans and decisions. Involves development of decision tools that are applied to "real world" financial data sets and planning/decision-making circumstances. Topics include applied data management techniques (designing queries/storable forms), financial statement analysis, numeric optimization tools, leverage assessment, incorporating risk in decisions, capital budgeting and time value of money, term structure of interest rates, and currency exchange. 2 undergraduate hours. 2 graduate hours. Prerequisite: One of ACE 240, ACE 345, FIN 221; or consent of instructor and advanced knowledge of spreadsheet software equivalent to the coverage of ACE 360.

ACE 447 Case Stud Agr Accy & Fin Plan credit: 3 Hours.

Capstone course for agricultural accounting, agricultural finance, and financial planning; applies business and planning concepts and tools to real-world situations; emphasizes group decision making; industry professions participate in the learning experience. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of ACCY 301, ACE 444, FIN 300; or consent of instructor.

ACE 448 Rural Real Estate Appraisal credit: 3 or 4 Hours.

Valuation methods and value bases of rural real estate; legal aspects of property rights, appraisal theory and procedures, condemnation appraisal, characteristics of the rural land market, soil identification and productivity, and other legal, economic, agronomic, and engineering aspects of real estate valuation. Laboratory field trips, including a practice appraisal; see Class Schedule for approximate cost. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ACE 232 or ACE 360; NRES 201.

ACE 449 Retirement & Benefit Planning credit: 3 or 4 Hours.

Employee benefit and retirement planning, including employer-sponsored or individually managed options, with particular attention to determining benefit and retirement needs and managing risks in specific planning situations. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both ACE 449 and FIN 434. Prerequisite: ACE 240, ACE 345, and ECON 302 or consent of instructor.

ACE 451 Agriculture in Intl Dev credit: 3 to 4 Hours.

Economics of agricultural development and the relationships between agriculture and other sectors of the economy in developing nations; agricultural productivity and levels of living in the less developed areas of the world; and studies of agricultural development in different world regions including Africa, Asia, and Latin America. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 452 The Latin American Economies credit: 2 to 4 Hours.

Same as ECON 452. See ECON 452.

ACE 454 Econ Dev of Tropical Africa credit: 2 to 4 Hours.

Types of African economies and growth of the exchange economy; development of natural resources, industry, trade, finance, and education; analysis of economic integration, governmental planning, and development projects; and demographic, land tenure, and institutional influences on development. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 455 Intl Trade in Food and Agr credit: 3 Hours.

Economic theory used to analyze trends and patterns of international trade in major agricultural commodities and to understand interaction between economic development, policy, and trade; welfare implications of policies affecting production, consumption, and trade; implications of protectionism, free trade, regional trade blocs, and multilateral trade liberalization, and the role for international trade institutions. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 456 Agr and Food Policies credit: 3 to 4 Hours.

Analysis of agricultural and food policies and programs and their effects on producers and consumers of agricultural products. Formulation of agricultural and food policies are examined with an emphasis on historical and current economic problems affecting agriculture and rural America. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ACE 471 Consumer Economic Policy credit: 3 Hours.

Analysis of choice-making, buying, using, and disposing of consumer goods by families, social policy Perspectives considered. 3 undergraduate hours. No graduate credit. Prerequisite: ACE 100 or equivalent and junior standing.

ACE 474 Econ of Consumption credit: 3 to 4 Hours.

Concepts, theories, and methods for analysis of the micro and macro aspects of consumption; includes standards and content of consumption and description of consumption patterns and trends in the USA and selected other countries. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor; a course in statistics; junior standing.

ACE 476 Family Economics credit: 2 to 4 Hours.

Economic welfare of American families, application of economic theory to the behavior of families and individuals with respect to time allocation between the home and the market; family forms; human capital accumulation; gender differences in income; income inequality; and poverty. Role of public policy is considered. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: ECON 302 or consent of instructor; a course in statistics; senior standing.

ACE 496 Practicum credit: 4 to 12 Hours.

Cooperatively supervised field experience in management and administration in a textile marketing business. Only four hours may be applied to the total required for a graduate degree. At the undergraduate level, up to four hours may be counted toward the hours required in Agricultural and Consumer Economics. 4 to 12 undergraduate hours. 4 to 12 graduate hours. Approved for both letter and S/U grading. Prerequisite: Consent of instructor. Not available to students on probation.

ACE 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in agricultural and consumer economics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated in the same semester to 4 hours, or subsequent terms to a maximum of 12 hours as topics vary.

ACE 500 Applied Economic Theory credit: 4 Hours.

Provides an understanding of theory of the firm, consumer economics and various market models necessary to conduct applied professional economic research with special emphasis on applications relevant to agricultural, consumer, development, and resource economics. Multivariate calculus and optimization methods are used.

ACE 501 Risk and Info: Theory and App credit: 4 Hours.

Applications of the theory of economic behavior under uncertainty and asymmetric information. Analysis of individual decision making under uncertainty includes: tests of the expected utility hypothesis; comparative statistics of changes in risk preferences and risk; and moment based models of decision making. Analysis of economic equilibrium under uncertainty and asymmetric information includes tests for complete markets and applications of noncooperative game theory. Prerequisite: Concurrent enrollment in ECON 500 and ECON 506.

ACE 502 Demand/Supply/Firms/Households credit: 4 Hours.

Applications of demand and supply theories and applications of firm and household behavior. Topics include demand and supply systems, aggregation and separability, dynamics, formation and boundaries of the firm, household decision making, intrahousehold allocation, allocation of time, human capital, and hedonics. Same as ECON 553. Prerequisite: ECON 500 and ACE 501.

ACE 503 Equilibrium and Welfare Econ credit: 4 Hours.

Provides a theoretical and applied treatment of economic equilibrium and the consequences of displacement of equilibrium for the welfare levels of economic agents. Displacement of equilibrium will be shown to be brought about by changes in government policy, technology, and consumer preferences. Welfare measures under partial equilibrium, general equilibrium, and multi-market models will be presented. Includes various applications of welfare economics in the analysis of policy and technological change. Prerequisite: ECON 500 and at least two semesters of college calculus.

ACE 510 Adv Natural Resource Economics credit: 4 Hours.

Economic theory is used to examine the allocation of renewable and efficiency issues that arise from natural resource policy and management issues. Same as ECON 548, ENVS 510, and NRES 510. Prerequisite: ECON 302 or equivalent.

ACE 516 Environmental Economics credit: 4 Hours.

Same as ECON 549. See ECON 549.

ACE 520 Food Commodity Markets credit: 4 Hours.

Examination of selected economic problems in marketing agricultural products and relevant theory and empirical methods for analyzing and interpreting research results. Topics include: operational efficiency in marketing firms and industries; efficient allocation over space, form, and time; price making institutions; and research in demand stimulation and selected issues in trade. Prerequisite: ACE 562 and ACE 563, and ECON 500; or equivalent.

ACE 527 Advanced Price Analysis credit: 4 Hours.

Study of methods used to analyze factors affecting agricultural prices; analysis of agricultural prices and price movements with respect to time, space, and form; and examination of methods of price forecasting and techniques of time series analysis. Prerequisite: ACE 562 or ECON 507 and ECON 500; or equivalent.

ACE 528 Research in Futures Markets credit: 4 Hours.

Research literature on commodity futures and options markets, both theoretical and empirical; topics include: supply of storage, basis models, theory of the firm and hedging under uncertainty, optimal hedging, speculative returns, market performance, pricing efficiency and option pricing. Prerequisite: ECON 500 or equivalent.

ACE 530 Microeconometrics credit: 4 Hours.

Applied micro-econometrics concentrating on cross section data, panel data, and treatment effects. Includes methods for estimating treatment effects in the Rubin causal model framework. Emphasis will be placed on econometric procedures relevant for agricultural and applied economists and their implementation in Stata, including Mata. Prerequisite: ECON 506 and ECON 507, or equivalent.

ACE 531 Impact Evaluation credit: 2 Hours.

The problem of identification. Methods for impact evaluation, including randomized field experiments, propensity score matching, differences in differences, instrumental variables, and regression discontinuity. Includes exercises using the econometric software program STATA. Prerequisite: ACE 500 or ECON 500 or equivalent.

ACE 532 Spatial Econometrics credit: 4 Hours.

This course provides the statistical and econometric techniques required for spatial analysis and appropriate modeling of cross-sectional (and panel) datasets. While spatial statistics allow the students to identify the two spatial effects commonly found in geocoded samples (spatial autocorrelation and spatial heterogeneity), spatial econometrics is especially geared towards including these effects in a regression model. An important aspect of the course is to gain hands-on experience in applying the appropriate techniques and using state-of-the-art software (such as the spatial econometric toolboxes available in R). 4 graduate hours. No professional credit. Prerequisite: ACE 562, ACE 564, ECON 535, or the equivalent. Graduate students only.

ACE 542 Advanced Agricultural Finance credit: 4 Hours.

Theory of financial decision making as applied to farms and firms related to agriculture. Topics include asset pricing models, financial markets, capital structure, farmland control, term structure of interest rates, risk management and credit evaluation. Prerequisite: ECON 500, calculus, and mathematical statistics, or equivalent; at least one course in finance strongly recommended; or consent of instructor.

ACE 552 Regional Development Theory credit: 4 Hours.

Same as UP 552. See UP 552.

ACE 555 Economic Impact Analysis credit: 2 Hours.

Examines the theories and limitations of input-output models, sources and weaknesses of the data, and validity of selected impact studies by researchers in universities, government, and the private sector. Combining economic theory, county-level data, and state-of-the-art software, students build an input-output model and carry out a professional impact study. Students pick their topics and regions, think through the economics of a scenario, figure out how to make the scenario mesh with the peculiar economic logic of the input-output model, and complete a regional impact study with a sound knowledge of the inherent theoretical and data issues. Same as UP 555.

ACE 556 Agr Policy and Political Econ credit: 4 Hours.

Economic theory is used to study both the effects and the causes of public policies that influence agricultural industries, consumers, and taxpayers. Neoclassical models of government intervention are used to study the welfare effects of income redistribution and stabilization policies and macroeconomic policies as they affect agriculture. Formal models of political economy and public choice are used to analyze the underlying causes of public policy. Emphasis is placed on the political power of interest groups as an explanation of public policy decisions. Prerequisite: ECON 500 or equivalent and ACE 502 and ACE 503.

ACE 557 Food, Poverty and Development credit: 2 Hours.

Economic theory and empirical analyses are used to study economic development, emphasizing the structural transformation of an economy, poverty alleviation among households, improvement in food security and public policies to support those processes. Topics include poverty measurement, poverty dynamics, growth theory, and impact evaluation. Special attention is paid to the role of the agricultural sector and rural development. Prerequisite: ACE 500 or ACE 504 or ECON 500 and basic econometrics.

ACE 559 Food, Trade and Development credit: 2 Hours.

Economic theory and empirical analyses are used to study international trade, emphasizing food trade, agricultural policy and international development. Topics include theoretical models of international trade, regional agreements, and food trade. Special attention is given to the impact of trade in developing countries with large agricultural sectors and to issues relating to trade in food products. Prerequisites: ACE 500 or ACE 501 or ECON 500 and basic econometrics.

ACE 561 Adv Res and Scholarly Comm credit: 4 Hours.

Seminar intended for Ph.D. students who have completed written preliminary examinations. Develops a comprehensive understanding of the research process. Discussions include identification of research topics, structure of research proposals, review of literature, effective communication, management of research activities, and contributions to scholarly debate. Prerequisite: Consent of instructor.

ACE 562 Applied Regression Models I credit: 2 Hours.

Application of simple regression methods to problems in agricultural and consumer economics with emphasis on foundational probability, random variable, and distribution concepts, development of the simple, two-variable regression model; estimation of model parameters; hypothesis testing; and prediction. Prerequisite: ACE 261 or equivalent; one of MATH 220, MATH 221, MATH 234.

ACE 563 Math Program App Econ I credit: 2 Hours.

Application of mathematical programming methods to discrete models in agricultural economics; Kuhn-Tucker theorem, Lagrange multipliers, duality, simplex method as applied to linear and quadratic programming, and input-output analysis models in agriculture. Prerequisite: MATH 124; one of MATH 220, MATH 221, MATH 234.

ACE 564 Applied Regression Models II credit: 2 Hours.

Application of multiple regression methods to problems in agricultural and consumer economics with emphasis on extensions to the simple, two-variable regression model, development of the multiple regression model; and problems created by violations of basic model assumptions. Prerequisite: ACE 562 or equivalent.

ACE 566 Mathematics for Applied Econ credit: 3 Hours.

Applications of concepts of linear algebra, calculus, and multivariate optimization to equilibrium analysis, comparative statistics, and other topics in agricultural and consumer economics.

ACE 567 Math Program App Econ II credit: 2 Hours.

Advanced mathematical programming methods with particular emphasis on applications in agricultural and consumer economics. Covers nonlinear programming, sector modeling, risk modeling, and methodological issues in mathematical programming modeling of agricultural systems. Prerequisite: ACE 563 or equivalent.

ACE 569 Career Development for PhDs credit: 1 Hour.

This course is intended to help doctoral candidates transition into careers in or out of academia. The class covers job market processes and strategies, presentation skills, teaching philosophies, and development of research trajectories. Approved for S/U grading only. Prerequisite: ACE 561.

ACE 571 Household Economics credit: 2 Hours.

Discussion of current topics and review of the literature in household economics. Relevant topics include marriage, divorce, intergenerational transfers, investment in children, migration. Prerequisite: ECON 500 or equivalent.

ACE 591 Independent Study credit: 0 to 8 Hours.

Individual research work under the supervision of an appropriate member of the faculty. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours if topics vary.

ACE 592 Special Topics credit: 0 to 8 Hours.

Group instruction on a special topic under the direction of one or more members of the faculty. Approved for both letter and S/U grading. May be repeated in a semester to a maximum of 8 hours. May be repeated to a maximum of 24 total hours, if topics vary.

ACE 594 Seminars and Workshops credit: 0 to 8 Hours.

Participation in a seminar or workshop with other graduate students and faculty members. Approved for both letter and S/U grading. May be repeated.

ACE 599 Thesis Research credit: 0 to 16 Hours.

Individual research under supervision of members of the graduate teaching faculty in their respective fields. Approved for S/U grading only. May be repeated.

Agr, Consumer, & Env Sciences (ACES)

ACES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ACES>)

Courses

ACES 101 Contemporary Issues in ACES credit: 2 Hours.

Study of contemporary issues in the human, food and natural resource systems, and an overview of the role of the College of Agricultural, Consumer and Environmental Sciences and the University of Illinois in these systems. Required of and limited to new freshmen enrolled in the College of ACES.

ACES 102 Intro Sustainable Food Systems credit: 3 Hours.

An objective approach towards critical systems thinking and towards collaborative analysis across multiple disciplines for the development, production, preparation, consumption, and utilization of food, feed, fiber and energy, while managing the disposal and reuse of byproducts, within complex socioeconomic, ecological and environmental systems. Students will be introduced to the fundamentals of modern crop, livestock, and other agricultural production systems, and consider the future challenges and opportunities in producing enough for a growing world population.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ACES 179 History of Ag in IL Since 1860 credit: 3 Hours.

An introduction to the history of agriculture in the rural Midwest with an emphasis on Illinois based on an analysis of the attitudes of indigenous peoples, immigrants, farmers and agribusiness interests toward land, labor, crop selection and production, and technology. The course compares the regional characteristics of the rural Midwest to other U.S. regions, and explores factors that created the American "breadbasket," a region recognized for the commodities, equipment and ideas that it exports to the world.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

ACES 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in the College of Agricultural, Consumer and Environmental Sciences. Topic may not be repeated except in accordance with the Code. Approved for letter and S/U grading. May be repeated. No more than 12 hours may be counted toward graduation.

ACES 200 ACES Transfer Orientation credit: 0 Hours.

Introduction to College of ACES and campus resources for students new to the College of ACES. Required of all off campus transfer students and optional for Inter College Transfer students. First eight weeks course. Approved for S/U grading only.

ACES 250 Introduction to Bioenergy credit: 3 Hours.

Introductory undergraduate survey course of a wide range of bioenergy issues. Topics span the entire life cycle of biofuels from feedstock production to end-product utilization. Class participants will gain a general understanding of each topic presented and an appreciation for what progress has been made and the challenges that remain in enabling biofuels production and utilization to meet national goals.

ACES 293 International Internship credit: 0 to 5 Hours.

Supervised learning experience designed for ACES students registering for an academic term abroad and/or for non-degree exchange students enrolling for an academic term at Illinois. The nature of the experience and the setting in which it takes place must be approved in advance by ACES faculty and by representative(s) of institutions/organizations/agencies that cooperate with the College of ACES in student exchange/study abroad programs. 0 to 3 undergraduate hours. Approved for both letter and S/U grading. May be repeated to a maximum of 10 hours. (Summer Session). Prerequisite: Written consent of ACES Study Abroad Office.

ACES 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated to a maximum of 12 hours. Students may register in more than one section per term. Prerequisite: GPA of 3.0 or above at the time the activity is arranged, and consent of instructor.

ACES 298 International Experience credit: 1 to 9 Hours.

International experience in agricultural, consumer and environmental sciences related areas involving foreign travel and study without enrollment in another institution. Experience must be planned and approved in advance through consultation with a College of Agricultural, Consumer and Environmental Sciences faculty member. Additional fees may apply. See Class Schedule. Approved for both letter and S/U grading. May be repeated to a maximum of 9 hours. Not open to students on probation. Prerequisite: Written consent of ACES Study Abroad Office.

ACES 299 ACES Study Abroad credit: 0 to 18 Hours.

Provides campus credit in the College of Agricultural, Consumer and Environmental Sciences for study at accredited foreign institutions. Final determination of credit granted is made upon the student's successful completion of work. Approved for both letter and S/U grading. May be repeated to a maximum of 36 hours within one calendar year. 0 to 8 undergraduate hours for Summer session only. Prerequisite: Consent of major department, college, and Study Abroad Office.

ACES 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Undergraduate research, bachelor's thesis, and/or design work under the direction of a faculty mentor, culminating in the writing of a research abstract and presentation of a display poster at an approved event such as ExplorACES, the Provost's Undergraduate Research Symposium, and/or an external professional/scientific meeting. May be repeated in separate terms to a maximum of 12 hours. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward a degree. Prerequisite: Junior or senior standing, cumulative GPA of 3.4 or above, enrollment in the ACES James Scholar Honors Program, and consent of instructor.

ACES 399 Honors Seminar credit: 1 Hour.

Designed to promote exposure to, and subsequent critical reflection about a variety of topics relevant to ACES James Scholars. Feature presentations by faculty members on topics of current interest in the agricultural, consumer and environmental sciences. Students engage in the topics by responding to faculty members' presentations through classroom activities, lab tours, stimulating debates, and lively discussions. The writing of a seminar paper rounds out the course. Prerequisite: James Scholars enrolled in the College of ACES with preference given to those with junior or senior standing.

ACES 409 Bioenergy Systems credit: 3 Hours.

Introductory survey course in bioenergy systems. Focus on plants, soils and bioenergy feedstocks; bioenergy production, processing and use; agricultural, environmental, economic and legal aspects of the bioenergy life cycle; tools and methods. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ACES 409 and ACES 509.

ACES 499 Interdisciplinary ACES Seminar credit: 1 to 4 Hours.

Platform for experimental courses on special interdisciplinary topics within the agricultural, consumer and environmental sciences. Designed to provide upper-level undergraduates and graduate students with access to subject offerings of new and developing areas of knowledge across the ACES curricula. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours in the same term and 12 hours in separate terms if topics vary.

ACES 501 Advanced Bioenergy Topics credit: 2 Hours.

Seminar in Advanced Bioenergy Topics presented by experts in the field.

ACES 509 Advanced Bioenergy Systems credit: 3 Hours.

Introductory survey course in bioenergy systems. Focus on plants, soils and bioenergy feedstocks; bioenergy production, processing and use; agricultural, environmental, economic and legal aspect of the bioenergy life cycle; tools and methods. Students design and execute a research project that identifies pathways to improve the existing bioenergy system from at least two of the course topics from different disciplines. Credit is not given for both ACES 509 and ACES 409.

Agricultural Communications (AGCM)

AGCM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AGCM>)

Courses

AGCM 110 Intro to Ag and Env Comm credit: 3 Hours.

Development and role of communication in relation to food, feed, fiber, energy, natural resources, international development and other dimensions of agriculture. Introduction to channels, methods, challenges and opportunities for improving communication within agriculture and communicating agriculture to the public.

AGCM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in agricultural communications. May be repeated in the same or separate terms as topics vary.

AGCM 220 Communicating Agriculture credit: 3 Hours.

Skills necessary to communicate complex information about the broad agriculture domain to different audiences. Application of communication theories. Emphasis on essential communication skills, including writing, conducting interviews, planning, and critical evaluation of information sources. Same as ENV5 220 and NRES 220. Prerequisite: Completion of a Composition I course.

This course satisfies the General Education Criteria for: Advanced Composition

AGCM 230 Agricultural and Environmental Photography credit: 3 Hours.

Application of photojournalism principles and techniques in the communication of topics related to food, agriculture, the environment, energy and community development for print, broadcast and computer-mediated applications. Emphasis on creative and technical aspects of digital photography.

AGCM 250 Visual Principles for Ag Comm credit: 2 Hours.

This course outlines fundamental design principles and techniques for effective visual communication on print. These principles will be applied in project-magazine pages, logos, brochures, newsletters, posters and signs-to achieve communication objectives. This course provides practical, hands on experience in developing visual presentations about topics related to agriculture, food, fiber, renewable fuel, the environment, and natural resources. Students are introduced to the use of industry-standard desktop publishing software (InDesign, Photoshop, Illustrator).

AGCM 270 Ag Sales and Persuasive Communication credit: 3 Hours.

Sales concepts and persuasive business communication techniques. Role, dynamics, and principles of sales communications related to food, agriculture, and the environment. Sales objectives, market segmentation, prospecting, handling obligations, relationship building, and the nuances of sales communications.

AGCM 293 Communications Internship credit: 1 to 3 Hours.

Supervised experience in a field directly pertaining to agricultural communications. Approved for S/U grading only. May be repeated. Prerequisite: Sophomore standing. AGCM Program approval required.

AGCM 294 Research Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 10 hours. Prerequisite: Sophomore standing.

AGCM 295 Independent Study or Research credit: 1 to 3 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated. Prerequisite: AGCM Program and instructor approval required.

AGCM 315 Emerging Media credit: 3 Hours.

Theories, principles and practices of applying emerging tools, technology, and norms to communicate agriculture to broad audiences. Focus on the strategies and tactics of using new media to communicate food, fuel, fiber, natural resources, health, human nutrition and related topics. Same as ADV 315. Prerequisite: AGCM 220 or ADV 150 or consent of instructor.

AGCM 320 Public Information Campaigns credit: 4 Hours.

Coordinated approach to planning, implementing and evaluating information campaigns in the broad domain of food and agriculture. Students work with groups, agencies and organizations in designing communication campaigns strategies and tactics. Prerequisite: Sophomore standing and Composition I course. This course satisfies the General Education Criteria for: Advanced Composition

AGCM 330 Environmental Communications credit: 3 Hours.

Basics of communicating about environmental issues to various audiences, emphasizing communication to lay publics. Gathering information about a current environmental issue, analyzing interests of groups involved, and examining strategies for communicating clearly to different groups. Same as ENV 330 and NRES 330. Prerequisite: Sophomore standing.

AGCM 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated for up to 6 hours in separate terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

AGCM 398 Undergraduate Seminar credit: 1 to 3 Hours.

Special topics in a field of study directly pertaining to subject matter in agricultural communications. May be repeated in the same or subsequent terms to a maximum of 12 hours.

AGCM 430 Comm in Env Social Movements credit: 3 Hours.

Examines the interests, values systems and communications strategies of key participants in the environmental movement. Students examine environmental issues and predict possible reactions from key participants in the environmental arena. Same as ENV 430, NRES 430, and SOC 464. 3 undergraduate hours. 3 graduate hours. Prerequisite: Composition I course.

AGCM 499 Seminar credit: 1 to 4 Hours.

Special topics in agricultural communications. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 12 hours as topics vary.

Agricultural Education (AGED)

AGED Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AGED>)

Courses

AGED 100 Intro to Ag & Leadership Ed credit: 2 Hours.

Overview of agricultural and leadership education career pathways in school and non-school settings, including extension, corporate and government sectors, and international and industry organizations. Includes overview of certification requirements, professional development, and current issues for agricultural education professionals.

AGED 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

An experimental course on a special topic in agricultural education. May be repeated in the same or separate terms as topics vary to a maximum of 12 hours.

AGED 220 Prog Del in Ag & Leadership Ed credit: 3 Hours.

Introduces formal and non-formal methods used to deliver education and training in agricultural and leadership education programs. Focuses on types and purposes of agricultural education, program components, principles of teaching and learning, community relationships, and reflective teaching. Technology-supported lab component provides skills needed to develop teaching and training materials.

AGED 230 Leadership Communications credit: 3 Hours.

Application of communication skills used in the dissemination of information by public or organizational leaders in contemporary times. Founded on empirical leadership studies and through use of experiential learning activities, presentations, projects, and examinations, students will consider how identity and the setting impact what they write, say, and do when communicating a message.

This course satisfies the General Education Criteria for:

Advanced Composition
Social Beh Sci - Soc Sci

AGED 250 Observation and Program Analysis credit: 4 Hours.

Early field experience in agricultural education, including observation and analysis activities in public schools, extension programs, or other selected settings; participation in clinical field experience activities; examination of educational program development and operation, teaching and learning processes, contextual factors in learning, evaluation of student learning; and professionalism. Approximately 45 hours of early field experience will be acquired. Off-campus observation begins the first week of January. Agricultural education programs in both school and non-school settings are examined. Prerequisite: AGED 220; concurrent enrollment in EDPR 203.

AGED 260 Intro to Leadership Studies credit: 3 Hours.

Study of leadership theories and their application to the development of leadership skills. Students develop a personal philosophy of leadership, prepare a development plan for enhancing leadership skills, and begin a portfolio to record their leadership growth. Explores topics concerning diversity, ethics, and leadership/follower roles.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

AGED 280 Training Needs Assessment credit: 2 Hours.

Students in this course will be equipped to analyze an employee and/or organization's performance to determine the training needs for a business or organization. Helps learners determine whether or not training is the solution to a job performance problem.

AGED 293 Ag Leadership Internship credit: 1 to 6 Hours.

Supervised off-campus experience in a field directly pertaining to subject matter in agricultural leadership education. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 12 hours.

AGED 295 Independent Study or Research credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms.

AGED 300 Training and Development credit: 4 Hours.

Students will learn to assess, design, develop, implement, and evaluate a training program in agricultural and non-agricultural industries. Topics will emphasize the theory of training and development, methods of assessing training needs and learning styles, design of effective training, presentation skills, and program evaluation. Different types of training programs will be examined, including orientation, skills training, team building, management development, and diversity training. Students will create and present a training program for an actual client utilizing the training design process. Prerequisite: AGED 280.

AGED 310 Prof Dev in Leadership Ed credit: 2 Hours.

Provides agricultural leadership education students with non-formal professional experiences prior to enrollment in the student internship. A minimum of 32 hours of observation and participatory experiences with professionals in extension/outreach, business and industry, political and/or communications/human resources are required for satisfactory completion of this class.

AGED 340 Leadership Ethics & Pluralism credit: 3 Hours.

Theory and research in leadership ethics and multicultural competence in a leadership context. Students will examine the underpinning of multiculturalism and identity development, and how both affect leadership practice. Also explores issues of power, oppression, privilege and the responsibilities of leadership. Integrates both ethics and multiculturalism through the examination of cases that include topics such as globalization, immigration, etc. Prerequisite: AGED 260. This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AGED 350 Early Field Experience credit: 3 Hours.

Supervised experience during the summer months and fall semester including: supervision of students' agricultural experience programs and projects; development of problem-solving and decision-making skills related to use of instructional technologies, management of FFA activities, and supervision of agricultural experiences; review of teacher certification requirements and application for teacher certification; development of online teacher certification portfolio meeting state, UIUC, and program requirements. A minimum of 50 hours or early field observation is required. Prerequisite: AGED 250.

AGED 360 Advanced Leadership Studies credit: 3 Hours.

Examines current and emerging leadership theories and their practical application in real-world settings. Continues exploration of advanced leadership theories begun in AGED 260, and includes opportunities for self-assessment and personal leadership development. Prerequisite: AGED 260.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

AGED 380 Leadership in Groups and Teams credit: 3 Hours.

Theory and practice of group and team leadership, including leadership assessment, group dynamics, group process, goal-setting, conflict management and resolution, leadership skill development, and case study analyses. Students engage in group activities throughout the semester. Prerequisite: AGED 260 and completion of the General Education Composition I requirement.

AGED 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

AGED 400 Foundations of Ag & Extn Ed credit: 3 Hours.

Comparative examination of the mission, purpose, and historical foundations of agricultural and extension education. Topics include review of agricultural education programs and delivery systems, the nature of teaching in school and non-school settings, and trends and developments in agricultural education. Also examines teacher characteristics and approaches to teaching, education program components, community relationships, and reflective teaching. 3 undergraduate hours. 3 graduate hours.

AGED 410 Grad Early Field Experience credit: 2 Hours.

An introduction to the application of pedagogy through early field experiences in agricultural education. Students participate in eight weeks of instruction and 40 hours of participatory experiences in approved agricultural education programs. Off-campus observation begins the first week of January. Restricted to graduate students in the teacher education option. 2 undergraduate hours. 2 graduate hours. Prerequisite: Concurrent enrollment in EDPR 203.

AGED 420 Curr Design & Instruction credit: 3 Hours.

This instructional methodology course provides students the opportunity to analyze the principles of learning and teaching as they influence the academic motivation of learners in formal and non-formal environments within agricultural, food and environmental sciences. Topics include: the understanding and implementation of psychological aspects of learning, planning and development of agricultural courses and curricula, creating teaching plans, managing positive learning environments, evaluating student learning, and the utilization of effective self-reflective teaching behaviors. 3 undergraduate hours. 3 graduate hours. Prerequisite: AGED 220 for majors; consent of instructor for non-majors.

AGED 421 Teaching Strategies in AGED credit: 3 Hours.

Synthesis of principles of teaching and learning as they influence educational activities in formal and non-formal environments within agricultural and related sciences. Gives individuals an opportunity to apply the educational concepts covered in AGED 300 or AGED 420. Individuals will design, implement, and evaluate learner-centered approaches in a variety of simulated educational environments. 3 undergraduate hours. 3 graduate hours. Prerequisite: AGED 300 or AGED 420 or graduate standing.

AGED 430 Youth Development Programs credit: 3 or 4 Hours.

Instruction in the youth development process, including learning; philosophy and purposes of youth development policies, programs, and organizations; relationships to organizational missions; principles and procedures for developing, coordinating, and implementing youth development programs; and examining research and practice in youth-at-risk initiatives. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AGED 220, or HDFS 105, or PSYC 100.

AGED 450 Program Delivery and Eval credit: 4 Hours.

Students complete this course during their twelve-week practice teaching or internship experience. Written assignments will focus on development of teaching plans, program initiation and improvement plans, and actual evaluation studies of agricultural education programs. Instruction will be provided during on-site faculty visits and by cooperating personnel. 4 undergraduate hours. 4 graduate hours. Prerequisite: AGED 420.

AGED 451 Professional Dev in Ag Ed credit: 2 Hours.

Analysis of teaching and learning processes, program evaluation and improvement strategies, curriculum development and modification, professional development, facility development, using community resources, program management, and discussion of trends and issues in agricultural education. 2 undergraduate hour. 2 graduate hour. Prerequisite: Senior standing.

AGED 460 Advanced Leadership Studies credit: 1 or 4 Hours.

This course will focus on understanding and then applying the Adaptive Leadership Model in relevant executive and supervisory contexts in professional organizations (industry, non-profit, community development). Enrolled students will have the opportunity to examine current cases of both adaptive and technical challenges facing agriculturally-focused organizations, as well as research and examine cases they choose themselves. The overarching goal of this course is to provide students the opportunity to practice skills relevant for leading fast-paced complex organizations in agriculture using the Adaptive Leadership Model. No undergraduate credit. 1 or 4 graduate hours. Prerequisite: AGED 260 or graduate standing.

AGED 480 Collaborative Leadership credit: 3 or 4 Hours.

Leadership operates within the context of community. The course will teach the research, theory, and practice of building effective community collaborations to deal with complex societal issues. A collaborative framework will be delivered by which students apply their knowledge of person, organizational, and community leadership to real-world problems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: AGED 260 or equivalent.

AGED 490 Adult Learning Principles credit: 3 or 4 Hours.

Theory and practice of adult learning including: overview of teaching and learning theory related to adults; core adult learning principles; individual and situational learning differences; goals and purposes for learning; and the future of adult learning. 3 undergraduate hours. 4 graduate hours.

AGED 499 Seminar credit: 1 to 4 Hours.

Special topics in agricultural education. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 undergraduate or graduate hours as topics vary.

AGED 500 Special Topics in Ag Education credit: 1 to 4 Hours.

Advanced study in selected phases of agricultural education applicable to agricultural educators in schools, community colleges, universities, cooperative extension, agribusiness, and community and governmental agencies. May be repeated in the same and subsequent terms.

AGED 510 Education Program Management credit: 4 Hours.

Theoretical and practical approaches to planning, delivering and evaluating programs in agricultural education, with a focus on development of comprehensive educational plans.

AGED 511 Grad Professional Dev in Ag Ed credit: 1 Hour.

Analysis of teaching and learning processes, program improvement strategies, professional development, FFA chapter development, awareness of school law, program management, and discussion of trends and issues in agricultural education.

AGED 520 Teaching College-Level ACES credit: 2 Hours.

Planning, delivering and evaluating effective teaching and learning of college-level agricultural, consumer and environmental sciences; the role of faculty in the governance of higher education in the agricultural sciences. Prerequisite: Master's standing.

AGED 540 Volunteer Management credit: 3 Hours.

Theory and practice of volunteer management including: volunteer demographics; recruitment; selection; orientation; training and development; retention; supervision; motivation; evaluation; legal issues; and risk management. Students will develop a comprehensive volunteer management strategy based on using volunteers in non-profit organizations.

AGED 545 Research Methods & Design credit: 4 Hours.

Provides foundations for quantitative and qualitative research methodologies and design principles for investigating problems in social and behavioral sciences. Focuses on language of research, purposes, validity threats, data collection methods, and critical evaluation of current literature.

AGED 549 Independent Study credit: 1 to 4 Hours.

Individual investigation and reporting of research on any phase of agricultural education selected by the student and approved by the advisor and faculty member who will supervise the study. 1 to 4 graduate hours. No professional credit. May be repeated in the same or subsequent terms to a maximum of 8 hours.

AGED 550 Advanced Program Delivery credit: 2 Hours.

Theory and practice of advanced program delivery in non-school settings, including the following: strategic planning; environmental scanning; logic model development; experiential and accelerated learning methodologies; and training and development strategies.

AGED 551 Advanced Program Evaluation credit: 2 Hours.

Theory and practice of advanced program evaluation in non-school settings, including the following: measuring the impact of educational programs; program outcomes and indicators; measuring behavior change, and developing, using, interpreting, and reporting pre-post evaluations, qualitative data, surveys, focus group data, and observational data.

AGED 599 Thesis Research credit: 0 to 8 Hours.

Individual research in the various areas of agricultural and extension education under the supervision of faculty members. Approved for S/U grading only. May be repeated in separate terms.

Agricultural and Biological Eng (ABE)

ABE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ABE>)

Courses

ABE 100 Intro Agric & Biological Engrg credit: 1 Hour.

Introduction to the engineering profession with career opportunities in the agricultural and biological engineering discipline. Concepts necessary for becoming a successful engineer including time management, design concepts, ethics, and teambuilding. Familiarization with laboratories, computer facilities, internships, and other opportunities. Team design experience. Emphasis on technical communication and problem-solving skills as well as career planning.

ABE 141 ABE Principles: Biological credit: 2 Hours.

Principles of biology relevant to agriculture, food, energy, and the environment, including microbiology, biochemistry, genetics, plant and animal systems, and ecosystems. Case studies of engineering applications where these biological principles have been taken into account or leveraged for the purpose of design.

ABE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours.

ABE 223 ABE Principles: Machine Syst credit: 2 Hours.

Machinery systems for off-road applications: internal combustion engines; fluid power; tractors, and traction; chemical application; grain harvesting. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 224 ABE Principles: Soil & Water credit: 2 Hours.

Engineering principles and methods of design and management of natural resources and environmental systems; watershed and hydrologic cycle; infiltration and surveying; runoff and erosion; water quality; non-point source pollution. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 225 ABE Principles: Bioenvironment credit: 2 Hours.

Principles of environmental control for biological structures: psychrometrics; mass and heat transfer through buildings; ventilation requirements. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 226 ABE Principles: Bioprocessing credit: 2 Hours.

Principles of bioprocess engineering applied to food and agricultural products: material balances; fluid flow; heat and mass transfers; drying; evaporation; fermentation; distillation; process simulation. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ABE 341 Transport Processes in ABE credit: 3 Hours.

Principles of transport processes involving momentum, heat, and mass as applied to biological systems in agriculture, food, energy, and the environment. Credit is not given for both ABE 341 and CHBE 421. Prerequisite: ABE 223, ABE 224, ABE 225, ABE 226, and PHYS 213.

ABE 361 Off-Road Machine Design credit: 3 Hours.

Design and development concepts of agricultural and industrial machines; analysis and synthesis of tillage, planting, harvesting, chemical application, material handling mechanisms, and precision farming tools. Prerequisite: ABE 223 and TAM 212.

ABE 397 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 398 Special Topics credit: 1 to 3 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate term if topics vary to a maximum of 12 hours.

ABE 425 Engrg Measurement Systems credit: 4 Hours.

Principles of instrumentation systems, including sensing, signal conditioning, computerized data acquisition, test design, data analysis and synthesis. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 425 and ME 360. Prerequisite: ECE 205.

ABE 430 Project Management credit: 2 Hours.

Engineering team effectiveness; project definition; assessing related technologies; marketing and business planning related to engineering; budgeting and financial analyses of engineering projects; safety, ethics and environmental considerations; intellectual property; engineering proposal presentation. Same as TSM 430. 2 undergraduate hours. 2 graduate hours.

ABE 436 Renewable Energy Systems credit: 3 or 4 Hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Renewable energy's role in reducing air pollution and global climate change. Capstone project to design a system for converting renewable energy into thermal or electrical energy. 3 undergraduate hours. 4 graduate hours. Credit is not given for both ABE 436 and TSM 438. Prerequisite: PHYS 211.

ABE 440 Applied Statistical Methods I credit: 4 Hours.

Same as ANSC 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

ABE 445 Statistical Methods credit: 4 Hours.

Same as ANSC 445 and NRES 445. See ANSC 445.

ABE 446 Biological Nanoengineering credit: 3 or 4 Hours.

Nanodevice design through organization of functional biological components; bio-molecular function and bioconjugation techniques in nanotechnology; modulation of biological systems using nanotechnology; issues related to applying biological nanotechnology in food energy, health, and the environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: MCB 150.

ABE 454 Environmental Soil Physics credit: 3 Hours.

Provides the theoretical basis for understanding and quantifying the physical, hydrological, geotechnical, and thermal properties of soil in relation to environmental processes. Topics include general soil properties as a porous media, particle size, soil structure and aggregation, water retention and potential, flow in saturated soil, flow in an unsaturated soil, soil temperature and heat flow, soil mechanics, infiltration, and soil-plant-water relations. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335 or NRES 201 or consent of instructor.

ABE 455 Erosion and Sediment Control credit: 2 Hours.

Processes, estimation, and control of soil erosion by water, wind and resultant sedimentation. Upland, in-channel, urban, agricultural, disturbed (both military training and mining), and forested environments. Capstone experience in site planning and design. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 350 or NRES 401; CEE 380 or NRES 201.

ABE 456 Land & Water Resources Engrg credit: 3 or 4 Hours.

Hydrology, hydraulics, design, construction and cost estimating of structures for the conservation and quality control of soil and water resources; relationship of topography, soils, crops, climate, and cultural practices in conservation and quality control of soil and water for agriculture. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 457 NPS Pollution Processes credit: 2 Hours.

Principles, concepts, and analysis of processes for nonpoint source pollution involving sediment, inorganic and organic chemicals, and microbial pathogens; hydrologic and pollutant interactions, pollutant fate and transport processes from storm water runoff and percolation; impact of pollutant transport on receiving water and ecosystems. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 224 or CEE 350.

ABE 458 NPS Pollution Modeling credit: 2 Hours.

Concepts, principles, and application of modeling for assessment and management of agricultural nonpoint source pollution. Modeling of agroecosystems and land use impacts on hydrologic and water quality response of upland catchments. Model selection, calibration, validation, and application for comparative analysis. Case studies in current watershed management issues, with a focus on agricultural waste and nutrient management, using existing field and watershed nonpoint source pollution models. 2 undergraduate hours. 2 graduate hours. Prerequisite: ABE 457.

ABE 459 Drainage and Water Management credit: 3 or 4 Hours.

Design, construction, performance, and maintenance of agricultural drainage systems to meet both production and water quality objectives. Modeling drainage systems. Principles of conservation drainage. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in TAM 335.

ABE 463 Electrohydraulic Systems credit: 3 Hours.

Engineering principles of electrohydraulic control systems related to off-road vehicles. Basics of fluid power systems, concepts of electrohydraulic systems and controls, analysis and design of electrohydraulic control systems, and applications of electrohydraulic control. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 110 or both ECE 205 and ECE 206; ME 310 or TAM 335.

ABE 466 Engineering Off-Road Vehicles credit: 3 Hours.

Design and application of off-road vehicles for farm and construction use; thermodynamics of engines; measurement of power and efficiencies; power transmission and traction; chassis mechanics; operator environment. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ABE 466 and TSM 464. Prerequisite: ME 300.

ABE 469 Industry-Linked Design Project credit: 4 Hours.

Industry-submitted and sponsored design projects which utilize principles of design, engineering analysis and functional operation of engineering systems. Design teams develop concepts, evaluate alternatives, model and analyze solutions, and build and test a final product. Emphases on communication skills, technical writing, and interaction with industry representatives. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of ABE 361, CHBE 421, TAM 335; or credit or concurrent registration in ME 370.

This course satisfies the General Education Criteria for: Advanced Composition

ABE 474 Indoor Environmental Control credit: 3 or 4 Hours.

Analysis of indoor environments and relationship with humans, animals and plants. Interactions between facilities operation and both human comfort and animal plant production. Psychrometrics, occupant health and comfort, structural heat transfer, heating and cooling loads, and energy and mass balances as related to indoor environment, air properties, and ventilation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 335, and ME 300 or CHBE 321, or consent of instructor.

ABE 476 Indoor Air Quality Engineering credit: 4 Hours.

Principles and applications of indoor air quality. Particle mechanics, gas kinetics, air quality sampling principles and techniques, air cleaning technologies such as filters, cyclones, electrostatic precipitation for indoor environments; ventilation effectiveness for pollutant control. Research or design project. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213, MATH 285, and TAM 335.

ABE 482 Package Engineering credit: 3 Hours.

Same as FSHN 469. See FSHN 469.

ABE 483 Engrg Properties of Food Matls credit: 3 Hours.

Physical properties of foods and biological materials; properties relating to equipment design and the sensing and control of food processes; thermal, electromagnetic radiation, rheological, and other mechanical properties. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 251; either CHBE 421 or both ME 330 and TAM 335.

ABE 488 Bioprocessing Biomass for Fuel credit: 3 Hours.

Engineering and scientific principles governing bioprocessing of biomass for production of ethanol and other fermentation products. Process unit operations; conventional and alternative feed stock materials; recovery of value-added coproducts and other variables involved in producing fuel ethanol; process simulation; economic analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 321 and TAM 335.

ABE 497 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development or design work under the supervision of a member of the faculty. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ABE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 16 hours.

ABE 501 Graduate Research I credit: 1 Hour.

Basic research orientation, research methods, presentation skills, laboratory practices, case studies, and professional and ethical conduct.

ABE 502 Graduate Research II credit: 1 Hour.

Research methodology, teaching methods, lecture preparation and delivery, critical review of scientific articles, peer review and publishing, mentoring and peer relationships, time management, and intellectual property.

ABE 594 Graduate Seminar credit: 0 Hours.

Presentations of thesis research by graduate students; other presentations on teaching or current research issues related to agricultural and biological engineering. Approved for S/U grading only. May be repeated up to a maximum of 6 times.

ABE 597 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phases of agricultural engineering selected by the student and approved by the advisor and the faculty member who will supervise the study. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

ABE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in agricultural and biological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 8 hours.

ABE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Air Force Aerospace Studies (AFAS)

AFAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AFAS>)

Courses

AFAS 102 Leadership Laboratory credit: 0 Hours.

Leadership Laboratory (LLAB) is a dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complements the AFROTC academic program (AFAS 111 - AFAS 342). It is a student planned, organized, and executed practicum conducted under the supervision of the Detachment Commander and operations Flight Commander. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

AFAS 111 Found of the US Air Force I credit: 1 Hour.

The Foundations of the United States Air Force" is a survey course designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Prerequisite: Requires concurrent enrollment with AFAS 102.

AFAS 112 Found of the US Air Force II credit: 1 Hour.

The Foundations of the United States Air Force" is a survey course designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Prerequisite: AFAS 111 or consent of instructor. Requires concurrent enrollment with AFAS 102.

AFAS 120 Intro to US Armed Forces credit: 3 Hours.

Same as MILS 120 and NS 120. See MILS 120. This course satisfies the General Education Criteria for: Humanities - Hist Phil

AFAS 221 Evolution Air & Space Power I credit: 1 Hour.

The Evolution of USAF Air and Space Power" features topics on Air Force heritage and leaders; introduction to air power through examination of the Air Force Core Functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Prerequisite: AFAS 112 or consent of instructor. Requires concurrent enrollment with AFAS 102.

AFAS 222 Evolution Air & Space Power II credit: 1 Hour.

The Evolution of USAF Air and Space Power" features topics on Air Force heritage and leaders; introduction to air power through examination of the Air Force Core Functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Requires concurrent enrollment with AFAS 102. Prerequisite: AFAS 221 or consent of instructor.

AFAS 331 USAF Leadership Studies I credit: 3 Hours.

The United States Air Force Leadership Studies," teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skill. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Requires concurrent enrollment with AFAS 102. Prerequisite: AFAS 222 or consent of instructor.

AFAS 332 USAF Leadership Studies II credit: 3 Hours.

The United States Air Force Leadership Studies," teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skill. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Requires concurrent enrollment with AFAS 102. Prerequisite: AFAS 331 or consent of instructor.

AFAS 341 Nat Sec Afrs/Prep Actv Duty I credit: 3 Hours.

National Security Affairs/Preparation for Active Duty" is designed for college seniors and gives them the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Requires concurrent enrollment with AFAS 102. Prerequisite: AFAS 332 or consent of instructor.

AFAS 342 Nat Sec Afrs/Prep Actv Duty II credit: 3 Hours.

National Security Affairs/Preparation for Active Duty" is designed for college seniors and gives them the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Requires concurrent enrollment with AFAS 102. Prerequisite: AFAS 341 or consent of instructor.

American Indian Studies (AIS)

AIS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AIS>)

Courses

AIS 101 Intro to Amer Indian Studies credit: 3 Hours.

Interdisciplinary introduction surveys the stories, histories, and lands of tribal peoples who became known as "American Indians".

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 102 Contemp Issues in Ind Country credit: 3 Hours.

Surveys a variety of topics in contemporary American Indian life. Focusing on the modern experience, topics may include law and politics; lands and environment; education; visual arts; languages and literatures; health; social justice; business; treaties; the sacred; gender; sports; decolonization; comparative tribal, Indian and global indigenous concerns.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

AIS 140 Native Religious Traditions credit: 3 Hours.

An interdisciplinary survey of native religious traditions, exploring the breadth and depth of spiritual expression among native people in North America. Assigned readings and class discussions cover a variety of important themes including sacred landscapes, mythic narratives, oral histories, communal identities, tribal values, elder teachings, visionary experiences, ceremonial practices, prayer traditions, and trickster wisdom. Students also consider historic encounters with missionary colonialism and contemporary strategies for religious self-determination. Class discussions are supplemented by audiovisual materials and guest speakers.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 165 Lang & Culture Native North Am credit: 3 Hours.

Same as ANTH 165. See ANTH 165.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

AIS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 6 hours.

AIS 265 Intro to American Indian Lit credit: 3 Hours.

Introduces students to the study of American Indian literature by focusing on texts by contemporary American Indian novelists, poets, and playwrights. Over the course of the semester, students will consider how indigenous aesthetics shape narrative in addition to examining how American Indian authors engage the legacies of colonization and the histories of their tribal communities through their stories. Same as ENGL 265.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AIS 275 Am Indian and Indigenous Film credit: 3 Hours.

Introduction to representations of American Indians and Indigenous peoples in film. Reconstructions of American Indians within the Western genre and more recent reconstructions by Native filmmakers will be considered. Other topics may include the development of an indigenous aesthetic; the role of documentaries and nonfiction films in the history of Native and Indigenous film; the role of commerce in the production of Native films. Same as ENGL 275 and MACS 275.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

AIS 277 Encounters in Native America credit: 3 Hours.

Same as HIST 277. See HIST 277.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 278 Native American History credit: 3 Hours.

Same as HIST 278. See HIST 278.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 280 Intro to Federal Indian Policy credit: 3 Hours.

Traces the evolution of U.S. federal law as it pertains to American Indian nations. From the doctrine of discovery, through which European nations asserted control over the lands they claimed, to the processes of reorganization and recognition that have shaped contemporary rights and struggles native nations currently face, this class will interrogate how American Indian nations were transformed into "domestic dependent nations".

AIS 285 Indigenous Thinkers credit: 3 Hours.

An introduction to the English-language traditions of indigenous intellectuals. Specific topics vary. May be repeated in the same term to a maximum of 6 hours. May be repeated in subsequent terms to a maximum of 9 hours.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

AIS 288 American Indians of Illinois credit: 3 Hours.

Same as ANTH 288 and HIST 288. See ANTH 288.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 291 Independent Study credit: 1 to 6 Hours.

Supervised reading and research in American Indian Studies chosen by the student with instructor approval. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: One course in American Indian Studies and consent of instructor.

AIS 295 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AFRO 215, GWS 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

AIS 430 Indigenous Governance credit: 3 or 4 Hours.

Indigenous peoples have long and rich traditions of governance and political philosophies that have shaped institutions and informed diplomacies amongst each other and with European nations. This course examines the indigenous governance historically and within contemporary contexts with emphasis on the importance of sovereignty within institutions, education, language revitalization, and cultural resurgence. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any 100 or 200-level American Indian Studies course or consent of instructor.

AIS 451 Politics in Children's Lit credit: 3 or 4 Hours.

Students will revisit classic and popular children's books, applying critical theoretical perspectives to texts with the purpose of examining ideologies behind their creation, publication, review, distribution, and consumption. An emphasis will be placed on texts by and about American Indians. 3 undergraduate hours. 4 graduate hours. Prerequisite: Fulfillment of the Advanced Composition requirement; junior standing or above; or consent of instructor.

AIS 459 Topics in American Indian Lit credit: 3 or 4 Hours.

Interdisciplinary seminar on special and advanced topics in American Indian and Indigenous Literatures. Same as ENGL 459. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: One year of college literature or consent of instructor.

AIS 461 Politics of Popular Culture credit: 3 or 4 Hours.

Concerned with interdisciplinary frameworks that allow us to 'read' popular culture as well as with its actual forms and specific artifacts, this course seeks, first, to grasp how popular culture has legitimized the colonization of American Indian peoples and second, to reflect on the ways in which Indians engage popular culture to assert an anti-oppression politics. Same as MACS 461. 3 undergraduate hours. 4 graduate hours. Credit is not given for both AIS 461 and MACS 320 or MDIA 570. Prerequisite: Any 100 or 200-level American Indian Studies course or consent of the instructor.

AIS 481 History of Amer Indian Educ credit: 3 or 4 Hours.

Students will study various efforts to "civilize" American Indians through US government initiatives and religious churches, as well as educational models developed by tribal entities following passage of the Indian Self-Determination and Education Assistance Act of 1975. Same as EPS 481. 3 undergraduate hours. 4 graduate hours.

AIS 490 Adv Topics in Am Ind Studies credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Any course in American Indian Studies; junior standing; or consent of instructor.

AIS 491 Readings in Am Ind Studies credit: 1 to 8 Hours.

Individual guidance in intensive readings in the theories and practices of the field of American Indian Studies. 1 to 8 undergraduate hours. 1 to 8 graduate hours. May be repeated in the same or subsequent terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Graduate standing or one course in AIS and consent of instructor.

AIS 501 Indigenous Critical Theory credit: 4 Hours.

Explores the distinctive form of inquiry which critiques settler-colonial ideas and institutions at the interdisciplinary crossroads where American Indian and Indigenous Studies engages other theories including but not limited to feminist theory, critical race theory, semiotics and phenomenology, psychoanalysis, and the postcolonial theory (to name only some of the many possibilities). Prerequisite: Graduate standing or consent of the instructor.

AIS 502 Indigenous Decolonial Methods credit: 4 Hours.

Introduction for graduate students to key critical scholars and prevailing and emerging models in research methods that seek ethical knowledge production in American Indian and/or Indigenous Studies, including ethnography, archival research, interviews, and translation (to name only some of the myriad options). Focus is on assisting students to initiate, develop, clarify, and justify the research methods they adopt and practice to reach their research goals. Prerequisite: AIS 501 or consent of the instructor.

AIS 503 Seminar in Indigenous Studies credit: 4 Hours.

Research and writing seminar that offers special topics based on current research questions and concerns in American Indian and indigenous Studies and opportunities for graduate students who have made considerable progress in defining a research project to advance the research and writing to the next stage (e.g., to include as a thesis or dissertation chapter or for publication). Topics vary. May be repeated as topic varies in subsequent semesters to a maximum of 8 hours. Prerequisite: AIS 501 and AIS 502, or consent of the instructor.

AIS 590 Am Indian Studies Grad Seminar credit: 4 Hours.

May be repeated up to a maximum of 8 hours. Prerequisite: Graduate standing or consent of instructor.

AIS 591 Problems in Indigenous Studies credit: 1 to 8 Hours.

Offers flexible, rigorous, and wide-ranging opportunities for interdisciplinary graduate-level work in Indigenous (including American Indians) Studies; thus, depending on student needs and instructor interests, the course may be negotiated as a directed reading, directed research, supervised fieldwork, supervised teaching, project, or thesis supervision. May be repeated in the same or subsequent semesters to a maximum of 8 hours. Prerequisite: Consent of instructor.

Animal Sciences (ANSC)

ANSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ANSC>)

Courses

ANSC 100 Intro to Animal Sciences credit: 4 Hours.

Survey of beef and dairy cattle, companion animals, horses, poultry, sheep, and swine. Includes the importance of product technology and the basic principles of nutrition, genetics, physiology, and behavior as they apply to breeding, selection, feeding, and management. Lecture and lab.

ANSC 101 Contemporary Animal Issues credit: 3 Hours.

Provides an understanding of fundamental issues impacting the care and use of animals, and their role in human welfare. Topics addressed include the fundamental principles of animal domestication and its impact on humans, animal welfare and care, animal-environmental interactions, food safety, diet and health issues, economic and societal issues facing the world today, and bioethical issues.

ANSC 103 Working With Farm Animals credit: 2 Hours.

Introductory course that will provide novice students with the fundamentals of animal-animal and animal-human interactions for domestic farm animals. Emphasizes hands-on experiences to develop a background in the concepts and practice of recognizing and understanding the animal's physiology and behavior, animal well being, and animal responses to human interactions. Prerequisite: ANSC 100.

ANSC 110 Life With Animals and Biotech credit: 3 Hours.

Lecture/discussion course that will provide students an overview of biotechnology and animals. Focuses on biotechnological achievements involving animals and how they influence the global development of agriculture, medicine, and industry. Topics will be covered from scientific, discovery, historical, social, and political perspectives.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANSC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

An experimental course on a special topic in animal sciences. Topic may not be repeated except in accordance with the Code. May be repeated to a maximum of 12 hours. No more than 12 hours may be counted toward graduation.

ANSC 201 Principles of Dairy Production credit: 3 Hours.

Surveys the dairy industry; examines principles of breeding, selection, reproduction, feeding, milking and management of dairy cattle. Prerequisite: ANSC 100.

ANSC 204 Intro Dairy Cattle Evaluation credit: 2 Hours.

Evaluation of physical traits of dairy cattle in relation to economic value and genetic improvement; sire selection, mating systems, and genetic merit for dairy cattle. Field trip required. Prerequisite: ANSC 100 or consent of instructor.

ANSC 205 World Animal Resources credit: 3 Hours.

Examination of the world's animals, domesticated and wild, and their uses in various climatic, economic and cultural contexts. Exploration of their contemporary management and their future prospects. Provides background for international experiences, such as ACES 298 and ACES 299. Prerequisite: Completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

ANSC 206 Horse Management credit: 3 Hours.

Focus on the principles of managing horses from birth through breeding; topics include reproductive physiology, breeding management, nutrition, diseases, parasites, herd health programs, genetics, facility design and exercise physiology.

ANSC 207 Companion Animal Biology & Care credit: 3 Hours.

An introduction to companion animal biology through consideration of the physical structure, nutrition, behavior, and reproduction of animal species most commonly kept as companions. The basic information is applied to discussion of basic preventive health care. Course content is largely focused on cats and dogs, although other mammals, birds and reptiles will be briefly considered. Legal and economic issues, and ethical considerations associated with companion animals are also incorporated into the course discussion.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANSC 211 Breeding Animal Evaluation credit: 3 Hours.

Application of current scientific tools, methods, and performance programs available to livestock breeders for improving beef cattle, swine, and sheep; emphasis on the changing nature of modern breeds of livestock as influenced by selection, economics, and consumer and market trends. Course requires visits (including weekends) to farms, related companies, and events to observe the latest techniques and scientific principles associated with livestock selection and evaluation. Students are responsible for personal expenses on the field trips. Prerequisite: Junior standing.

ANSC 219 Meat Technology credit: 3 Hours.

Student participation in the transformation of live animals through harvest and carcass fabrication into food products for human consumption; includes laboratory. Purchase of personal equipment is required.

ANSC 221 Cells, Metabolism and Genetics credit: 3 Hours.

Provides an introductory background in basic aspects of cell biology, physiology, and genetics. Topics addressed include cell structure, cell organelles, and different types of cells, protein synthesis and gene expression, chromosome structure, basic mechanisms of chromosome replication, basic principles of quantitative and population genetics, and an introduction to genomics and proteomics. Prerequisite: ANSC 100, CHEM 102 and 103 or concurrent enrollment.

ANSC 222 Anatomy and Physiology credit: 3 Hours.

Provides an introductory background in basic and fundamental principles of animal anatomy and physiology. The major organ systems (muscle, skeletal, neural, endocrine, cardiovascular, respiratory, and renal) will be presented with an emphasis on comparative anatomy, integrated function, and specific homeostatic mechanisms. Prerequisite: ANSC 100.

ANSC 223 Animal Nutrition credit: 3 Hours.

Provides an introductory background in the fundamental principles of animal nutrition and how nutrition impacts animal well-being and performance. Students will develop comprehensive knowledge in gastrointestinal and digestive anatomy and physiology, nutrient function and requirements, and energy utilization in various species. Specific topics include different classes and properties of nutrients, differences in digestive mechanisms in monogastric vs. ruminant animals, and how carbohydrates, lipids, proteins, minerals, and vitamins contribute to the nutrient requirements of animals. Prerequisite: ANSC 100, ANSC 221, and CHEM 104 and CHEM 105.

ANSC 224 Animal Reproduction and Growth credit: 4 Hours.

Study of the basic principles of reproduction, lactation, growth, and hormonal regulation in animals as well as humans, including cell growth and differentiation, processes of reproduction, biotechnological methods of reproductive control, manipulation, performance enhancement of lactation and growth. Prerequisite: ANSC 100, ANSC 221.

ANSC 250 Companion Animals in Society credit: 3 Hours.

Explores the current and historical functions and influences of companion animals in American society. Topics include the evolution of animal protection, the use of assistance and service animals, and the growth of the pet supply industry. Controversial issues which are of current concern to society will also be examined.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

ANSC 256 Horse's Role in Human History credit: 3 Hours.

Provides an understanding of the crucial roles that horses have played in the development and expansion of human civilization, including how the role of the horse in culture and society has changed throughout history. Topics addressed include an understanding of the evolution and domestication of horses, use of horses for transportation, sport, warfare and power, and the impact of horses on societal issues facing the world today.

ANSC 293 Internship Off Campus credit: 1 to 4 Hours.

Supervised, off-campus learning experience in an animal-related enterprise. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Good academic standing; ANSC 100.

ANSC 294 Intern On Campus Practical Exp credit: 1 to 5 Hours.

Supervised, on-campus learning experience associated with subject matter specific to animal sciences. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Good academic standing; ANSC 100.

ANSC 295 UG Research or Thesis credit: 1 to 5 Hours.

Individual research in animal sciences. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Minimum GPA of 2.5; not open to students on probation; consent of instructor.

ANSC 298 Undergraduate Seminar credit: 1 Hour.

Presentations and discussion of employment opportunities, departmental research activities, and topics relevant to animal agriculture. Prerequisite: Sophomore standing.

ANSC 299 Animal Mgt Field Studies credit: 1 or 2 Hours.

Field studies of farms and service industries; discusses and demonstrates management practices on commercial farms. Trip normally taken during spring break. May be repeated up to 8 hours in separate terms if topics vary.

ANSC 301 Food Animal Production, Management, and Evaluation credit: 3 Hours.

Provides an overview of how nutrition, genetics, and environment affect beef cattle, swine, and sheep growth, development, and end-product quality and value. Students get hands-on experience evaluating and determining value of live animals and carcasses. Prerequisite: Credit or concurrent enrollment in ANSC 223 and ANSC 224; or consent of instructor.

ANSC 305 Human Animal Interactions credit: 3 Hours.

Explores the relationships between humans and companion animals and the roles and functions that animals play in today's society. Examines the evolution of the human/companion animal bond, benefits and disadvantages of this bond, and working/nonworking roles of companion animals. Controversial issues which are of current concern to society will be examined in detail. Writing and in-class discussions are emphasized. Prerequisite: ANSC 250.

ANSC 306 Equine Science credit: 3 Hours.

Understand and apply current scientific research and principles of equine science to intensive horse production. An in-depth approach to equine reproductive physiology, nutrition, anatomy and exercise physiology will be followed using a combined lecture and laboratory format. Emphasis on current research and hands-on techniques. Prerequisite: ANSC 206, ANSC 222 or equivalent, and credit or concurrent enrollment in ANSC 224 or equivalent; or consent of instructor.

ANSC 307 Companion Animal Management credit: 3 Hours.

This course provides an advanced overview of companion animal biology through consideration of the physical structure, nutrition, behavior, and reproduction of animal species most commonly kept as companions. Course content is applied to discussion of best management practices and basic preventive health care. Course content is largely focused on cats and dogs, although other mammals, birds and reptiles are briefly considered. Legal and economic issues, ethical considerations, and career opportunities associated with companion animals are also incorporated into course discussion. Credit is not given for both ANSC 307 and ANSC 207.

ANSC 309 Meat Production and Marketing credit: 2 Hours.

General approach to meat utilization with emphasis on selecting, grading, cutting, and pricing meat for the retail, restaurant, and food service industry. This course includes laboratory and may use field trips to establishments to highlight course concepts.

ANSC 310 Meat Selection and Grading credit: 3 Hours.

Study characteristics associated with the value of carcasses, primal and retail cuts from meat animals; emphasize USDA grading and specifications as well as written communication. Field trips to meat packing plants are required.

ANSC 312 Advanced Livestock Evaluation credit: 3 Hours.

Advanced instruction in the selection of breeding animals of beef, sheep, and swine species and in the evaluation of market animals for slaughter. This course requires visits to farms, related companies, and events to observe the latest techniques and scientific principles associated with livestock selection and evaluation. Prerequisite: ANSC 211 or consent of instructor.

ANSC 313 Horse Appraisal credit: 2 Hours.

Advanced course for students interested in improving their performance and conformation evaluation skills; provides exposure to the horse show industry and the career opportunities associated with this facet of the horse industry; students may compete in intercollegiate judging contests.

ANSC 314 Adv Dairy Cattle Evaluation credit: 2 Hours.

Advanced instruction in the selection of breeding dairy animals. Involves visits to farms, related companies and events to observe the latest techniques and scientific principles associated with dairy cattle selection and evaluation. Field trips for cattle judging are required. May be repeated to a maximum of 4 hours. Prerequisite: ANSC 204 or consent of instructor.

ANSC 322 Livestock Feeds and Feeding credit: 3 Hours.

Livestock feeds and practical feeding applications for livestock will be addressed. Feed identification and ration formulation will be strongly emphasized. One session of this class will take place at the UIUC Feed Mill. Prerequisite: ANSC 223.

ANSC 331 Biology of Reproduction credit: 2 to 4 Hours.

Study of comparative reproduction, lactation, behavior, reproductive strategies, assisted reproduction, and reproductive diseases in domestic and wild animals including mammals, birds, reptiles, and amphibians. Prerequisite: Sophomore standing; IB 104 or one introductory level biology course.

ANSC 350 Cellular Metabolism in Animals credit: 3 Hours.

Principles and regulation of cellular metabolism in animals, emphasizing energy derivation and its relationship to domestic animal and food production. Prerequisite: CHEM 104, CHEM 105, and ANSC 221 or equivalent.

ANSC 363 Behavior of Domestic Animals credit: 4 Hours.

Introduction to concepts of animal behavior with emphasis on domestic animals; lecture and lab. Prerequisite: ANSC 100.

ANSC 366 Animal Behavior credit: 3 Hours.

Same as ANTH 342 and IB 329. See IB 329.

ANSC 370 Companion Animal Policy credit: 3 Hours.

This course provides an overview of public policy with respect to the use and treatment of companion animals in the United States. Current and alternative policies are considered in terms of their effectiveness in improving or otherwise altering the treatment of companion animals. The influences of animal protection organizations, consumer groups, politicians, the scientific community, and other stakeholders on the development and enforcement of policies are examined in detail. Prerequisite: ANSC 250.

ANSC 396 UG Honors Research or Thesis credit: 1 to 5 Hours.

Independent study, under the supervision of a faculty member, on a problem of appropriate scope and character that culminates in writing a thesis. Intended primarily for honors students who plan on conducting research or pursuing graduate study. Thesis projects must be supervised by a faculty member and reviewed by a departmental committee. Students must present a satisfactory thesis to receive credit. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: Junior standing, minimum GPA of 3.4; consent of a faculty member.

ANSC 398 UG Experiential Learning credit: 1 to 5 Hours.

Student-directed experiential learning on special topics directly pertaining to subject matter in animal sciences. Students are required to complete a Memorandum of Agreement prior to enrolling in this course. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated up to 5 hours per semester, up to a maximum of 10 total hours.

ANSC 400 Dairy Herd Management credit: 3 Hours.

The technology of modern milk production practices; application of principles in nutrition, physiology, economics, health and hygiene, waste management, and facilities design for efficient dairy herd management systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 201 or consent of instructor.

ANSC 401 Beef Production credit: 3 Hours.

The principles of the management of beef cattle enterprises. Applies science and technology to the breeding, selection, feeding, health and production of beef and beef products. Emphasizes the use of research findings in decision-making. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ANSC 401 and ANSC 213. Prerequisite: ANSC 223 or equivalent.

ANSC 402 Sheep Production credit: 3 Hours.

Study of management, nutrition, reproduction, genetics, marketing, economics, housing, health and production record programs as they apply to sheep production. History of the U. S. sheep industry will be explored along with a study of wool production, marketing and processing. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 403 Pork Production credit: 3 Hours.

Applies science and technology to the selection, breeding, feeding, housing and management of swine in a production enterprise; emphasizes use of research findings in decision making. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ANSC 403 and ANSC 213. Prerequisite: ANSC 221 or equivalent; ANSC 223 or equivalent; ANSC 467; and ANSC 224 or equivalent or ANSC 431.

ANSC 404 Poultry Science credit: 3 Hours.

Basic principles of genetics, physiology, nutrition, and health of avian species; the application of science and technology in solving the breeding, nutrition, disease, housing, and other management problems encountered in commercial egg and poultry meat production. 3 undergraduate hours. 3 graduate hours.

ANSC 405 Advanced Dairy Management credit: 2 Hours.

Advanced dairy management compliments the four other classes offered in the dairy certificate program featuring applied management principles and practices needed in modern dairy production. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 201 or equivalent or consent of instructor.

ANSC 406 Zoo Animal Conservation Sci credit: 3 Hours.

Topics related to the conservation, physiology and management of exotic animal species in a captive setting will be addressed. These include conservation biology, population genetics, nutrition, reproduction (natural and assisted), behavior, exhibitry, environmental enrichment and veterinary care. Also covers taxonomy, zoo research, the role of zoos in conservations, and the ethics of maintaining captive animals. 3 undergraduate hours. 3 graduate hours. One Saturday field trip may be required. Prerequisite: ANSC 221 or IB 104, or equivalent.

ANSC 407 Animal Shelter Management credit: 3 Hours.

Basic management concepts related to maintaining the physical and behavioral health of companion animals in a shelter setting will be addressed. Population dynamics and management will be heavily emphasized. Utilizes practical resources available through local and national animal welfare organizations. Two class sessions will take place at the Champaign County Humane Society. One Saturday field trip is required. 3 undergraduate hours. No graduate credit. Prerequisite: ANSC 207 or ANSC 307.

ANSC 409 Meat Science credit: 3 Hours.

Fundamental biological principles that influence composition, processing, preservation, and quality of meat and meat products. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 221 or equivalent, ANSC 222 or equivalent, ANSC 223 or equivalent, and ANSC 224 or equivalent.

ANSC 420 Ruminant Nutrition credit: 3 Hours.

Physiology and microbiology of digestion in the ruminant, and biochemical pathways of utilization of the absorbed nutrients for productive purposes. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 421 Minerals and Vitamins credit: 3 Hours.

Nutritional implications and metabolic roles of minerals and vitamins in animal metabolism. The course is designed to instill a basic understanding of vitamin and mineral functions, absorption, metabolism, and excretion. Research methodologies used in the study of vitamin and mineral nutrition will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent, credit or concurrent registration in MCB 450 or ANSC 350, or consent of instructor.

ANSC 422 Companion Animal Nutrition credit: 3 Hours.

Digestive physiology and basic nutritional considerations of companion animals, with primary focus on dogs and cats. Topics discussed include nutritional idiosyncrasies of dogs and cats, the importance of nutrition in various physiological states, and nutrient needs during disease. Information on pet food regulations, common ingredients and formulation, manufacturing methods, and trends in the pet food industry will also be covered. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 223 or equivalent.

ANSC 423 Advanced Dairy Nutrition credit: 2 Hours.

All aspects of dairy cattle nutrition will be discussed including nutrients, phase feeding (milk curve analysis, dry matter intake, and body weight loss), dry and transition cow programs, forage feeding systems, feed delivery approaches, metabolic disorders related to nutrition, and application of various dairy feeding guides. 2 undergraduate hours. 2 graduate hours. Prerequisites: ANSC 201 or equivalent, or consent of instructor.

ANSC 424 Pet Food & Feed Manufacturing credit: 3 Hours.

Integrates principles of animal nutrition with various aspects pertaining to pet food and animal feed manufacturing. Topics discussed in this course include processing technologies (e.g., extrusion, retorting, baking) involved in the manufacturing of pet foods and animal feeds, principles of diet formulation and nutritional guidelines, and an overview of regulatory affairs, quality control, and good manufacturing practices. This course includes two field trips to a pet food manufacturing facility and a food and feed ingredient company. 3 undergraduate hours. 3 graduate hours. Prerequisite: Required - ANSC 223; Recommended - ANSC 322 and ANSC 422.

ANSC 431 Advanced Reproductive Biology credit: 3 Hours.

Course is an upper-level undergraduate or entry-level graduate course dealing with reproductive biology. It will include the study of basic cell biology of reproduction, lactation, growth and hormone regulation of domestic and non-domestic animals as well as humans, including biotechnology methods of reproduction control, manipulation, performance enhancement of lactation and growth, and disease control. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 224 or equivalent.

ANSC 435 Milk Quality and Udder Health credit: 2 Hours.

An advanced course on the physiological basis of mammary growth, milk secretion, and udder health. Topics covered includes mammary gland anatomy, hormonal control, causes and control of mastitis, milk harvesting, and milk quality. The course will be delivered via CD and web-based synchronous discussion. Students should have a basic course in dairy/animal sciences, or physiology, or consent of the instructor before taking this course. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 201 or equivalent or consent of instructor.

ANSC 437 Adv Reproductive Management credit: 2 Hours.

The focus of this course is advanced techniques and technologies used to manage production livestock. The course will emphasize advanced and emerging technologies such as embryo transfer, cloning, semen sexing, and ultrasound pregnancy diagnosis and fetal sexing and innovations in existing procedures including artificial insemination, reproductive health management, and estrus synchronization. Implementation of existing and emerging techniques and technologies and research and discovery will be covered for individuals focusing on careers in livestock production, clinical veterinary medicine, education, technical service/support, and research and development. 2 undergraduate hours. 2 graduate hours. Prerequisite: ANSC 331 or equivalent, or consent of instructor.

ANSC 438 Lactation Biology credit: 4 Hours.

Examines the structural and functional development of the mammary gland, cell biology, and control of milk synthesis, and composition and biochemistry of milk. Compares and analyzes the physiological processes of lactation in mammals. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 224 or equivalent.

ANSC 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

ANSC 441 Human Genetics credit: 3 or 4 Hours.

Same as ANTH 441. See ANTH 441.

ANSC 444 Applied Animal Genetics credit: 3 Hours.

Principles of heredity and their application to the problems of animal improvement. 3 undergraduate hours. 3 graduate hours.

ANSC 445 Statistical Methods credit: 4 Hours.

Design and analysis of experiments: multiple regression, method of fitting constants, factorial experiments with unequal subclass numbers, analysis of covariance, experimental design; computer applications to agricultural experiments using statistical packages. Same as ABE 445 and NRES 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: CPSC 440, or equivalent.

ANSC 446 Population Genetics credit: 3 or 4 Hours.

Conceptual and mathematical approach to the genetics of populations: estimation of allele and genotype frequencies; Hardy-Weinberg principle; measures of genetic diversity and distance; selection; non-random mating; genetic drift; mutation; neutral theory; migration and population subdivision; linkage and recombination; coalescence and phylogenetic inference. Applications to animals, plants, human health and wildlife conservation. Same as IB 416. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students desiring 4 hours credit do additional work in some area of population genetics. Prerequisite: An introductory genetics course (ANSC 221 or IB 204); one of MATH 220, MATH 221, or MATH 234; or consent of instructor.

ANSC 447 Advanced Genetics and Genomics credit: 4 Hours.

Current principles and methods in genetics and genomics to better understand genome function, genome evolution, the genetic architecture of complex traits, the genetic basis of human and animal diseases, and animal productivity. To build a strong foundation for the application of novel genomic tools, the course will provide an overview of main concepts in genetics and genomics, including gene-environment interaction and epigenetic modifications. The focus of the course will be on mammals, but novel applications of the new sequencing technologies to other systems will be discussed. In addition to the presentation of scientific concepts and discoveries, the course will include a significant practical component. Students will learn software programs used for genetic mapping and bioinformatics analysis, will review and present scientific papers, and will write a research paper proposing their own experiments. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 221, MCB 150, or IB 150.

ANSC 448 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Introduction to deterministic and stochastic mathematical models for the life sciences, statistical methods for fitting and testing models, and computer simulation programs. Applications to populations, processes, and products of animals, plants, and humans. Same as IB 487 and STAT 458. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students desiring 4 hours credit do additional work in some area of mathematical modeling in the life sciences. Prerequisite: IB 104; a course in calculus, and a course in computer sciences; or consent of instructor.

ANSC 449 Biological Modeling credit: 3 or 4 Hours.

Same as CPSC 448, GEOG 468, and IB 491. See GEOG 468.

ANSC 450 Comparative Immunobiology credit: 4 Hours.

Advanced concepts of immunophysiology and immunogenetics. Immunophysiology with an emphasis on immune-neuroendocrine interactions. The molecular and cellular basis of self-nonself recognition with an emphasis on the major histocompatibility complex in vertebrates and innate immunity in both vertebrates and invertebrates. The mucosal immune system, which requires a complex interplay between innate and acquired immunity to protect mucosal surfaces exposed to the environment. A working knowledge of genetics and cellular and molecular biology is recommended. Same as MCB 442 and PATH 410. 4 undergraduate hours. 4 graduate hours.

ANSC 451 Microbes and the Anim Indust credit: 3 Hours.

Fundamental aspects of the ecology of microorganisms and their biochemical activities related to the degradation of organic matter with emphasis on the gastrointestinal tract of production animals. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 100, and ANSC 350, MCB 300, MCB 424, or equivalent.

ANSC 452 Animal Growth and Development credit: 3 or 4 Hours.

Basic principles of animal growth from early fetal development through typical marketing ages for the major domestic animal species. Topics discussed include molecular and cellular determinants of tissue development and whole animal growth, with coverage of current and future technologies for manipulating growth to enhance animal production. 3 or 4 undergraduate hours. 4 graduate hours. Prerequisite: ANSC 221, ANSC 222, ANSC 223, and ANSC 224.

ANSC 453 Stem Cell Biology credit: 3 or 4 Hours.

The history of stem cell biology as well as up-to-date topics in stem cell research will be presented and discussed with emphasis on experimental approaches. Each student is expected to present research articles relative to each focus area and lead the discussion for the whole class every week. Topics include Molecular Reproductive Biology, Genetics, Physiology of both adult- and embryo-derived stem cells, and their application to Biotechnology and Regenerative Medicine. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 100 or equivalent, MCB 316, ANSC 221, ANSC 224, or equivalent; or consent of instructor.

ANSC 467 Applied Animal Ecology credit: 3 Hours.

An in-depth multidisciplinary approach (physiology, behavior, immunology, neuroscience) to understanding animal-environment interactions (including thermal, air, microbial, photic and behavioral factors) as basis for prescribing practical environments for keeping animals. Courses in physiology, biology, nutrition, microbiology, and genetics are recommended. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANSC 221 or equivalent, ANSC 222 or equivalent, and ANSC 223 or equivalent; or consent of instructor.

ANSC 471 ANSC Leaders & Entrepreneurs credit: 3 Hours.

Designed to familiarize students with the tools and skills necessary for successful business operation in industry and entrepreneurial environments including food animal production farms. The overall aim is to explore how enhanced interpersonal and leadership skills facilitate positive relations in business. Students will design a business plan, an entrepreneurial enterprise, that will be read by an external committee of professors, community members, and business owners and evaluated for its viability and creativity. This course is relevant for leaders as well as future entrepreneurs interested in acquiring valuable skills that may be applied to many careers. 3 undergraduate hours. 3 graduate hours. Prerequisites: Any advanced composition course.

ANSC 483 Outreach Education Skills credit: 3 Hours.

Same as CPSC 483. See CPSC 483.

ANSC 498 Integrating Animal Sciences credit: 2 Hours.

Introduction to the theoretical basis of and skills associated with leadership, inquiry, and collaborative learning. Capstone experience in integrating knowledge, practicing skills, and applying theory through collaborative projects that address current issues in animal sciences. Projects relate to the impact of animals and animal use on humans and societal issues facing the world today. 2 undergraduate hours. 2 graduate hours. Prerequisite: Must have completed one of the following: ANSC 293, ANSC 294, ANSC 295, ANSC 299, ANSC 396, ANSC 398, ACES 293, ACES 298 or ACES 299.

ANSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in animal sciences. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

ANSC 509 Muscle Biology credit: 2 Hours.

Microstructure and chemical composition of muscle tissue; chemistry and biosynthesis of muscle and connective tissue proteins; and biochemical aspects of muscle contraction and rigor mortis. Prerequisite: ANSC 452, ANSC 409, and ANSC 350 or MCB 450.

ANSC 510 Science of Animal Well-Being credit: 1.5 Hours.

Same as VCM 510. See VCM 510.

ANSC 520 Protein and Energy Nutrition credit: 3 Hours.

Physiological aspects of protein and amino acids, fats and fatty acids, and carbohydrates as applied to higher animals; includes classification, digestion, absorption, utilization, metabolism, and dietary deficiencies and excesses. Same as NUTR 520. 3 graduate hours. No professional credit. Prerequisite: MCB 450 or equivalent and ANSC 222 or equivalent.

ANSC 521 Regulation of Metabolism credit: 4 Hours.

Same as FSHN 511 and NUTR 511. See NUTR 511.

ANSC 522 Advanced Ruminant Nutrition credit: 3 Hours.

Physiological and microbiological aspects of ruminant digestion and their influence on the metabolism of the extraruminal tissues; interpretation of nutritive requirements in terms of rumen microbial activities; and evaluation of research techniques. Offered in alternate years. Prerequisite: ANSC 420 or equivalent, and ANSC 350, MCB 450, or equivalent.

ANSC 523 Techniques in Animal Nutrition credit: 3 Hours.

Discusses and applies methods of laboratory analysis and animal experimentation frequently used in nutrition research. Same as NUTR 523. 3 graduate hours. No professional credit. Prerequisite: Courses in nutrition, physiology, and biochemistry and consent of instructor.

ANSC 524 Nonruminant Nutrition Concepts credit: 2 Hours.

Review of literature in nonruminant nutrition. Emphasizes basic concepts associated with food intake, carbohydrate and fat utilization, protein quality, bioavailability of nutrients, and diet formulation. Same as NUTR 524. 2 graduate hours. No professional credit. Prerequisite: Consent of instructor.

ANSC 525 Topics in Nutrition Research credit: 1 Hour.

Same as FSHN 510 and NUTR 510. See NUTR 510.

ANSC 526 Adv Companion Animal Nutrition credit: 3 Hours.

Students will learn how to effectively apply advanced concepts related to pet nutrition and disease, including the metabolism within healthy and diseased dogs and cats, how nutrition may aid in preventing and treating disease, and the science behind pet food formulation and production. Students will develop critical-thinking and problem-solving skills by writing and reviewing grant proposals and delivering an oral presentation. Prerequisite: ANSC 422 (Companion Animal Nutrition) or consent of instructor.

ANSC 530 Advanced Endocrinology credit: 2 Hours.

Same as MCB 512 and CB 512. See MCB 512.

ANSC 533 Repro Physiology Lab Methods credit: 1 to 3 Hours.

Laboratory methods used in reproductive physiology studies, such as blood sampling, large animal surgery, collection of tissues and gametes, embryo recovery, in vitro fertilization, tissue culture, hormone measurements, and directed individual research problems. Same as MCB 533 and CB 533. Prerequisite: Consent of instructor.

ANSC 541 Regression Analysis credit: 5 Hours.

Same as CPSC 541. See CPSC 541.

ANSC 542 Applied Bioinformatics credit: 4 Hours.

Introduction to theoretical and applied aspects of bioinformatics. Topics include genomic and proteomic databases, sequence alignment and search algorithms (e.g., BLAST, FASTA, CLUSTAL W), predictive methods in DNA sequence, machine-learning techniques (e.g., Hidden Markov Models) and data mining, biomolecular structure and its prediction, molecular evolution and phylogenetic reconstruction, structural genomics and phylogenomics. Concepts are complemented with hands-on experience with computational biology databases and bioinformatic tools. Same as CPSC 569 and IB 506. Prerequisite: Graduate level status or consent of instructor.

ANSC 543 Bioinformatics credit: 4 Hours.

Same as CHBE 571, MCB 571, and STAT 530. See CHBE 571.

ANSC 545 Statistical Genomics credit: 3 or 4 Hours.

This course presents current statistical approaches to analyze DNA microarray, quantitative trait loci and proteomic data and understand the genetic architecture of complex phenotypes including health, performance and behavior. DNA microarray studies measure the expression of thousands of genes simultaneously. Quantitative trait loci (QTL) mapping studies detect associations between genomic regions and phenotypes. Results from these and proteomic studies help identify and quantify genes, regulators and products leading to drug, biotechnology and scientific discoveries. Same as CPSC 545 and IB 507. Prerequisite: Graduate level course in Statistics and graduate level course in Molecular Biology.

ANSC 554 Immunobiological Methods credit: 3 Hours.

Same as PATH 544. See PATH 544.

ANSC 561 Animal Stress Physiology credit: 2 Hours.

Examines animal's physiological and behavioral adaptations to stress. Prerequisite: Consent of the instructor.

ANSC 590 Animal Sciences Seminar credit: 0 to 2 Hours.

Discussions of current research and literature. Registration for 0 to 2 hours each term is expected for animal sciences graduate students. Approved for both letter and S/U grading. May be repeated to a maximum of 2 hours for Masters students and 4 hours for Ph.D. students.

ANSC 592 Adv Topics in Animal Science credit: 1 to 4 Hours.

Selected topics associated with teaching, research, and production related to the animal industry. Prerequisite: Consent of instructor.

ANSC 593 Res Studies in Animal Sciences credit: 1 to 4 Hours.

Directed and supervised study of selected research topics in Animal Sciences. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

ANSC 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Anthropology (ANTH)

ANTH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ANTH>)

Courses

ANTH 101 Introduction to Anthropology credit: 3 Hours.

Anthropology was first envisioned as a holistic discipline, combining insights from the study of human anatomy and evolution, research on material remains of human settlements, and the analysis of social interaction in language and other cultural practices. Following this tradition, this course explores the questions about where humans came from, how societies live and communicate, and why human cultural groups vary.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 102 Human Origins and Culture credit: 4 Hours.

Introduction to human evolutionary biology focusing on the biological processes responsible for our evolution. Draws on a diverse range of disciplines- evolutionary biology, population genetics, comparative anatomy, primatology, archaeology, geology and paleoecology to provide context for interpreting the fossil and archaeological evidence for humans' biological origin and evolution and early cultural change.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 103 Anthro in a Changing World credit: 3 Hours.

Presents the fundamental areas of anthropological analysis through a series of comparative cases that emphasize social and cultural relations in global contexts. Directs attention to the anthropological history of global empires and colonial states, their cultural exchanges, and contemporary studies of culture, society, and globalization.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ANTH 104 Talking Culture credit: 3 Hours.

Introduction to linguistic anthropology, focusing on the role of language in the creation and maintenance of society and culture and on a person's concept of self within that culture. Demonstrates how language use within a community can serve as the foundation for the analysis of cultural practices. Same as LING 104.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 105 World Archaeology credit: 3 Hours.

Using archaeological data, traces our prehistoric heritage and the processes which led to the evolution of agriculture, settled villages, and civilization in many areas of the world. Lectures range from the earliest Homo sapiens to Sumeria, Egypt, Mexico, Peru, and the United States.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 106 Hist Arch Americas credit: 3 Hours.

Explores recent theoretical, methodological, and thematic developments in historical archaeology in North America and the Caribbean.

The temporal coverage is 1500-1900 AD. Examines how historical archaeologists use artifactual, documentary and oral history evidence in interpreting the past, and how historical archaeology can contribute to our understanding of the ways by which material culture can be used to study race, class, gender, and ethnic identities. Same as AFRO 106.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

ANTH 108 Religion & Society in West I credit: 3 Hours.

Same as JS 108, PHIL 108, REL 108, and SOC 108. See REL 108.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

ANTH 109 Religion & Society in West II credit: 3 Hours.

Same as PHIL 109, REL 109, and SOC 109. See REL 109.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

ANTH 130 History of South Asia credit: 3 Hours.

Same as HIST 130. See HIST 130.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

ANTH 143 Biology of Human Behavior credit: 3 Hours.

Critical consideration of data and information bearing on current controversies and ideas concerning selected aspects of human behavior.

Topics to be discussed include communication; social organization; and parental, sexual, and aggressive behavior. Same as HDFS 143.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

ANTH 157 The Archaeology of Illinois credit: 3 Hours.

Traces the prehistory of Illinois from the first entry of people into the region more than 113,000 years ago until the 17th century and the beginning of historical records; examines subsequent cultural changes up to the 19th century and statehood from an archaeological and ethnohistorical perspective.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 160 Contemporary Social Issues credit: 3 Hours.

Course considers how anthropological theory and methods enhance our understanding of contemporary social and political issues, including immigration, education, affirmative action, and welfare. It examines the relationship between social policy and social science as well as the strengths and limits of anthropological methods for social and political issues.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

ANTH 165 Lang & Culture Native North Am credit: 3 Hours.

Develops understanding of the rich diversity of languages and cultures found among Native North American peoples from the perspectives of sociocultural and linguistic anthropology. Same as AIS 165.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 175 Archaeology and Pop Culture credit: 3 Hours.

Examines the ways in which the ancient past has been interpreted, appropriated, represented, used, and misused for a variety of reasons by political parties, national governments, and religious and ethnic groups living in the present.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

ANTH 180 The Archaeology of Death credit: 3 Hours.

Cross-cultural introduction to the celebration of death across time and space. Examines the anthropological and archaeological literature on death, particularly in terms of death ritual and burial practices. Students study popular films on death in different cultures, and carry out a field project at a local cemetery.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

ANTH 182 Latin American Cultures credit: 4 Hours.

Latin America considered as a theater of conflict and cultural experimentation among Native American, African, and Iberian peoples; their survival and transformation as reported in selected ethnographies and eyewitness sources; and some modern theories and controversies about their experience.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

ANTH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ANTH 209 Food, Culture, and Society credit: 3 Hours.

Introduces basic anthropological and sociological methods, concepts and approaches to the study of the food. Explores issues including gender roles, religious influences, family relationships, community sharing, nationalist rituals, and global processes in the production, distribution and consumption of food. Film, ethnographies, and other social science studies will be examined. Same as SOC 269.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ANTH 210 Families in Global Perspective credit: 3 Hours.

Same as HDFS 220. See HDFS 220.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

ANTH 220 Introduction to Archaeology credit: 3 Hours.

Introduction to the problems of studying past cultures; special attention given to the ranges of techniques available and the adequacy of various methodologies as bases for sound inference about the structure of extinct cultures. Prerequisite: ANTH 102 or consent of instructor.

ANTH 222 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, PS 242, and SOC 222. See AFST 222.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 223 Exploring African Cities credit: 3 Hours.

Same as LA 220. See LA 220.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

ANTH 224 Tourist Cities and Sites credit: 3 Hours.

Examination of tourism's social, political, economic, cultural, and physical dimensions from an anthropological perspective.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ANTH 225 Women in Prehistory credit: 3 Hours.

Course identifies the presence of women in the archaeological record and seeks to reconstruct women's lives and roles in a range of ancient societies. It also considers the intellectual history of gender studies in archaeology and anthropology. Same as GWS 225.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ANTH 230 Sociocultural Anthropology credit: 3 Hours.

Introduction to the anthropological study of contemporary human societies; emphasis on the comparative study of social organization, interpersonal relations, cultural ecology, and processes of sociocultural change, but also includes some consideration of the method and theory of ethnographic field research.

ANTH 240 Biological Anthropology credit: 3 Hours.

Past and present evolution of the human species and population and individual biological variation; topics include genetic principles relevant to human evolution, primate phylogeny and behavior, fossil evidence for human evolution, and the origin and significance of biological diversity in modern humans. Prerequisite: ANTH 102 or ANTH 143; or an introductory life sciences course; or consent of instructor.

ANTH 241 Human Biological Variation credit: 3 Hours.

Examines the biological concept of race as applied and misapplied to Homo sapiens by anthropologists and others from the 18th century to the present and of the origin, nature, and significance of so-called racial variation.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANTH 242 History of Human Evolution credit: 3 Hours.

Reviews the history of evolution and its controversies from the pre-Darwinians to contemporary debates. Examines disciplinary and wider societal debates and how they affect each other.

ANTH 243 Sociality of the Great Apes credit: 3 Hours.

Examines the social organization, mating patterns, and group structure of free-ranging chimpanzees, gorillas, and orangutans. Presents historical perspective focusing on misconceptions that have colored our understanding of ape social behavior; addresses questions concerned with learning potential, food sharing, social cooperation, aggressive behavior, self-awareness, and the appropriateness of the apes as models for understanding human behavior. Prerequisite: ANTH 102, ANTH 143, or an equivalent course in animal behavior; or consent of instructor.

ANTH 246 Forensic Science credit: 4 Hours.

History and theory underlying methods used in forensic science. Topics include the courtroom, the units of a crime laboratory, methods of securing and investigating a crime scene, and the analysis of evidence collected from a crime scene such as blood, fibers, hair and fingerprints.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANTH 247 Forensic Science DNA Lab credit: 3 Hours.

Forensic science is the application of science to the law and encompasses a wide variety of scientific disciplines. This course introduces students to general laboratory practice, molecular biology and DNA analysis skill that are commonly used by forensic DNA scientists. Students will learn using a "hands-on" and interactive approach with many of the same tools used by professional forensic DNA scientists. Prerequisite: ANTH 246.

ANTH 249 Evolution and Human Disease credit: 3 Hours.

Principles of modern evolutionary theory are applied to medical problems. Topics include: transmission, pathogen strategies, symptoms and spectrum of disease, evolution of virulence, concept of cause, antimicrobial resistance, emerging diseases, stress and adaptation, nutrition, diachronic overview of changing patterns of human disease, and ecological factors.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ANTH 250 The World Through Museums credit: 3 Hours.

Same as MUSE 250. See MUSE 250.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 258 Sex in Nature and Culture credit: 3 Hours.

A simultaneous exploration of human sexuality from a biological and cultural perspective. Same as GWS 258.

ANTH 259 Latina/o Cultures credit: 3 Hours.

Introduction to the Spanish-speaking population of the United States, including demography, history, economics, and culture; emphasis on Mexican-Americans and Puerto Ricans, although other Spanish-speaking groups are also considered. Same as LLS 259. Prerequisite: ANTH 103 or consent of instructor.

ANTH 261 Intro to the African Diaspora credit: 3 Hours.

Same as AFRO 261. See AFRO 261.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

ANTH 262 Women's Lives credit: 3 Hours.

Perceptions of women, their perceptions of themselves, and their varying roles and statuses in several contemporary societies in diverse countries; supervised ethnographic observation of women's behavior. Same as GWS 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ANTH 266 African Film and Society credit: 3 Hours.

Introduction to African cinema as a contemporary art form and as a window on the social and cultural realities of Africa. The course includes discussion of modern African culture, the African film industry, and African cinema as an art form and as popular entertainment. Same as AFST 266.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ANTH 267 Memoirs of Africa credit: 3 Hours.

Course introduces Africa to students who have read little or nothing about the continent, the course provides a "user-friendly" approach by offering engagingly written narratives of actual lives lived. The texts may be a combination of memoirs written by Africans (about their childhood experiences growing up in various regions of Africa) and by non-African scholars and other authors (including but not limited to anthropologists) who have spent significant amounts of time on the continent. Same as AFST 267. Prerequisite: Completion of Campus Composition I general requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Cultural Studies - Non-West

ANTH 268 Images of the Other credit: 3 Hours.

Do all peoples view neighboring or distant populations as radically different "Others," or can humans create mutual images based on a notion of shared humanity? Course compares and analyzes the range of images of ethnic, "racial," gender, class, and bodily differences that have been enacted historically and cross-culturally in both Western and non-Western populations. Prerequisite: A previous course in history and/or one of the social sciences suggested.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

ANTH 270 Language in Culture credit: 3 Hours.

Examines the intersections of culture and language. Topics include the definition of language; the cultural shaping of narrative; how different linguistic systems guide speakers to think differently about the world; and how ideologies about language relate to beliefs about the nation, modernity, race, and gender. Credit is not given for both ANTH 270 and ANTH 271.

ANTH 271 Language in Culture-ACP credit: 3 Hours.

Course is identical to ANTH 270 except for the additional writing component. Credit is not given for both ANTH 271 and ANTH 270. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

ANTH 277 Ancient Cities, Sacred Land credit: 3 Hours.

Examines urban development from its origins to the present day. Among the concepts covered are urbanism, urbanization, ceremonial centers and ceremonial cities, the city as a system, the spatial and economic organization of cities, and the built environment (sacred landscapes, vernacular architecture, places of power). Small field project is conducted in Champaign-Urbana.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

ANTH 278 Climate Change & Civilization credit: 3 Hours.

Examination of how climate change impacts society. With the increasing need to understand how climate changes and society intersect at present, it is becoming important that we address critical questions about how lessons from the past inform present needs. Case studies from around the world are discussed.

ANTH 285 Intro to Korea Through Film credit: 3 Hours.

Same as EALC 285. See EALC 285.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 286 Southeast Asian Civilizations credit: 3 Hours.

Overviews the cultural and institutional history of the Indianized states and Vietnam, with attention to dominant commercial, political, religious, artistic, and social traditions of Southeast Asia. Same as ASST 286 and HIST 225.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

ANTH 287 Contemporary East Asia credit: 3 Hours.

Same as EALC 288. See EALC 288.

ANTH 288 American Indians of Illinois credit: 3 Hours.

An interdisciplinary survey of the Native American experience in the Illinois region from pre-Columbian times to the present. Introduces theories, concepts and methods in archaeology, history, and sociocultural anthropology. Includes archaeological field site and museum visits, plus guest lectures by American Indian scholars and community members. Same as AIS 288 and HIST 288.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

ANTH 290 Jewish Cultures of the World credit: 3 Hours.

Survey of the world's Jewish cultures with a particular focus on the non-Western world. Addresses the relations between Judaism and other religious systems and the nature of Jewish life in such locales as North Africa, Sub-Saharan Africa, India, China, and South America.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 340 Archaeology of Religion credit: 3 Hours.

We familiarize ourselves with how anthropologists approach the study of religion and then look at how we can best understand religion in the past. We examine the differences between religion, worldview, cosmology and culture, and investigate what archaeology can tell us about the origins of religion and the materiality and mundane practices of religion, revitalization and missionization. Lectures will cover theoretical, perspectives, and archaeological cases. Same as REL 342. Prerequisite: Consent of the instructor.

ANTH 341 Native People and Christianity credit: 3 Hours.

Same as REL 341. See REL 341.

ANTH 342 Animal Behavior credit: 3 Hours.

Same as ANSC 366 and IB 329. See IB 329.

ANTH 343 Behavior and Biology of Women credit: 3 Hours.

Exploration of female biology and behavior in a broad evolutionary context. Explores development from pre-puberty through menopause, reproductive processes such as pregnancy, birth and lactation, cognitive and behavioral sex differences, and male and female reproductive strategies in a variety of cultural settings. Examples are drawn primarily from traditional and modern human societies as well as field and experimental data from other species, particularly non-human primates. Prerequisite: ANTH 143 or consent of instructor.

ANTH 346 Forensic Anthropology credit: 3 Hours.

Analysis of human skeletal remains of the medico-legal profession. Topics include the development of the field of forensic anthropology, biological profile and skeletal trauma analysis, interval since death estimation. Additional topics include investigation of crime scenes, the legal role of the biological anthropologist as an expert witness and case report preparation. Attention will also be drawn to the incorporation of anthropological and ethical approaches to dealing with death and using human remains for research. Prerequisite: ANTH 240 and ANTH 246.

ANTH 347 Human Osteology credit: 3 Hours.

Comprehensive knowledge of the human skeleton is central to reconstructing the anatomy, demography, health and evolution of past populations because most of our evidence is derived from preserved skeletal and dental remains. The primary goal of this course is the identification of isolated and fragmentary skeletal remains given that this is a prerequisite to all subsequent analysis. In addition to identifying the bones and landmarks of the human skeleton, students will learn about the structure and function of bone, understand the growth and development of the human skeleton and be introduced to analytical techniques used in human osteology including paleopathology, paleodemography and forensics. Prerequisite: ANTH 240.

ANTH 358 People of the Ice Age credit: 3 Hours.

Explores a vast period of human prehistory - 2 million to 10,000 years ago - before the first cities arose and before people domesticated plants and animals in the Old World; uses archaeological and paleoanthropological data to understand past life ways as well as reasons for change through time in human adaptation. Prerequisite: ANTH 102.

ANTH 360 Evolution and Human Health credit: 3 Hours.

Same as IB 360. See IB 360.

ANTH 361 Ecology and Human Health credit: 3 Hours.

Same as IB 361. See IB 361.

ANTH 362 Body, Personhood, and Culture credit: 3 Hours.

Examines basic cultural assumptions about the human body and what it means to be a "person" in Western and non-Western societies. Addresses key themes in cultural anthropology and the social sciences concerning the relationship of the individual and society and of nature and culture. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ANTH 363 Anth of Dance/Movement credit: 3 Hours.

Anthropological study of dance and other human movement systems in cultural contexts. Designed especially for students with little or no background in socio-cultural anthropology or the social sciences. Includes reading the works of major figures in the field, and learning how to study dances, signed languages and ritual events from an anthropological perspective. Students will also learn about socio-cultural theory and observation, doing fieldwork, movement literacy, problems of subjectivity and objectivity, and personal anthropology.

ANTH 364 Performing "America" credit: 3 Hours.

Introduction to theories of performance and performativity or enactment, and applies these to an understanding of public events like political rallies, music, the arts, protests, and everyday life in the U.S. Emphasis on how these practices of production and consumption help articulate social identity, including gendered, sexual, racial/ethnic, religious, class, and generational affiliations. Focus on the contemporary U.S. with comparative case studies drawn from other parts of the world and some historical materials. Draws on anthropological studies, as well as scholarly literatures from communication studies, literature, the arts, and social history. Prerequisite: At least one course in anthropology or the social sciences.

ANTH 368 'America' in the World credit: 3 Hours.

Study of the lure and rejection of the U.S. around the world, by drawing on long-standing anthropological approaches to the histories of peoplehood, selfhood, and otherness. Examines the historical, political, cultural, economic, and social context of both anti- and pro-Americanism, in various parts of the globe. Prerequisite: Any previous course in cultural anthropology.

ANTH 370 Latina/o Ethnography credit: 3 Hours.

Same as LLS 370. See LLS 370.

ANTH 372 Topics in Lang & Culture credit: 3 Hours.

Advanced topics in language and culture. May be repeated in separate terms. Prerequisite: ANTH 104, ANTH 270, or consent of instructor.

ANTH 373 Culture & Psychology credit: 3 Hours.

Same as PSYC 373. See PSYC 373.

ANTH 374 Anth of Science and Technology credit: 3 Hours.

Examination of science as a cultural system. Utilizing ethnographic methods and social theories, the course will locate scientific knowledge, institutions and practices within enduring anthropological questions around rationality and truth, meaning, personhood, sociality, power inequalities, social transformations, and social justice. Prerequisite: Junior standing.

ANTH 375 The Culture of Nature credit: 3 Hours.

Examines how the natural and the cultural are mutually-constitutive concepts, and investigates contemporary and historical constructions of notions of a natural world. We will see how these concepts have varied over time and among different social groups, with a special emphasis on the contemporary United States. Topics will include the idea of landscape and of nature as a resource to be used, appreciated, represented, controlled, or enjoyed. In addition, the course will feature a special unit on sustainability, and one devoted to analyzing our relationships to animals. Prerequisite: At least one anthropology course or a course in another social science.

ANTH 376 Aztec Civilization credit: 3 Hours.

Detailed description and analysis of Aztec culture, society, and empire at c. 1500 AD, based primarily on ethnohistorical documentation. Topics covered include life cycle, family and society, political and economic organization, warfare, religion, and intellectual and aesthetic traditions. External relationships with neighboring peoples and the indigenous view of the Spanish conquest are considered. Prerequisite: ANTH 102, ANTH 103, or ANTH 105.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

ANTH 379 Medical Anthropology credit: 3 Hours.

Introduction to concepts and social aspects of health, illness, and curing in different cultures. Considers concepts of interaction between folk and modern medicine in developing nations and delivery of health care as an international social problem. Prerequisite: ANTH 230 or ANTH 260, or consent of instructor.

ANTH 380 Ethnography of the University credit: 3 Hours.

Introduces students to ethnographic research methods through research on the University of Illinois. Emphasizes qualitative research methods and institutional analysis. Student work builds on research done by prior students and student research is web archived. Reflection on and reconfiguration of research questions and hypotheses is encouraged as research projects proceed. Prerequisite: Any 100-level or 200-level sociocultural anthropology course: ANTH 103, ANTH 104, ANTH 230 etc.

ANTH 390 Individual Study credit: 2 to 4 Hours.

Supervised reading and research on anthropological topics chosen by the student with staff approval. Especially (but not exclusively) for students who are preparing for a summer field-work project, or who have some justifiable reason for doing independent study, but who do not qualify for the honors (departmental distinction) courses. Prerequisite: Junior or senior standing; 12 hours in anthropology; consent of instructor. May not be taken concurrently with ANTH 391 or ANTH 495.

ANTH 393 The World of Jewish Sepharad credit: 3 Hours.

Study of the cultural legacy and history of the Sephardic Jews, mostly focusing on the Mediterranean and the thriving communities they established in countries of Muslim governance and in the Balkans, and more recently in America. The Judeo-Spanish language, which has been preserved until the end of the twentieth century, the press, literature and music are components of this course. Same as HIST 393 and REL 393. This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ANTH 399 Special Topics credit: 1 to 3 Hours.

Topics are given on a one-time only, experimental basis. Faculty offer special topics in their areas of expertise that provide an opportunity for undergraduates to be exposed to some of the most current developments in faculty research. May be repeated.

ANTH 402 Transnational Islam, Europe-US credit: 3 or 4 Hours.

Anthropological approach to transnational Islam, focusing on its various expressions in Europe and the United States, particularly since World War II. Same as ASST 402 and REL 409. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as GBLB 403, GWS 403, HIST 434, REL 403, and SAME 403. See REL 403.

ANTH 404 Disability, Culture & Society credit: 3 or 4 Hours.

Same as CHLH 407, KIN 407, and REHB 407. See CHLH 407.

ANTH 405 Contemporary Central America credit: 3 or 4 Hours.

Explores cultural, political and historical processes in 20th- and 21st-century Central America—focusing on Costa Rica, Nicaragua, Honduras, El Salvador, and Guatemala—through an anthropological lens. Grapples with a core set of questions arising from changes in the global relations, including the rise of global neoliberalism, the crises and renovations of political projects, the transformations of spatial relations through transnational migration, and the proliferation of various pan-hemispheric as well as local identity-based movements. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 or ANTH 182 or ANTH 230 or a course in Latin American history or consent of instructor.

ANTH 408 Human Evolutionary Anatomy credit: 3 or 4 Hours.

Comprehensive, comparative study of musculoskeletal anatomy in primates, focusing on functional and adaptive changes that have occurred in the masticatory apparatus, facial skeleton, and locomotor systems of New World monkeys, Old World monkeys, apes, and humans. Relationships between morphology, ecology, and behavior are discussed, applied to the fossil record, and used to address current issues in human evolution. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 443 or ANTH 440 or ANTH 456 or a course in human or comparative vertebrate anatomy.

ANTH 409 Human Evolutionary Anatomy Lab credit: 3 or 4 Hours.

Comparative detailed dissections of craniofacial, locomotor, neural, and alimentary systems in nonhuman primates, to understand the anatomical bases of human evolution. 3 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in ANTH 408.

ANTH 411 Research Methods in Socio-Cultural Anthropology credit: 3 or 4 Hours.

Exploration of qualitative forms of research used by sociocultural anthropologists when conducting field research. Emphasis is on formulating research questions, research design, and application of these ethnographic methods to a substantial research project. 3 undergraduate hours. 4 graduate hours.

ANTH 414 Writing Ethnography credit: 3 or 4 Hours.

Addresses issues of the theoretical divide between the humanities and the social sciences, the unique authority of the scholar/author, and the invisibility of the reader in producing scholarly texts. Focusing on the ways in which scholars are also authors, we explore current debates by reading a selection of contemporary anthropological texts (and some prescient precursors) that boldly experiment with how ethnography is written. Students will experiment with several ethnographic writing styles. This course is designed for advanced undergraduate anthropology students and graduate students in cultural anthropology, writing studies, and education. 3 undergraduate hours. 4 graduate hours. Prerequisite: Undergraduate students should have already taken at least one 300-level course in cultural anthropology, and graduate students in cultural anthropology, writing studies, and education. Other students should contact the instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

ANTH 416 Anthropology of Music credit: 3 Hours.

Same as MUS 416. See MUS 416.

ANTH 420 Case Studies Global Heritage credit: 3 or 4 Hours.

Cultural heritage encompasses major domains of social, economic, political, religious and environmental practice and policy-making under today's conditions of globalization. Students will critically examine cultural heritage case studies from around the world. 3 undergraduate hours. 4 graduate hours.

ANTH 421 Social Organization credit: 3 or 4 Hours.

Introduction to anthropological concepts of social organization and structure; considers kinship theory, descent and alliance systems, social stratification, nonkin association, social networks, group identification and boundaries, structural-functional interpretations of society, and the meaning of social or cultural structure. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 423 Economic Anthropology credit: 3 or 4 Hours.

Covers the emergence of economic anthropology as a subdiscipline; considers various definitions of economics with their implications for the study of human society; emphasizes the relationship between social organization and economic life from the perspectives of classical studies in anthropology and their contemporary interpretations. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230.

ANTH 425 Anthropology of Education credit: 2 or 4 Hours.

Same as EPS 425 and EPSY 466. See EPS 425.

ANTH 430 The History of Anthropology credit: 4 Hours.

Provides a selective overview of the history and historiography of anthropology in the 19th and 20th centuries. The class moves chronologically and topically, paying particular attention to the social, institutional, and historical contexts of paradigmatic shifts, the interconnections between various national traditions, and the negotiations of the discipline's boundaries. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate or senior standing in anthropology, or consent of instructor.

ANTH 432 Genes and Behavior credit: 3 Hours.

Same as IB 432, NEUR 432, and PSYC 432. See IB 432.

ANTH 435 The Neandertal Debate credit: 3 or 4 Hours.

A detailed investigation of the origin and biological adaptations of late archaic humans and the emergence of modern humans. Explores the practice and validity to using skeletal anatomy to interpret the behavior of past populations using evolutionary and comparative approaches. This course will interpret Neandertal biology and anatomy with particular emphasis on its relevance for theories about the origin and evolution of our species. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 240.

ANTH 436 Biogeography credit: 3 Hours.

Same as ESE 439, GEOG 436, IB 439 and NRES 441. See IB 439.

ANTH 437 Primate Behav Endocrinology credit: 3 or 4 Hours.

Introduction to behavioral endocrinology, focusing on primate, especially human behaviors. Examines the relationship between hormones and behavior using an evolutionary and comparative approach, considering both how hormones influences behavior and how behavioral interactions regulate endocrine physiology. The course covers basic endocrine system physiology and function, hormonal influences on primate social behaviors such as male and female reproductive behaviors, courtship, parental care, bonding and attachment, as well as aggression and territoriality. Other topics include stress, hormones, and health. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 and ANTH 143; or an equivalent course in behavioral ecology, primate behavior, physiology or psychology; or consent of instructor.

ANTH 438 Primate Life History Evolution credit: 3 or 4 Hours.

Life history seeks to explain why differences exist in the pathways that organisms follow from conception to death. Examination of the diversity in the evolution of primate (including human) life histories. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 102, ANTH 143, ANTH 240, ANTH 243 or equivalent.

ANTH 440 Human Paleontology credit: 3 or 4 Hours.

Principles of evolution and a survey of human evolution from the early primates through the Pleistocene epoch; emphasis on evolutionary theory as applied to humans and interpretation of the fossil record. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 240 or consent of instructor.

ANTH 441 Human Genetics credit: 3 or 4 Hours.

Principles of human genetics; anthropological aspects of race and race formation; and hereditary and environmental factors in the biological variation of modern humans. Same as ANSC 441. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 102 or equivalent.

ANTH 443 Primate Form and Behavior credit: 3 or 4 Hours.

Survey of primate social behavior and the classification, morphology, and distribution of living and extinct species; emphasis on interrelationships among behavior, biology, and ecology. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 240 or consent of instructor.

ANTH 444 Methods in Bioanthropology credit: 3 or 4 Hours.

Supervised participation in biological anthropology research projects; techniques, methods, and procedures discussed and practiced under actual field or laboratory working conditions. Normally taken concurrently with ANTH 445. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 240 or equivalent; consent of instructor.

ANTH 445 Research in Bioanthropology credit: 3 or 4 Hours.

Analysis, interpretation, evaluation, and organization of field and laboratory data in biological anthropology; preparation of written reports on research. May be taken concurrently with ANTH 444 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 240 or equivalent; consent of instructor.

ANTH 446 Behavioral Inference & Fossils credit: 3 or 4 Hours.

Theories and methods for interpreting behaviors inferred from the human and primate fossil record. Topics include discussions of adaptation, methods of inference in historical sciences, and practical experimental approaches to understanding aspects of diet, locomotor behavior and social organization in species known only from the fossil record. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 240.

ANTH 447 Advanced Skeletal Biology credit: 3 Hours.

Human skeletal and dental remains form the basis for research in both bioarchaeology and forensic anthropology. We will examine the bases for making inferences about individual skeletons and past populations, with particular emphasis placed on paleodemography, reconstruction of diet, paleopathology, and biological distance analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 347.

ANTH 448 The Prehistory of Africa credit: 3 or 4 Hours.

The study of cultural development in Africa from the appearance of hominids to the time of European domination. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 449 North American Archeology credit: 3 or 4 Hours.

Methods, techniques, and results of archaeology in North America; focuses on divergent approaches to the regional archaeology of North America; and surveys and synthesizes the archaeology of the subcontinent. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 451 Archaeological Surveying credit: 3 or 4 Hours.

Familiarization with methods used in the location and recording of archaeological sites, including techniques of mapping especially adapted to the needs of archaeology; attention given to means of presenting results and interpreting data derived from this work; and work both in the field and in the laboratory. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 452 Stone Tool Technology Analysis credit: 3 or 4 Hours.

Lecture and laboratory on the principles and techniques of stone and bone artifact manufacture, identification, classification, metrical analysis, interpretation, and integration with other classes of archaeological evidence. Emphasis on the use of lithics to test human behavioral models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220.

ANTH 453 Landscape Archaeology credit: 3 or 4 Hours.

The use of archaeological, documentary, and oral history evidence to study and interpret the ways past peoples shaped their landscapes through the deployment of cultural and social practices, and the ways, in turn, that such people were influenced, motivated, or constrained by their natural surroundings. Same as LA 454. 3 undergraduate hours. 4 graduate hours. Prerequisite: Introductory archaeology course, such as ANTH 220, or introductory landscape architecture course, such as LA 215, and a 300 level course in socio-cultural anthropology or archaeology, or equivalent with instructor's permission.

ANTH 454 Archaeological Field School credit: 3 or 4 Hours.

Participation in archaeological excavations; techniques, methods, and procedures discussed and practiced under actual working conditions. Normally taken concurrently with ANTH 455. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: Consent of instructor.

ANTH 455 Lab Analysis in Archaeology credit: 3 or 4 Hours.

Laboratory work including processing, classifying, dating, interpretation, evaluation, and preparation of written reports of archaeological research. May be taken concurrently with ANTH 454 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: ANTH 102 or consent of instructor.

ANTH 459 The Ancient Maya credit: 3 Hours.

Introduction to the Ancient Maya of Mexico, Guatemala, Belize, and Honduras. Evaluates theories that account for the rise and fall of Classic (c. A.D. 250-950) Maya rulership. Excavation data, iconography, and inscriptions are used to reconstruct political and social organization, ideology, subsistence activities, and inter-regional interactions. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 105.

ANTH 460 Heritage Management credit: 3 or 4 Hours.

Detailed examination of the theoretical and practical issues of archaeological heritage management. Focusing on the legal, environmental, ethical, social, political, educational, and touristic aspects of the management of ancient sites for their continued sustainability. Same as LA 460 and RST 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 and at least one ANTH 300- or 400-level archaeological area course.

ANTH 461 Hist of Archaeological Theory credit: 3 or 4 Hours.

Examines the prominent theories in archaeology from its inception to the present day and does so within the context of general developments in anthropological thought. Provides a foundation for graduate students and a capstone for major emphasizing archaeology. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduates: ANTH 220; anthropology major with focus on archaeology; senior standing or consent of the instructor. For graduate students: enrollment in ANTH 430 during the same term advised.

ANTH 462 Museum Theory and Practice credit: 3 or 4 Hours.

A foundational introduction to museology consisting of a critical examination of the history and social life of museums and how museums have been studied by scholars in a range of academic disciplines. Includes visits to campus and local museums. Same as ARTH 462 and LA 472. 3 undergraduate hours. 4 graduate hours.

ANTH 463 Religion and Society credit: 4 Hours.

Course focuses on theoretical issues raised by religion. Does religion address itself essentially to intellectual, emotional or pragmatic issues? Is religion created by rulers, clerics or worshippers? How does the individual experience religion, and (how) can s/he reshape it? In exploring these and related issues, we will read the writings of German, French, and British social scientists of the past 150 years as well as work by contemporary anthropologists. Theoretical perspectives covered include symbolic, processual, materialist, structural-functionalist, structuralist, and postmodernist approaches. Same as REL 463. 4 undergraduate hours. 4 graduate hours. Prerequisite: A 200-level course in cultural anthropology or consent of instructor; or graduate standing.

ANTH 465 Oceania's Peoples and Cultures credit: 3 or 4 Hours.

Survey of the Pacific Islands; regional geography, human ecology, culture history, and ethnography of Melanesia, New Guinea, Polynesia, New Zealand, Micronesia, and Australia; and some consideration of Pacific ethnohistory and the role of Oceania in the modern world. Same as ASST 465. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 102 and ANTH 103, or consent of instructor.

ANTH 466 Class, Culture and Society credit: 4 Hours.

Social hierarchies in a variety of cultural contexts; industrial societies and the process of industrialization; looks at other social forms for the purposes of comparison. A variety of social theories will be discussed and compared through ethnographic studies. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 and ANTH 230 or graduate standing.

ANTH 467 Cultures of Africa credit: 3 or 4 Hours.

Culture and social organization in traditional African societies with emphasis on the politics, kinship, and religion of a small sample of societies illustrating the main cultural variations found in sub-Saharan Africa; some discussion of ecological factors and ethnic group relations in precolonial times. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 230 or consent of instructor.

ANTH 468 Religions of Africa credit: 3 or 4 Hours.

Explores a variety of religious traditions and experiences in sub-Saharan Africa from an anthropological perspective. Local, indigenous traditions are emphasized, but African experiences of Islam and Christianity are also covered. Same as AFST 468 and REL 468. 3 undergraduate hours. 4 graduate hours. Prerequisite: A 200-level course in cultural anthropology or consent of instructor; or graduate standing.

ANTH 469 Kinship-Culture-Power-Africa credit: 2 or 4 Hours.

To present the classic approaches to kinship in anthropology that were developed for Africa; to explore the variety of kinship arrangements and strategies that exist in Africa; and to expose students to the panoply of contemporary critiques of classic works on kinship in Africa, and contemporary alternatives to them. Same as AFST 467. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: For students outside anthropology or African Studies, at least one previous course in cultural anthropology is strongly recommended.

ANTH 471 Ethnography through Language credit: 3 or 4 Hours.

Overview of theoretical perspectives and methodologies in linguistic anthropology, including sociolinguistics, ethnography of communication, performance and poetics, discursive practices, and structural analyses. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 230 or ANTH 270 and preferably both.

ANTH 472 Border Latina, Latino Cultures credit: 3 or 4 Hours.

Explores and examines the production of U. S. Latina/Latino identities as instances of international, cultural, historical, and social border crossings. In both regional and global contexts, we will analyze the ways in which Mexican American, Cuban American and Puerto Rican identities have been shaped by colonial relations vis-a-vis Spain and by postcolonial conditions vis-a-vis the United States. Same as LLS 472. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103, and ANTH 259 or ANTH 359.

ANTH 473 Museums and Communities credit: 3 or 4 Hours.

Examination of museums and members of ethnographic source communities, and the development of new curatorial practices that incorporate source community needs and views. 3 undergraduate hours. 4 graduate hours.

ANTH 477 Pottery Analysis credit: 3 or 4 Hours.

Introduction to the theories and techniques of pottery analysis for archaeologists. In addition to presentation and discussion of the major literature, there is hands-on practice making, drawing, breaking and analyzing pottery. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 220 or consent of instructor.

ANTH 478 African Immigrants in Europe credit: 3 or 4 Hours.

Examines the pressing issues facing the new European Union as the realities of multicultural continent shape the daily lives of all. Begins with EU policy and theoretical models of immigration, but most readings emphasize perspectives of Africans' own experiences as immigrants and refugees in Europe. Same as AFST 478 and EURO 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: One prior 300-level anthropology or related social science course, or consent of instructor.

ANTH 479 Race, Medicine, and Society credit: 3 or 4 Hours.

Same as AAS 479 and LLS 479. See LLS 479.

ANTH 481 Andean Ethnography credit: 3 or 4 Hours.

Survey of Andean cultures at the time of the Spanish conquest, of their subsequent history, and of modern Indian culture in the Andean countries. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 182, ANTH 230 or consent of instructor.

ANTH 486 Peoples of Mainland SE Asia credit: 3 or 4 Hours.

Culture, cultural history, and social systems of mainland Southeast Asia: Burma, Thailand, Cambodia, Vietnam, Laos, Assam Hills, upland southwestern China, and Malaya; emphasis on the interaction of complementary ethnic types in the context of local ecology and the Hindu-Buddhist systems of religion and politics of the lowland states. Same as ASST 486. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ANTH 220 or ANTH 230, or consent of instructor.

ANTH 488 Modern Europe credit: 4 Hours.

Historical studies which deploy anthropological methods in the study of early modern and modern Europe; looks at processes of twentieth century modernization through ethnographic studies. Western, Central and Eastern Europe will all receive attention, but the study of Western Europe will predominate. 4 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 and ANTH 230 or three history courses or graduate standing.

ANTH 489 The Ethnography of Korea credit: 3 or 4 Hours.

Same as EALC 469. See EALC 469.

ANTH 494 Honors Senior Thesis I credit: 2 to 4 Hours.

The first of a two-term individual study and research project for those students who are candidates for departmental distinction in anthropology. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; 3.25 GPA in anthropology; and consent of instructor. May not be taken concurrently with ANTH 390.

ANTH 495 Honors Senior Thesis II credit: 2 to 4 Hours.

The second of a two-term individual study and research project for those students who are candidates for departmental distinction in anthropology. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; 3.25 GPA in anthropology; and consent of instructor. May not be taken concurrently with ANTH 390.

ANTH 496 Individual Field Research credit: 3 or 4 Hours.

Supervised participation in field research in ethnography, ethnology, linguistics, or social anthropology; techniques, methods, and procedures discussed and practiced under actual working conditions. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Usually offered in the summer session only. Prerequisite: ANTH 230; some knowledge of the language of the area concerned; consent of instructor. Normally taken concurrently with ANTH 497.

ANTH 497 Individual Field Data Analysis credit: 3 or 4 Hours.

Analysis, interpretation, evaluation, and organization of field data in cultural anthropology; preparation of written reports on research in ethnography, ethnology, linguistics, or social anthropology. May be taken concurrently with ANTH 496 or subsequently. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: ANTH 230; some knowledge of the language of the area concerned; consent of instructor.

ANTH 498 Senior Capstone Seminar credit: 3 Hours.

A guided independent research seminar for Anthropology majors normally taken during the Fall of the senior year. Students may select to conduct significant and original research in any of the four sub-fields of anthropology or combine interdisciplinary interests. Working closely with the course instructors and with additional guidance from a chosen anthropology faculty advisor, student will develop a research topic of their choice, identify significant research questions, before collecting and analyzing their field data. 3 undergraduate hours. No graduate credit.

ANTH 499 Topics in Anthropology credit: 4 Hours.

Research seminar on specialized topics in anthropology. 4 undergraduate hours. 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

ANTH 502 Ethnicity and Nationalism credit: 2 or 4 Hours.

Examines ethnic and national identities, their interactions, and the implications for them and of them within increasingly translocal, transnational, and global historical contexts. 2 or 4 graduate hours.

ANTH 503 Seminar on States & Governance credit: 4 Hours.

Explores theories of the state and governance through an anthropological perspective. Theoretical issues covered will include political economy, sovereignty, biopolitics, and empire across a range of social settings will attend to issues of race, class, gender, and sexuality. 4 graduate hours. No professional credit. May be repeated in separate terms up to 8 hours, if topics vary. Prerequisite: Grad Students only.

ANTH 504 Colonialism & Postcolonialism credit: 4 Hours.

Course examines the history of colonialism and post-colonialism in anthropological perspective. The relations of history and anthropology are explored through ethnographic studies that problematize historical memory. Theoretical works about colonized people will be debated and discussed. Same as HIST 519. Prerequisite: Graduate standing.

ANTH 505 Global Modernities credit: 4 Hours.

Examines the notion of "alternative" modernities: is "modernity" always imitative of the West, or under globalization does it emerge independently in local cultures? Does it obliterate local "tradition", or can it function as site of creativity and resistance? What are its implications for anthropological fieldwork methods and writing styles? Prerequisite: Graduate standing or consent of instructor.

ANTH 508 Feminism, Gender and Sexuality credit: 4 Hours.

Theoretical issues raised in recent feminist writings in anthropology. Theoretical approaches to be explored include constructionist, postmodern, textual and historical materialist perspectives. Selected contemporary ethnographies introduce the integration of feminist theory into data analysis. Same as GWS 508. Prerequisite: Graduate standing or consent of instructor.

ANTH 511 Research Proposal Seminar credit: 4 Hours.

This seminar guides graduate students in designing a doctoral research project and writing a grant proposal. Focus is on developing a cogent theoretical framework, articulating significance of the project, identifying appropriate research methods, and considering ethical issues. Seminar format allows regular feedback from peers to clarify and hone ideas. Prerequisite: Graduate standing in anthropology or consent of instructor.

ANTH 512 Language in Culture I credit: 4 Hours.

This first of our two core theoretical courses in linguistic anthropology pays particular attention to language in culture. Examines the historical development of the field and its debates, and its relationships with socio-cultural anthropology. Develops theoretical and critical analytical skills needed in contemporary ethnographic research. Same as LING 512. Approved for both letter and S/U grading. Prerequisite: Graduate standing.

ANTH 514 Seminar in Cognitive Science credit: 2 or 4 Hours.

Same as PSYC 514, CS 549, EPSY 551, LING 570, PHIL 514. See PSYC 514.

ANTH 515 Seminar in Anthropology credit: 2 or 4 Hours.

Analysis of selected topics of special interest in anthropology. May be repeated to a maximum of 8 hours in the same or subsequent semesters.

ANTH 517 Anthro Approach to Memory credit: 4 Hours.

Examines individual memory, the construction of memories in collective practice, and the orchestration of memory in social institutions such as museums and ritual. Reflects critically on primary sources, to integrate theory and ethnography and to compare alternative approaches. Approved for both letter and S/U grading. Prerequisite: Graduate standing.

ANTH 518 Language in Culture II credit: 4 Hours.

Part II of the core theoretical seminar in linguistic anthropology. Continues examination of historical developments in the sub-field and its debates, and relationships with socio-cultural anthropology. Develops theoretical and critical analytical skills needed in contemporary ethnographic research. Same as LING 518. Prerequisite: Graduate Standing.

ANTH 520 Cultural Heritage Proseminar credit: 1 Hour.

Broad introduction to the most current perspectives on cultural heritage theory and practice based on state-of-the-art lectures from faculty in multiple departments across campus. Each professor synthesizes the key ideas from his/her discipline and illustrates this material with a case study from his/her own research. The course provides students with a fundamental corpus of knowledge in the cultural heritage field and prepares them for further coursework and training in this field. 1 graduate hour. No professional credit. Prerequisite: Graduate standing required.

ANTH 523 Dynamic Embodiment credit: 4 Hours.

Examines anthropological theories and methods for understanding systems of body movement and performance in cultural contexts. Explores the study of everyday skills as well as the expressive complexities of dances, gestural systems, sacred and secular ritual, sign languages, sports, theater, and martial arts. Prerequisite: Graduate standing.

ANTH 532 Dissertation Writing Seminar credit: 4 Hours.

Through reading style handbooks, theoretical works on the nature of writing, and published dissertations in anthropology, as well as completing specific dissertation writing assignments, this course provides a forum for advanced doctoral students to outline and complete substantial work on their doctoral thesis. The class format is a workshop in which every student circulates dissertation chapters for discussion by the instructor and other class members. Prerequisite: Students must have completed all requirements for the Ph.D. in anthropology but the dissertation, and they must have completed their doctoral fieldwork.

ANTH 540 Seminar in Bioanthropology credit: 4 Hours.

Seminar designed to involve students in the theoretical and methodological approaches to problem areas in physical anthropology. May be repeated. Prerequisite: ANTH 440, ANTH 441, or ANTH 443; consent of instructor.

ANTH 541 Ontogeny and Phylogeny credit: 4 Hours.

Investigation of how ontogeny (growth and development) relates to phylogeny (evolutionary change) across the course of human evolution. Focuses on the exceptional nature of human size and shape development and its evolution, with particular attention to the evolution of the human skull and brain. Prerequisite: ANTH 102, ANTH 240, ANTH 440 or equivalent.

ANTH 543 Seminar in Primate Ecology credit: 2 or 4 Hours.

Group discussions and individual presentations of research reports and problems in fields of primate ethology, ecology, evolution, and related subjects; topics vary each term. 2 or 4 graduate hours. No professional credit. May be repeated in separate terms. Prerequisite: Consent of instructor.

ANTH 552 Res Prob in Archaeology credit: 4 Hours.

Seminar oriented to current research problems in archaeology, designed to acquaint students with theoretical and methodological aspects of particular problems and to develop a critical perspective archaeological research. May be repeated. Prerequisite: Consent of instructor.

ANTH 555 The Archaeology of Complexity credit: 4 Hours.

Examines patterns of behavior archaeologists associate with complex societies and seeks to understand if and how these behaviors generate and/or reflect cultural complexity; theoretical literature and case studies discussed. Major topics include chiefdoms, settlement pattern analysis, and ideology. Prerequisite: Graduate student standing.

ANTH 557 Social Construction of Space credit: 4 Hours.

Consideration of anthropological, archaeological, and related disciplinary perspectives on space, place, landscape, the built environment, and architecture. Coursework encompasses critical review of major theoretical literature and case studies of ancient and modern societies. Same as LA 562. Prerequisite: Consent of instructor.

ANTH 559 Social Norms and Law credit: 4 Hours.

Exploration of the interaction of social norms and formal legal rules. Norms provide social rules of expected behavioral responses to particular situations, often accompanied by the threat of informal sanctions, and provide cognitive categories for perceiving and ordering one's experiences. Explores these subjects using examples from various areas of legal doctrine, such as property, contracts and bargaining, crime, torts, and taxation; examines related studies in historical and non-Western cultures and considers the uses of anthropology in studying facets of our own legal system. Prerequisite: Consent of instructor.

ANTH 560 Anthropology and Law credit: 3 or 4 Hours.

Introduction to the field of legal anthropology. Addresses anthropological theories of the nature of law and disputes, examines related studies of legal structures in non-Western cultures, and considers the uses of anthropology in studying facets of our own legal system. Same as LAW 678. 4 graduate hours. 3 professional hours. Prerequisite: Consent of instructor.

ANTH 561 Archaeological Theory credit: 4 Hours.

Contemporary theory in archaeology. Different theoretical approaches are examined by critically analyzing seminal literature within the contexts of paradigmatic shifts in archaeology and general developments in the discipline of anthropology, focuses on materiality and corporality. Prerequisite: ANTH 461 or consent of instructor.

ANTH 562 Archaeology and Racialization credit: 4 Hours.

Study of theories and methods for archaeological and historical analysis of processes of racialization in past societies. Subjects include the interrelation of racializing ideologies with other cultural and social dimensions, such as class, ethnicity, gender, political and legal structures, and economic influences. Same as AFRO 562. Prerequisite: Consent of instructor.

ANTH 565 Race and Cultural Critique credit: 4 Hours.

Same as AAS 561, AFRO 531, GWS 561, and LLS 561. See AAS 561.

ANTH 570 Cultural Aspects of Tourism credit: 4 Hours.

Same as RST 570. See RST 570.

ANTH 589 Readings in Anthropology credit: 2 or 4 Hours.

Individual guidance in intensive readings in the literature of one or more subdivisions of the field of anthropology, selected in consultation with the adviser in accordance with the needs and interest of the student. May be repeated in the same or separate semesters as topics vary. Prerequisite: One semester of graduate work in anthropology; consent of advisor.

ANTH 590 Dissertation Readings credit: 4 to 16 Hours.

Supervised individual investigation or study of a topic not covered by regular courses. The topic selected by the student and the proposed plan of study are approved by the adviser and the staff member who supervises the work. Prerequisite: Consent of instructor.

ANTH 594 Cultural Heritage credit: 2 or 4 Hours.

Same as LA 594. See LA 594.

ANTH 599 Thesis Research credit: 0 to 16 Hours.

Preparation of theses. Approved for S/U grading only.

Applied Health Sci Courses (AHS)

AHS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AHS>)

Courses

AHS 125 Freshmen Scholars Seminar credit: 1 Hour.

Designed for James Scholars for Applied Health Sciences who are in their first year of college to introduce them to research. Students will learn strategies to apply classroom material to community and society. Includes visits from faculty and staff from across campus and within the College who will expose students to an array of contexts and approaches for research. This course is a James Scholar course for freshmen only.

AHS 199 Undergraduate Open Seminar credit: 1 to 6 Hours.

Topics will vary each semester. Please see section topic. May be repeated to a maximum of 12 hours in the same or subsequent terms as topics vary.

AHS 292 AHS Study Abroad credit: 0 to 18 Hours.

Provides credit toward the undergraduate degree for study at an accredited international institution or approved overseas program. Final determination of credit granted is made upon the student's successful completion of work. Approved for letter and S/U grading. May be repeated to a maximum of 44 hours. Prerequisite: One year or residence at UIUC and consent of major department and the college.

AHS 365 Civic Engagement in Wellness credit: 3 Hours.

Same as CHLH 365, KIN 365, RST 365, and SHS 370. See KIN 365.

AHS 375 Comm Partners & Health credit: 3 Hours.

Same as KIN 375 and SHS 375. See SHS 375.

AHS 399 Advanced Open Seminar credit: 1 to 6 Hours.

Advanced undergraduate seminar. Topics will vary each semester. Please see section topic. Approved for letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 6 hours.

AHS 494 Special Topics credit: 1 to 4 Hours.

Lecture courses in topics of current interest; specific subject matter will be announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated up to 12 hours if topics vary. Prerequisite: See Class Schedule for section requirements.

Arabic (ARAB)

ARAB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARAB>)

Courses

ARAB 150 Lang&Culture of Arab World credit: 3 Hours.

Interdisciplinary overview of the major aspects of the contemporary Arab culture. Based on scholarly research, textual resources, media, and literature from both the Arab World and elsewhere, examines the Arab people's historical background; language varieties; literary traditions; and representative social institutions. Same as SAME 150.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West

ARAB 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ARAB 201 Elementary Standard Arabic I credit: 5 Hours.

Mastery of the Arabic alphabet and phonetics; elementary formal grammar and the development of reading and writing skills; and conversation in the formal noncolloquial style. Participation in the language laboratory is required.

ARAB 202 Elementary Standard Arabic II credit: 5 Hours.

Continuation of ARAB 201. Participation in the language laboratory is required. Prerequisite: ARAB 201.

ARAB 210 Colloquial Arabic I credit: 4 Hours.

Development of conversational fluency in one of the major colloquial dialects; see Class Schedule for dialect to be taught each term.

ARAB 211 Colloquial Arabic II credit: 4 Hours.

Continuation of ARAB 210. Prerequisite: ARAB 210.

ARAB 403 Intermediate Stand Arabic I credit: 4 Hours.

Survey of more advanced grammar; emphasis on increasing conversational fluency in the formal noncolloquial style; and reading of prose texts reflecting aspects of Arabic culture. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 202.

ARAB 404 Intermediate Stand Arabic II credit: 4 Hours.

Continuation of ARAB 403. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 403.

ARAB 405 Advanced Standard Arabic I credit: 3 Hours.

Practice to attain conversational fluency in the formal noncolloquial style; introduction to Arabic literature; and readings in social, political, and historic writings. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 404.

ARAB 406 Advanced Standard Arabic II credit: 3 Hours.

Continuation of ARAB 405. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 405.

ARAB 407 Topics Stand Arabic Lang&Lit I credit: 3 Hours.

Selected readings from Modern Standard Arabic authors, with a focus on novels, plays, and basic poetry illustrative of Arab cultural issues and advanced level MSA grammar, as well as development of expository writing skills. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 406.

ARAB 408 Topics Stand Arabic LangLit II credit: 3 Hours.

Continuation of ARAB 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARAB 407.

ARAB 409 Adv Top Stand Arabic LangLit I credit: 3 or 4 Hours.

Introduction to Modern Standard Arabic in the professions as documented in selected newspapers, educational radio and TV programs, works of fiction, biographies, anthologies, and professional journals. Students will be introduced to argumentative writing in MSA, expected to make oral presentations, and to write a research paper in their field. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 408.

ARAB 410 AdvTop Stand Arabic LangLit II credit: 3 or 4 Hours.

Continuation of ARAB 409 with increased emphasis on the development of comprehension and writing of professional language. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARAB 409.

ARAB 412 Business Arabic credit: 3 or 4 Hours.

Introduction to Arabic business language as used in basic business settings, including commercial advertisement and business correspondence. Emphasizes language skills that will enable students to conduct job searches and locate job vacancies that match their fields of study and their interests. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms if topics vary to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: ARAB 405 or consent of instructor.

ARAB 413 Arabic-English Translation credit: 3 or 4 Hours.

Introduction to translation methodology and the profession of translation, with particular emphasis on the development of Arabic-to-English translation techniques and the acquisition of related knowledge above and beyond language skills. Students will be exposed to a variety of text types from different Arabic-speaking countries and learn to produce quality, professional translations and apply effective strategies to deal with the challenges of fully preserving the meaning of the original text while conveying the appropriate tone (style/register) and paying attention to grammar, mechanics, and audience-specific needs. Same as TRST 413. 3 undergraduate hours. 4 graduate hours. Prerequisite: Advanced standing in Arabic.

ARAB 490 Readings in Advanced Arabic credit: 3 or 4 Hours.

Directed reading course intended to develop an advanced student's facility with the Arabic language through various readings (authors, genres, themes, or other topical studies) and is conducted entirely in the Arabic language. Topics may vary from term to term. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms up to 6 undergraduate hours or 8 graduate hours, if topics vary. Prerequisite: ARAB 410 or consent of instructor.

Architecture (ARCH)

ARCH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARCH>)

Courses

ARCH 101 Introduction to Architecture credit: 3 Hours.

An introduction to architecture, architectural education and the profession with emphasis on issues that influence architecture and the people and processes involved.

ARCH 164 Architecture as a 2nd Language credit: 3 Hours.

Unique to architects is the combination of thinking tools in a conceptual toolbox, a resource to which they have access at any time and in all situations. These tools can be thought of as a second language. Architecture as a Second Language is a hands-on, experiential online course in which students are immersed in challenging activities similar to those architects face. The course helps develop new perspectives, capabilities, and insights that can be applied to any calling or discipline.

ARCH 171 Inactive credit: 4 Hours.

inactive.

ARCH 172 Drawing and Modeling credit: 3 Hours.

Introduction to the architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts: freehand sketching, architectural delineation, and digital applications. Prerequisite: ARCH 171 or consent of instructor. Concurrent enrollment in ARCH 231 or consent of instructor.

ARCH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ARCH 210 Intro to the Hist of Arch credit: 3 Hours.

Visual and cultural analysis of selected buildings, urban spaces, and cities, from ancient Greece to modern times; emphasizes the architectural traditions of Western Civilization, especially as they affect the built environment of America and the Middle West. Prerequisite: Sophomore standing or consent of instructor.

ARCH 222 Islamic Gardens & Architecture credit: 3 Hours.

Same as LA 222. See LA 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

ARCH 231 Anatomy of Buildings credit: 4 Hours.

A holistic approach to the introduction of architectural technology. Enabling students to integrate technical material with design, this lecture/lab course addresses building codes, zoning, construction documentation and delivery, digital fabrication, and the impact of energy, sustainability, and environmental forces on building construction, comparing general principles of light frame and heavy construction materials, components, and systems. Students learn how to build virtually and physically, understanding the roles design and construction professionals play on integrated teams.

ARCH 232 Structural Fundamentals credit: 4 Hours.

The study of forces, their distribution, and their impact on building structure. Topics include: equilibrium of rigid bodies in two and three dimensions; trusses; shear and bending moments in beams; arches and frames; stresses, strains, and deformations in axially loaded members; direct shear and bearing stresses; torsion; beam stresses and deflections; introduction to the design of structural members; and architectural applications. Prerequisite: MATH 220 or MATH 221, and MATH 231 or PHYS 101.

ARCH 271 Graphics for Architects credit: 4 Hours.

Introduction to architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts: 1) freehand sketching; 2) architectural delineation; and 3) digital applications. Prerequisite: ARCH 101 and concurrent enrollment in ARCH 231.

ARCH 273 Representation credit: 3 Hours.

Develops understanding of the representation of ideas, values, and meaning in the built environment. Focuses on three topic areas: analysis, technical communication, and modeling. Exposure to multiple software tools and mastery of basic skills in each. Prerequisite: ARCH 172 or consent of instructor.

ARCH 274 Strategies of Architectural Design credit: 3 or 4 Hours.

Focuses on understanding architecture as holistic synthesis of principles, technology and form. Content is arranged in six areas: Research and Analysis, Typology Analysis, Street Analysis, Block Analysis, Neighborhood Analysis, and Development and Presentation. Students work both on individual assignments and in teams on design projects. Emphasis on combining graphic and modeling skills with analytical skills. Exercises require demonstration of skills and concepts introduced in earlier design and technology courses. Prerequisite: ARCH 273 or consent of instructor.

ARCH 300 Ind Studies in Urban Design credit: 3 Hours.

The individual study of selected topics involving the history, design, and function of significant European cities. Prerequisite: One year of history of architecture or Art History; consent of instructor.

ARCH 314 History of World Landscapes credit: 4 Hours.

Same as LA 314. See LA 314.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

ARCH 321 Environment, Architecture, and Global Health credit: 3 Hours.

This course surveys current research at the intersection of the built environment, health, and well-being. It emphasizes relationships among people and multiple scales of the environments they inhabit and the health and well-being consequences of these relationships. It comparatively examines these relationships within a broad range of Western and Non-Western cultures and contexts by introducing significant historical and contemporary theories, data of relevance, research processes, and applications in environmental design and planning processes. To improve person-environment fit, the roles of social groups, institutions, and organizations in the person-environment-health/well-being nexus within various cultural and geographic contexts are examined and compared.

ARCH 341 Environment Tech HVAC credit: 4 Hours.

Study of the control of thermal environment, mechanical and related building sub-systems, and their integration into the overall building design. The specific topics include: thermal comfort and behavioral implications; fundamentals of thermal behavior of buildings; the principles of heat and moisture in buildings; indoor air quality and "Sick Building Syndrome"; energy and sustainability implications of building design; and mechanical systems including HVAC and plumbing systems. Prerequisite: ARCH 233.

ARCH 342 Environment Tech Ltg & Acoust credit: 4 Hours.

Study of the control of luminous and sonic environments, the supporting building systems, and their integration into the overall building design. Specific topics include: lighting fundamentals; light sources; effects of lighting on comfort and performance; lighting calculations and design; energy economy and sustainability; acoustic fundamentals; room acoustics; noise control; and basic electrical and sound systems. Prerequisite: ARCH 233.

ARCH 351 Statics & Dynamics credit: 4 Hours.

Study of equilibrium of rigid bodies in two and three dimensions; trusses; shear and bending moments in beams; arches and frames; cables; friction; introduction to dynamics; architectural applications. Prerequisite: MATH 220 or MATH 221; and MATH 231 or PHYS 101.

ARCH 352 Mech of Mat & Design Appl credit: 4 Hours.

Study of stresses, strains, and deformations in axially loaded members; direct shear and bearing stresses; torsion; beam stresses and deflections; stresses under combined loading; column buckling; design of structural members; introduction to statically indeterminate structures; architectural applications. Prerequisite: ARCH 351.

ARCH 373 Arch Design and the Landscape credit: 5 Hours.

Building design in a landscape setting; creation of place; schematic building design and site planning issues, universal design and accessibility; principles of energy efficient building design; human-environment relationship issues; and architectural design and presentation methods; required field trips. Prerequisite: ARCH 272.

ARCH 374 Arch Design and the City credit: 5 Hours.

Building design in the community setting; creation of place; introductory urban design and site planning issues, including universal design and accessibility; human-built environment relationship issues; architectural design and presentation methods; required field trips. Prerequisite: ARCH 373.

ARCH 399 Study in Versailles, France credit: 0 to 18 Hours.

Study in the University of Illinois Architectural Program at Versailles, France. Approved for S/U grading only. Prerequisite: Concurrent registration in the Versailles, France Study Abroad Program.

ARCH 400 Senior Honors in Architecture credit: 1 to 4 Hours.

For candidates for honors in Architecture. Independent guided study and research in a selected area of architecture. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours with consent of Director of School. Prerequisite: Senior standing in architecture, a University grade-point average of 3.0 or, in special cases, consent of Director of School.

ARCH 401 Independent Study credit: 0 to 4 Hours.

Independent guided study and investigation in a selected area of architecture. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated. Prerequisite: Junior standing in architecture, written proposal approved by a sponsoring faculty member and the approval of the Director of the School.

ARCH 402 Intro to Hist of Arch Theory credit: 3 Hours.

Architectural theory, criticism, and historiography from antiquity to the present. Based on close readings of texts from antiquity to the present day. 3 undergraduate hours. 3 graduate hours. Prerequisite: Sophomore standing.

ARCH 403 Spec Topics in Arch History credit: 3 Hours.

Special topics in Architectural History courses. Topics and subject matter to be published in course listings. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARCH 210 and sophomore standing.

ARCH 407 Rome: The Eternal City credit: 3 Hours.

Considers the architecture and urbanism of the city of Rome across time. Special focus will be placed on critical strategies for understanding urban sites. 3 undergraduate hours. 3 graduate hours. Prerequisite: Sophomore standing.

ARCH 409 Special Topics in Spanish Arch credit: 3 Hours.

Explores aspects of the architecture and urban design of Spain from antiquity until the present. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: ARCH 210.

ARCH 410 Ancient Egyptian & Greek Arch credit: 3 Hours.

Architecture and urban form in Egypt and the Greek world through the Hellenistic period. Same as CLCV 410. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 111 or CLCV 131.

ARCH 411 Ancient Roman Architecture credit: 3 Hours.

Architecture and urban form in the ancient Roman world from the Etruscans through the Late Antiquity. Connections between Roman Late Antique, Early Christian, and Byzantine Architecture will be considered. Same as CLCV 411. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210; ARTH 111, CLCV 131, or CLCV 132.

ARCH 412 Medieval Architecture credit: 3 Hours.

Explores aspects of the architecture and urban design of medieval Europe from late antiquity to the late Middle Ages (approximately 300-1400). Same as MDVL 412. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 111.

ARCH 413 Renaissance Architecture credit: 3 Hours.

Developments in architecture, urban design, and garden art in Italy and northern Europe in the fifteenth through the sixteenth centuries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 414 Baroque & Rococo Arch credit: 3 Hours.

Developments in architecture, urban design, and garden art in Italy, France, Germany, and England in the seventeenth and eighteenth centuries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 415 Neoclass & Nineteen Cent Arch credit: 3 Hours.

Evolution of Continental and British architecture and urban planning from 1750 to World War I; includes some reference to American architecture of the same period. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.

ARCH 416 Modern American Architecture credit: 3 Hours.

Development of American architecture and urban planning from the seventeenth century to the present. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 417 Twentieth-Century Architecture credit: 3 Hours.

Developments in Western architecture and urban design from 1900 to the present; examines the rise of modernism in Europe and after World War II; includes work in the United States, India, Japan, and Australia. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.

ARCH 418 Hist of the Urban Environment credit: 3 Hours.

Examines the evolution of town planning and urban design in Western civilization from prehistory to the present; studies cultural and technical advancements affecting the form of the urban environment. 3 undergraduate hours. 3 graduate hours.

ARCH 419 Historic Building Preservation credit: 3 Hours.

Introduces historic preservation: legal, financial, and administrative assistance, graphic examination of restored buildings and sites, and application of conservation technology. 3 undergraduate hours. 3 graduate hours.

ARCH 423 Soc/Beh Factors for Design credit: 3 Hours.

Research-oriented introduction to existing social and behavioral knowledge, methods, and tools for relating man to his physical and social environment, with implications for theories and a philosophy of architectural design. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 424 Gender & Race in Contemp Arch credit: 3 Hours.

Analyzes how the built environment reflects social attitudes towards gender and race. Identifies the work of women and people of color in architecture and related disciplines as consumers, critics, and creators of the environment. Provides links with valuable professional networks in Chicago and elsewhere. Same as GWS 424. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 433 Design of Steel and Reinforced Concrete Structures credit: 4 Hours.

Loads and load combinations; design methods/structural safety; steel as a structural material; design of structural steel members subject to tension, compression, bending, shear, and combined forces as well as bolted and welded joints. Reinforced concrete as a structural material; transformed sections; design for bending, shear, and serviceability; design of one-way slabs and columns. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ARCH 433 and ARCH 451; credit is not given for both ARCH 433 and ARCH 452. Prerequisite: ARCH 232.

ARCH 434 Environmental Control Systems I credit: 5 Hours.

Study of the control of thermal, luminous, and sonic environments with an emphasis on passive means of controls. Specific topics include: thermal comfort and behavioral implications; fundamentals of thermal behavior of buildings; the principles of heat and moisture in buildings; lighting fundamentals; light sources; effects of lighting on comfort and performance; energy economy and sustainability; acoustic fundamentals; room acoustics; noise control; basic electrical, plumbing, vertical transportation, and life safety systems. 5 undergraduate hours. 5 graduate hours. Prerequisite: Concurrent enrollment in ARCH 374 or consent of instructor.

ARCH 435 Structural Systems and Construction Methods credit: 4 Hours.

Presents a unified approach to architectural structures and construction technology to enable students to integrate design, engineering, and construction, while providing an understanding of how material/component/system decisions impact the work of architects, engineers, and constructors. Using a series of case-studies and project-based assignments, students learn about the various structural systems and construction methods used in the design of buildings. The evolution and state-of-the-art in structure and construction strategies will be discussed to provide requisite breadth and depth. Topics covered include: structural and building codes; structural systems and their layout planning; foundation systems; construction methods and technologies in wood, steel, concrete, and masonry; sustainability considerations; detailing; and digital modeling. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 231 and ARCH 232.

ARCH 441 Heat and Moisture in Buildings credit: 3 Hours.

Provides information and skills necessary for the designer to deliver dry, durable and healthful buildings. First half covers theory, including heat transfer, psychrometrics, steady-state diffusion and conduction analysis, and transient analysis. Second half covers building applications: roofs, walls, windows, foundations, and mechanical systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 341 or equivalent.

ARCH 451 Theory & Design Steel & Timber credit: 4 Hours.

Analysis and design of steel and timber structures for buildings. Steel columns, beams, trusses, connections, roof and floor framing systems; timber beams, columns, roof and floor framing systems. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 452 Theory of Reinforced Concrete credit: 4 Hours.

Concrete materials; behavior of reinforced concrete construction; behavior and design of structural elements, one-way slabs, beams, and girders; columns; ACI code requirements; and introduction to continuity in reinforced concrete structures. Course Information: 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 460 International Architecture credit: 4 Hours.

Interdisciplinary opportunity to focus on, study, and record the design and planning of cities and rural settlements in other cultures. Through directed study and participation in the intellectual environment of a foreign university, students analyze unfamiliar settings, developing insights to enrich their professional development. 4 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Junior standing or higher in the School of Architecture, Department of Landscape Architecture, or the Department of Urban and Regional Planning.

ARCH 461 Critical Travel Documentation credit: 4 Hours.

Modern and historic city forms and rural practices are analyzed while experiencing the realities of daily life traveling in another culture. Journals include drawings and writings that record buildings, environs, and landscapes. 4 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Junior standing or higher in the School of Architecture, the Department of Landscape Architecture, or the Department of Urban and Regional Planning.

ARCH 468 Overseas Architectural Studies credit: 3 Hours.

This course is designed to enrich the professional development of students in a study abroad location. Students participate in thematic workshops, seminars, lectures and field trips focused on understanding and analyzing architectural and urbanistic landmarks and settings on site through both directed and independent assignments. 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Senior standing in the School of Architecture.

ARCH 471 Fundamentals of Arch Design credit: 6 Hours.

Basic architectural design methods, fundamentals, principles and concepts including creative problem solving in two- and three-dimensions. 6 undergraduate hours. 6 graduate hours. Prerequisite: Limited graduate standing in Architecture and concurrent enrollment in ARCH 231.

ARCH 472 Arch Des in Landscape & Cities credit: 6 Hours.

Intermediate architectural design methods, fundamentals, principles and concepts focusing on buildings in landscape and urban contexts. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 471 and concurrent enrollment in ARCH 233.

ARCH 473 Architectural Design and Performance credit: 6 Hours.

Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building: materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 371 and ARCH 372.

ARCH 474 Architectural Design and Making credit: 6 Hours.

Building design that emphasizes the creative process of making, experimentation, and theories of contemporary methods and materials. Projects focus on translating design ideas at multiple scales into reality through computation, representation, or production, utilizing fabrication processes. Outcomes foreground entrepreneurial design thinking and team-based learning. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 473.

ARCH 475 Arch Design & Development credit: 6 Hours.

Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building; materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 374 or ARCH 472.

ARCH 476 Arch Design & Exploration credit: 6 Hours.

Exploration of boundaries of architecture and the built environment. Focused exploration into specific design topics, such as issue-oriented building problems, urban design theory, intermediate building design and site planning theory, human-environment relationship theory, interdisciplinary design, and architectural design and presentation methods. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 475.

ARCH 490 Special Topics in Contemporary Architecture credit: 1 to 4 Hours.

Selected topics in and applications of contemporary architecture; see Class Schedule or department office for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms up to 12 undergraduate hours or 8 graduate hours, if topics vary. Prerequisite: Consent of instructor. For majors only.

ARCH 491 Arch Professional Internship credit: 0 Hours.

Full-time or part-time professionally supervised field experience in design intended to introduce students to the practice of architecture in a commercial firm or agency of government. Students work in the school-approved firm or agency of their choice. Written work reports and reflective experiential learning reports are required. 0 undergraduate hours. 0 graduate hours. Approved for S/U grading only. May be repeated in separate terms a maximum of 3 times. Prerequisite: Graduate standing or upper-level undergraduate standing, or consent of instructor. For students enrolled in the BSAS and M.Arch. programs of study only.

ARCH 498 Directed Research in Arch credit: 1 to 4 Hours.

Participation in on-going research projects which may include energy management, environmental perception, facilities development, building science, and other topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Approval of written proposal by instructor and Director of School.

ARCH 499 Off-Campus Study credit: 0 to 12 Hours.

Provides opportunity for approved off-campus study. Detailed proposal for study off campus must be submitted for approval to the appropriate committee in the School prior to such study. Final determination of credit and its application toward the degree is made after a review of the student's off-campus work by the above committee and the Director of School. 0 to 12 undergraduate hours. 0 to 12 graduate hours. Approved for both letter and S/U grading. Prerequisite: Senior or graduate standing in architecture and approval of program prior to registration.

ARCH 501 Architectural Practice credit: 3 Hours.

Role of the architect in the building enterprise, professional ethics, and the conduct of professional practice; legal aspects of architectural practice and building construction; introduction of business management, marketing, operational procedures, financial planning, and cost control of architectural practices; and the administration of construction contracts. Prerequisite: Graduate standing or consent of instructor.

ARCH 502 Structural Planning credit: 4 Hours.

General problems in the selection and design of structural systems for buildings; methods of analysis; site explorations, soils, and foundations; bracing; and special systems. Prerequisite: ARCH 451 and ARCH 452.

ARCH 510 History of World Landscapes credit: 4 Hours.

Same as LA 513. See LA 513.

ARCH 511 Seminar in Ancient Arch credit: 3 Hours.

Seminar on topics in ancient architecture. Prerequisite: ARCH 410, or equivalent as determined by the instructor.

ARCH 512 Seminar in Medieval Arch credit: 3 Hours.

Seminar on topics in medieval architecture. Same as MDVL 512. May be repeated to a maximum of 12 hours in the same or subsequent terms. Prerequisite: ARCH 411, ARCH 412, or equivalent as determined by the instructor.

ARCH 513 Sem in Ren & Baroque Arch credit: 3 Hours.

Seminar on topics in European architecture from the fifteenth through the eighteenth centuries. Prerequisite: ARCH 413 and ARCH 414, or equivalent as determined by the instructor.

ARCH 516 Architecture Seminar 1800-2000 credit: 3 Hours.

Seminar on topics in European and American architecture from 1800 to 2000. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: ARCH 415, ARCH 416, or ARCH 417.

ARCH 517 Architectural History 1850-Present credit: 3 Hours.

This course is a survey of significant buildings, movements, and figures of modern and contemporary architecture, with a focus on contextualizing built environments as the embodiment of social, cultural, political, economic, and technological developments of their time. It outlines the development of modern, postmodern, and contemporary architectural thought. Key themes include industrialization and modernization, the development of the modern movement in twentieth-century architecture, non-Western modernism, the development of postmodernism as an architectural movement, regionalism, globalization and architecture, the sustainability movement, and the development of digital technology in architecture. 3 graduate hours. No professional credit.

ARCH 518 Recording Historic Buildings credit: 3 Hours.

Examines techniques for recording historic buildings and sites: measuring, photographing, and drawing to Historic American Building Survey standards; taking field notes and investigating public records to document reports. Prerequisite: ARCH 419 and demonstrated ability in architectural graphics; or consent of instructor.

ARCH 519 Conserv of Building Materials credit: 3 or 4 Hours.

Examination, analysis, and pathologies of building materials and techniques for treatment and repair of historic buildings. Emphasis is on conservation of traditional masonry, concrete, and metals. Field trips and lab work. To receive 4 hours credit, students must participate in lab. Prerequisite: ARCH 419.

ARCH 530 Management in Architecture credit: 3 Hours.

Study of management and business administration topics relevant to the architecture profession. The application of: marketing, ethics, accounting, organizational behavior, quantitative analysis, finance, operations, economics, and strategic planning to the field of architecture. Management and economic issues that influence and motivate commercial, industrial, institutional, and individual clients are addressed. Prerequisite: Graduate standing in Architecture.

ARCH 534 Building Economics credit: 3 Hours.

Study of factors affecting cost of building including: the building market, construction cost, estimates and cost control, time value of money and building life-cycle cost, measuring the worth of investments, depreciation and tax consideration of cash-flows. Prerequisite: Graduate standing or consent of instructor.

ARCH 536 Planning and Design of Structural Systems credit: 4 Hours.

This course addresses the selection, planning, and preliminary design of structural systems for buildings. Emphasis is on understanding structural systems and their components as part of an integrated building system. Topics covered include a review of concepts from statics and strength of materials, structural requirements of strength-stiffness-stability, structural planning considerations, gravity loads and systems, lateral loads and systems, soils and foundations, and cable-net and other facade systems. 4 graduate hours. No professional credit. Prerequisite: ARCH 232 and ARCH 433 or consent of instructor.

ARCH 537 Environmental Control Systems II credit: 4 Hours.

This course investigates the control of thermal and luminous environments with an emphasis on active means of controls and building envelope design. Specific topics include: heating and cooling load and energy calculations; primary (boilers, chillers, etc.) and secondary (comfort delivery) mechanical systems; indoor air quality; energy, lighting, and daylighting codes and metrics; electric lighting properties, selection, design, and calculations; advanced daylighting strategies and calculations; visual comfort assessment; curtain wall and masonry systems; and rain screen principles. 4 graduate hours. No professional credit. Prerequisite: ARCH 434 or consent of instructor.

ARCH 538 Econ Issues in Arch Develop credit: 4 or 6 Hours.

Individual and team analysis of architectural development proposals addressing relevant economic topics and trends. Proposals are analyzed for development, construction, finance, operation, and sale costs. Potential and projected rate of return on investment is established for specific time periods. Economic and social forces impacting upon real estate values are examined. 4 or 6 graduate hours. No professional credit. Prerequisite: ARCH 501, ARCH 530, and ARCH 534; or consent of instructor.

ARCH 544 Bldg Sys & Design Integration credit: 0 to 4 Hours.

Advanced course on building design for greater performance, including the study of: the anatomical and functional variations of building subsystems and their design implications; inter-system relationships and synergistic integration of building subsystems into the overall building; and the strategies for designing buildings of high functional performance and greater overall value. Term paper is required for 4 hours credit. Prerequisite: Graduate standing in Architecture or consent of instructor.

ARCH 545 Design & Constructability credit: 3 or 4 Hours.

Advanced course on building design for greater constructability, including material alternatives and their architectural, performance, and construction implications; the implications of the specifics of design on the range of applicable construction methods, and therefore, on construction productivity and economy; and the strategies for designing buildings of high constructability and greater overall value. Term paper is required for 4 hours credit. Prerequisite: ARCH 544 or consent of instructor.

ARCH 546 Programming & Concept Studio credit: 6 Hours.

An advanced course on programming architectural projects and developing design concepts to best meet the project goals and maximize value creation. Investigation of relevant issues and appropriate methods of programming and concept development are followed by programming and design exercises. The specific contents include: theories and methods of programming; general program requirements and exemplary design responses for selected major building types; testing of the viability of selected model programs through exploration of appropriate design responses; further enhancement of the subject programs in light of such explorations; and investigation and development of philosophically sound and operationally efficient methods of programming and design. May not be repeated for credit. Prerequisite: Graduate standing in architecture and consent of instructor.

ARCH 547 Architectural Practice Studio credit: 6 Hours.

Comprehensive building design with emphasis on holistic design integration for optimum performance and constructability with best possible economy under the realistic temporal, technical, legal, and budgetary limitations. The projects, typically real ones, are executed through partial construction document phase through collaborative design by project teams. (Day-long Friday field trips). Prerequisite: ARCH 534, ARCH 545, and ARCH 546; or consent of instructor.

ARCH 548 Const Execution & Admin credit: 4 Hours.

Advanced course in construction with emphasis on acquiring knowledge and developing skills for successful project execution in a real-time project with numerous variables affecting the project outcome, including: devising methods and strategies for effective project execution; making decisions that can steer the project to the best possible direction; and skillfully mediating disputes and conflicts that might arise. For this purpose, on-going major construction projects are used as Learning Laboratories. May be repeated to a maximum of 8 hours. (Summer I credit: 1 graduate hour and Summer II credit: 2 graduate hours). Prerequisite: ARCH 501 and ARCH 545; or consent of instructor.

ARCH 550 Reinforced Concrete Design credit: 4 Hours.

Selection, design, and comparison of reinforced concrete floor systems for buildings; study and design of columns and footings; and prestressed concrete. Prerequisite: ARCH 452.

ARCH 551 Structural Analysis credit: 4 Hours.

Advanced problems in the analysis of statically determinate structures; general theories and methods of analysis of statically indeterminate structures by geometric and energy methods; and introduction to theory of plastic design. Prerequisite: ARCH 451 and ARCH 452.

ARCH 552 Soil Mech and Foundations credit: 3 Hours.

Soil properties and site exploration; stresses in soils; soil consolidation and settlement; shear strength of soils; bearing capacity; design of spread and combined footings; mats; pile foundations; lateral soil pressure and retaining walls. Prerequisite: ARCH 452 and ARCH 551.

ARCH 553 Adv Reinforced Concrete Design credit: 3 Hours.

Critical review of the analysis, methods, and specifications involved in the design and behavior of reinforced concrete structures for buildings, including tall buildings, plates, and shells; computer applications. Prerequisite: ARCH 551; credit or concurrent registration in ARCH 560 or consent of instructor.

ARCH 554 Adv Steel Design credit: 3 Hours.

Advanced topics in the design of steel structures; critical study of the AISC specification; design of steel members and their connections; composite structures; and the analysis and design of continuous structures and tall buildings. Prerequisite: ARCH 560 or consent of instructor.

ARCH 555 Prestressed Concrete Design credit: 3 Hours.

Theory and design of prestressed concrete structures and suspension shell structures. Prerequisite: ARCH 553 or consent of instructor.

ARCH 556 Advanced Structural Planning credit: 4 Hours.

Study of the loads, functional and spatial requirements, and construction problems in the selection and design of structural systems for buildings; cost estimates; and integration of mechanical and electrical equipment. Prerequisite: ARCH 552 and ARCH 553; credit or concurrent registration in ARCH 554 and ARCH 555, or consent of instructor.

ARCH 558 Structural Wood Design credit: 3 Hours.

Analysis and design of wood structures for buildings; response of wood buildings to gravity and lateral loads; design of structural elements: beams, columns, beam-columns, members in tension, and trusses using NDS specifications; connections; plywood panels; diaphragms and shear walls. Prerequisite: ARCH 451 or equivalent.

ARCH 559 Structural Masonry Design credit: 3 Hours.

Engineering properties of masonry materials; codes and standards for masonry structures; analysis and design of masonry structures including multistory buildings and arches. Prerequisite: ARCH 452 or equivalent.

ARCH 560 Advanced Structural Analysis credit: 3 Hours.

Advanced theory and analysis of statically indeterminate structures, recognizing effects due to temperature, settlement, and fabrication errors; matrix methods focusing on computer analysis techniques; introduction to plastic analysis and design. Prerequisite: ARCH 551.

ARCH 563 Soc/Beh Research Designed Env credit: 4 Hours.

Introduction to methods and techniques of systematically generating social and behavioral information relevant to the programming, design, and evaluation of physical environments. Same as LA 563. Prerequisite: Graduate standing in architecture, landscape architecture, or urban and regional planning.

ARCH 571 Design: Detail and Architectonics credit: 6 Hours.

Design studio investigations of multiple techniques and methodologies addressing the design and fabrication of small-scale architectural constructions, explorations of specific sites and places, and interdisciplinary projects. Field trips may be required. Shop safety orientation required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Graduate standing or consent of instructor.

ARCH 572 Design: Behavior and Environment credit: 6 Hours.

Design studio explorations responding to social, economic, political and behavioral dimensions of human existence and settlement. Projects investigate the experience of physical environments at the human scale and socially sustaining design strategies addressing diverse human needs. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Graduate standing or consent of instructor.

ARCH 573 Design: Technology and Performance credit: 6 Hours.

Design studio investigations of buildings and systems focusing on structure, enclosure, technology and performance. Integration of building materials, components and systems and their impact on the design, construction, and sustainability of buildings. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 credit hours. Prerequisite: Graduate standing or consent of instructor.

ARCH 574 Design: Architecture and Urban Design credit: 6 Hours.

Design studio investigations of issues that impact urban habitats, buildings and people. Architecture and urban design, preservation, and adaptation of new and existing buildings, cities, districts, public realms and urban environments. Designing and preserving buildings and communities in a sustainable manner. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 credit hours. Prerequisite: Concurrent enrollment in ARCH 536 or consent of instructor.

ARCH 576 Architectural Design Seminar credit: 3 Hours.

Presentations and discussions relative to various areas of architectural and environmental design concerns. May be repeated to a maximum of 15 hours. Prerequisite: Consent of instructor.

ARCH 577 Theories of Architecture credit: 4 Hours.

Review of principles of architectural design; factors in programming architectural requirements; design development; and evaluation and criticism. 4 graduate hours. No professional credit. Prerequisite: ARCH 517 or consent of instructor.

ARCH 589 PhD Colloquium credit: 1 Hour.

Provides graduate students insight on the responsibilities and expectations of academic faculty. Core responsibilities - research, teaching and service - required of faculty will be discussed, along with important resources and strategies to aid students in obtaining a faculty appointment and plotting a successful career path. Approved for S/U grading only. Must be repeated in separate terms to a maximum of 2 hours.

ARCH 590 Directed Research credit: 0 to 8 Hours.

Nature and scope of projects to be determined by consultation between student and faculty advisor; open to architecture and landscape architecture majors as well as those from other disciplines who wish to engage in interdisciplinary work. Approved for both letter and S/U grading. May be repeated in the same term up to 12 hours and separate terms up to 18 hours; MARCH students are limited to 12 hours. Prerequisite: Consent of instructor.

ARCH 591 Spec Prob Arch Hist & Pres credit: 2 to 4 Hours.

Individual investigation of the work of particular architects, of specific buildings, and of the architecture of periods or regions; comparative studies; and aesthetic problems. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Twelve hours of architectural history or consent of instructor.

ARCH 593 Spec Prob Arch Practice & Mgt credit: 2 to 4 Hours.

In-depth investigation of emerging issues and specific areas of research interest beyond what is covered in graduate courses of regular offering in the area of architectural practice and management. Students, as individuals or in groups, are expected to propose a research plan and methods for a specific topic of research interest in consultation with the instructor, and execute it under the guidance of the instructor through consultation on a regular basis. May be repeated in same and subsequent terms as topics vary to a maximum of 12 hours. Prerequisite: Advanced graduate standing and consent of instructor.

ARCH 594 Spec Prob Building Sci & Tech credit: 2 to 4 Hours.

In-depth investigation of emerging issues and specific areas of research interest beyond what is covered in graduate courses of regular offering in the area of building science technology. Students, as individuals or in groups, are expected to propose a research plan and methods for a specific topic of research interest in consultation with the instructor, and execute it under the guidance of the instructor through consultation on a regular basis. May be repeated to a maximum of 12 hours. (Summer credit: 1 to 2 graduate hours). Prerequisite: Advanced graduate standing and consent of instructor.

ARCH 595 Spec Prob Struct Theory & Des credit: 2 to 4 Hours.

Individual or group investigation and study in architectural engineering application; research in economy and design in correlation with architectural, mechanical, and structural requirements. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARCH 596 Spec Prob Housing Env credit: 2 to 4 Hours.

Individual investigation or research in housing environments involving special issues such as energy conscious design, human-environmental relations, aesthetic theory, government policy, and cultural patterns. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARCH 597 Spec Prob Arch Design credit: 2 to 4 Hours.

Individual investigation of building types and systems, aesthetic theories, design thesis programming and other problems in architectural design. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

ARCH 598 Specialized Architectural Practice credit: 0 Hours.

This course adds an academic dimension to professionally supervised field experiences in which problems in architectural design and technology are defined, researched, and solved. Advanced doctoral students are introduced to applied research processes in any of architecture's sub-disciplines. Sites of applied research may include commercial firms, not-for-profit organizations, and government agencies. Students work in school-approved firms or agencies of their choice. Written accounts of work accomplished, documentation of research questions developed and pursued, and reflective experiential learning reports must be submitted for evaluation. Field experiences may be part time or full time. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated for up to 11 months total of training. This course is intended to facilitate CPT in professionally focused environmental design research for students in the PhD program. Prerequisite: Required research methods course (ARCH 505/LA 505 or ARCH 563/LA 563 or equivalent) and approval of both PhD program chair and student's PhD adviser. For PhD students who have completed stage 1 of coursework.

ARCH 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor and graduate program coordinator.

Art (ART)

ART Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ART>)

Courses

ART 100 Understanding Visual Culture credit: 3 Hours.

Interdisciplinary methods in recognizing and understanding meaning of a wide range of visual messages in the arts, design, and culture, with emphasis on critical thinking and analysis. Topics include: visual perception, visual persuasion, the visual interpretation of time and space, humor. Contemporary art and design are explored through the use of semiotics and historical, cultural and ethical aesthetic and technical perspectives.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 102 Drawing for Non-Majors credit: 3 Hours.

Students will work with a wide variety of drawing materials, methods and strategies in a studio art context. Students will explore drawing concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate as well as those who may have significant knowledge and experience. Not open to students majoring in art and design. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 103 Painting for Non-Majors credit: 3 Hours.

Students will work with a wide variety of painting materials, methods and strategies in a studio art context. Students will explore painting concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate along with those who have significant knowledge and experience. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 104 Sculpture for Non-Majors credit: 3 Hours.

Students will work with a wide variety of sculptural materials, methods and strategies in a studio art context. Students will explore sculpture concepts, form, and technique through production and critique of artworks, as well as address theories and histories of visual representation through readings and discussion. Students with little or no background in visual art are encouraged to participate along with those who may have significant knowledge and experience. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 105 Visual Design for Non-Majors credit: 3 Hours.

This course utilizes lectures, exercises, and projects to help students heighten their visual literacy, improve their ability to communicate in an increasingly visually oriented world, and gain a better understanding of the processes and methodologies that designers use. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 140 Introduction to Art credit: 3 Hours.

A creative and expressive exploration of multiple art media, including but not limited to drawing, painting and design elements. This course is an introduction to the art making process with weekly interactive lectures and hands on studio sections. Additional fees may apply. See Class Schedule. Not open to students in art and design and architecture.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 150 Introduction to Drawing credit: 2 Hours.

This is an introductory drawing course with an emphasis on heightening visual awareness and utilizing basic elements of technique and concept. Media such as pencil and charcoal will be used through a variety of technical and conceptual exercises. This course is designed for students who have little to no prior experience with drawing. Approved for Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 151 Black & White Film Photography credit: 3 Hours.

Course offers a foundation in black & white film photography. Camera use, film exposure & processing, and printing processes will be explained and demonstrated. Provides a technical & conceptual understanding of photography as a visual medium for expression and communication of ideas. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Enrollment is restricted to students in Living Learning Communities and minors in Art + Design.

ART 152 Experimental Photography credit: 3 Hours.

Introduces students to a variety of alternative photographic media and image making practices, including: photograms, pinhole cameras and paper negatives, Diana medium format cameras, orthochromatic film, cyanotype and VanDyke brown printing, solarizing/specialty print developers and print toners. Approved for both Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 153 Digital Photography Seminar credit: 2 Hours.

Course offers a foundation in digital photography. Camera use and digital editing will be explained and demonstrated. Elements of visual composition for effective photographs will also be included. Course is taught as a service-learning project with the Champaign County Humane Society. Weekly field trips to photograph at CCHS are a component of the class schedule. Approved for both Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 154 Digital Video credit: 2 Hours.

This is an introductory course for those who have little or no experience working in digital video formats. Students will explore the tools and techniques of moving image production through individual and team projects, as well as view and discuss existing films and videos. Students will learn basic camera functions and the use of professional editing programs for video and sound. Projects will focus on the creation of time-based media with an emphasis on technique, documentation, narrative, and context. Approved for both Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Enrollment is restricted to students of Living Learning Communities and minors in Art + Design.

ART 155 Introduction to Graphic Design - Unit One credit: 3 Hours.

This course introduces non-graphic design majors to visual literacy, composition, and the creative process. Students will solve real world visual communication problems in a hands-on studio environment using Adobe Creative Suite (Illustrator, Photoshop, and InDesign). Students will receive instruction in the elements of visual grammar and establish a foundation for visual literacy based on design principles. Using hands-on exercises and problem-solving projects, students will work through the creative process and learn industry standards necessary to function in today's commercial art field. Approved for Letter and S/U grading. Prerequisite: Enrollment is restricted to students of Living-Learning communities and minors in Art + Design.

ART 191 Unit One Studio/Seminar credit: 1 to 3 Hours.

Topics vary; consult Unit One office. Approved for both letter and S/U grading. May be repeated if topics vary.

ART 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

ART 201 Art in Early Childhood credit: 2 Hours.

Philosophical and practical foundations for teaching art in early childhood settings. Lectures, discussions and class activities focus on the value of art in the curriculum, artistic development and instruction, observation and guided teaching practice. Additional fees may apply. See Class Schedule. Prerequisite: Not open to students majoring in art and design.

ART 202 Art in the Elementary Grades credit: 2 Hours.

Introductory laboratory experiences with the elements of design in the visual arts and with processes, materials, and activities appropriate for the elementary grades. Additional fees may apply. See Class Schedule. Prerequisite: Not open to students majoring in art and design.

ART 205 Experience & Meaning in Design credit: 3 Hours.

Introduces students to the cultural impact of graphic design by connecting graphic design theory to the everyday experience of meaningful design. Graphic design will be studied as a mediating factor between culture and cognitive processing. The course utilizes a weekly pattern of assigned readings, online presentations, design assignments delivered online, and peer review. The reading and presentations will connect the students to major concepts. The assignments will allow students to demonstrate understanding of those concepts.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

Cultural Studies - Western

ART 206 Mining the University/Community credit: 3 Hours.

Mining the University/Community is an hybrid/online course allowing students to assemble their own intellectual experience by finding and attending creatively-stimulating public events outside of their majors. Students are charged to find challenging events each week (lectures, performances, screenings, discussions of intellectual value), contribute these 'finds' to a class calendar full of possibilities, attend one of those events and then post a written evaluation of their chosen event each week to the class blog on Compass. Each student creates a collection of 14 different intellectual experiences with observations and responses shared with all class members as well as a final class post to summarize the evolution of the collection.

ART 208 Digital Art and Sustainability credit: 3 Hours.

The course will explore the social and environmental impacts of art-making practices that rely heavily on computer and Internet technologies. We will examine the wide range of artistic practices that employ computer and internet technologies and will introduce students to artists and artistic practices that criticize computer and Internet technologies and their impacts. Students will research the source of materials and labor used to manufacture computer and Internet related technologies, the facilities that support the infrastructure of the Internet and the social, political and economic systems that impact end of life management of electronic waste. From this base of research, students will employ digital or Internet technologies to produce a final project that explores how they understand the impact of their use of these technologies in scholarly pursuits including research, writing and making art.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ART 210 Special Topics for Non-Majors credit: 3 Hours.

Allows students to explore a revolving series of genres, specializations, and /or interdisciplinary practices. Possible subjects include, but are not limited to, site-specific public art, recycled and sustainable materials, performance, sound, or emerging technology. Topics and subject matter to be published in course listings. May be repeated to a maximum of 6 hours in separate terms.

ART 221 Visual Culture of Fandoms credit: 3 Hours.

The course will involve writing and art making as two modes of interpretation and response to mediated imagery. We will consider the idea that students may become so closely entwined with their own fandoms that it affects their sense of self, personal/societal relationships, and memory. We will also focus on the importance of imagination in creating/sustaining fandoms and fan art. The framework of this course will be supported by academic literature on fandoms as well as visual methodologies. Students will briefly learn about elements and principles of design; the codes and conventions that structure the image; the viewers and how they interpret or experience the image; and the contexts in which an image is exhibited and viewed.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 240 Learning Through Contemporary Art credit: 3 Hours.

By looking at how contemporary artists research, strategize, and make, students in this class will learn about arts-based approaches to research, study, and learning. Students will respond to the work examined through their own video production instead of traditional writing.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 280 Exploring Visual Culture credit: 3 Hours.

Introduces key concepts for understanding the wide range of imagery that has come to characterize contemporary everyday life in the 21st century. Explores concepts drawn from the literature of visual culture studies. Analyzes images from popular culture, fine arts, and vernacular arts, with contemporary mass media, such as music videos and television dramas, being considered alongside historical paintings and sculpture.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ART 299 Special Topics in Art credit: 1 to 3 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Sophomore standing.

ART 310 Design Thinking credit: 3 Hours.

Introduces design literacy and promotes an understanding of the field of contemporary design. Explores design thinking as a common thread that connects all disciplines concerned with the making of things, the solving of problems, and the organization of information. Through a series of lectures, case studies, and simple design projects, this course offers an extensible framework of tools and strategies that can be applied across multiple disciplinary boundaries.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ART 350 Writing with Video credit: 3 Hours.

Students will engage in a comprehensive exploration of creative inquiry, self-reflection, social engagement, and media production. They will adapt the basic, traditional principles of critical writing and analysis, to communicate effectively using image production and post-production. Directed writings in concert with video production projects will allow students to experience an integrated process of thinking, creating, and problem-solving.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ART 375 Capstone Studio for Non-Majors credit: 3 Hours.

Non-majors with prior studio experience will identify and pursue project-based creative work, either individually or as part of a collaborative team. Students work closely with the instructor to identify individual interests and formulate a suitable semester-long project. Prerequisite: Two prior studio courses.

ART 499 Special Topics in Art credit: 1 to 4 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same term to a maximum of 6 undergraduate hours or 6 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: Senior standing or consent of instructor.

ART 550 Writing with Video Workshop credit: 4 Hours.

Explores the use of video in research, scholarly, and/or creative endeavors. Students engage in a comprehensive examination of video as a rhetorical narrative medium, with a focus on the actual production of video work. Emphasizes the use of video as a tool for inquiry, engagement, composition, and communication across a broad range of cultural and professional practices. Additional fees may apply. See Class Schedule. Prerequisite: Graduate standing.

Art--Design (ARTD)

ARTD Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTD>)

Courses

ARTD 101 Introduction to Industrial Design credit: 3 Hours.

Introduction to problem-finding and problem-solving processes in the design of products. This course teaches foundational industrial design skills, methods, philosophies, and design thinking. Creation of 3-dimensional products begins with a simplified design process, adding steps until a final project is completed that incorporates all components of the design process. This course satisfies the 3D requirement in the new Art + Design Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For Art + Design majors only.

ARTD 151 Introduction to Graphic Design credit: 3 Hours.

An introductory course for students considering graphic design as their major. This course teaches design as a critical thinking and problem solving process that will be applied to class projects. Topics will include principles of visual perception, visual communication theory, precedents in design history, and technical skills common to the practice of graphic design and which relate to image making, surface design, typography, layout, design systems and their applications. This course satisfies the 2D requirement for the new Art + Design Foundation curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTD 160 The Image World credit: 3 Hours.

Explores photography and video as the most powerful media in today's image-saturated world. Students will look at, think about, discuss, and write about a diverse array of photography and video. They will study examples of historical and contemporary art, design, journalism and advertising, in various and numerous contexts. Students will make their own images, create their own videos, conduct visual research, and produce media-based projects. Students will also build their own individual social media sites for sharing their work with both their classmates and the world. This course satisfies the 2D requirement in the new Art+Design curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design majors only.

ARTD 201 Industrial Design I credit: 4 Hours.

Introduction to the creative process and methods involved in industrial design; research, modeling, form giving, prototyping and communication with emphasis on user centered design. Projects of escalating scale and complexity complemented by lectures and demonstrations. Additional fees may apply. See Class Schedule. Prerequisite: Concurrent registration in ARTD 224 or ARTD 225.

ARTD 202 Industrial Design II credit: 4 Hours.

Studio design problems of increasing complexity involving structures and mechanisms. Lectures and discussions to explore design issues affecting contemporary culture and aesthetics perceptions. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 201. Concurrent registration in ARTD 224 or ARTD 225. Sophomore standing in Industrial Design major.

ARTD 209 Chado (The Way of Tea) credit: 3 Hours.

Explores the Japanese Tea Ceremony and its relevance to everyday life. Students will acquire a better understanding of Japanese culture and a new appreciation of their own cultures through the study of the Tea Ceremony and the Zen worldview that informs it. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTD 215 Introduction to Typography credit: 3 Hours.

This introductory studio functions as a survey of media-based affordances on typography. Students relate typographic form to reading conventions and reader expectations, as well as human cognitive and perceptual limitations. Internal consistency is established as a primary criterion for quality in design solutions. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in graphic design curriculum or consent of instructor.

ARTD 216 Introduction to Image Making credit: 3 Hours.

This introductory studio functions as a survey of representational strategies through image reproduction technology. Discussions center around the reader's construction of meaning through still and moving images. Students develop an authorial voice in visual practice. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in graphic design curriculum or consent of instructor.

ARTD 217 Graphic Design for Non-Majors credit: 3 Hours.

Introduces students to the field of graphic design in theory and practice. Examines what graphic designers make and the methods that are employed in contemporary design practice. Emphasis is placed on the organization and visual presentation of relevant content across media and their effect within systems. Additional fees may apply. See Class Schedule.

ARTD 218 Intro to Web Technologies credit: 2 Hours.

This half semester, fully online course introduces students to the standards-based languages of the web (HTML, CSS, and JavaScript) through directed study, quizzes, and technically oriented design exercises.

ARTD 222 Typographic Practice credit: 3 Hours.

This introductory studio functions as a survey of typographic practice across media platforms. Students relate typographic form to reading conventions and reproduction technologies. Additional fees may apply. See Class Schedule.

ARTD 225 Design Drawing credit: 3 Hours.

Introduction to rapid drawing methods and tools used by designers. Focuses on theory and application of orthographic and perspective drawing for communication of design ideas. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Concurrent registration in ARTD 201 or ARTD 202.

ARTD 228 Computer Applications credit: 3 Hours.

Concepts, methods and applications of computer-aided industrial design to the design of products for mass manufacture. Rendering and lighting techniques to communicate product forms. Additional fees may apply. See Class Schedule. Prerequisite: Industrial Design major, sophomore standing or consent of instructor. Concurrent registration in ARTD 201 or ARTD 202.

ARTD 230 Design Thinking/Need-Finding credit: 3 Hours.

Design thinking, a term with origins in industrial design practice, describes a human-centered approach to design and innovation in products and services, addressing the tri-partite requirements of feasibility, desirability and viability. With this focus on determining user needs, a variety of processes, including observation, empathy, ideation, prototyping and modeling, are used to discover people's needs and opportunities for design thinking, along with the communication of design outcomes by diagrammatic and narrative means. Design thinking is best done in teams, hence the project team basis for this course. This course concentrates on need-finding rather than the full resolution of design proposals. Same as TE 230. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design or Engineering majors only.

ARTD 240 eWaste: Sustainable Design credit: 3 Hours.

Examines the topics of electronic waste, or eWaste, within the context of sustainable design. Students will learn about sustainable and "green" electronic product design practices and develop the ability to assess a variety of products according to these criteria. Case studies will be supplemented by assigned readings, directed writing, and group discussion.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTD 251 Graphic Design Toolbox credit: 2 Hours.

This studio introduces students to the field of graphic design in theory and practice. The course examines what graphic designers make and the methods that are employed in contemporary design practice. Emphasis is placed on the organization and visual presentation of relevant content across media and their effect within systems.

ARTD 260 Basic Photography credit: 3 Hours.

Investigates basic image making and meaning. Student works with digital camera, exposure meter and learns digital printing. Student must furnish camera. Additional fees may apply. See Class Schedule. Prerequisite: Freshman standing in Art and Design or in Art History major or minor; or consent of instructor.

ARTD 261 Photography II credit: 3 Hours.

Uses digital process to express content with emphasis on the development of a personal aesthetic. Student must furnish camera. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 260. For Art majors only.

ARTD 262 View Camera credit: 3 Hours.

Includes work with camera movements, exposure, black and white film development and basic wet process silver printing as tools of creative expression. Most equipment furnished. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARTD 261 or consent of instructor.

ARTD 263 Digital Photographic Output credit: 3 Hours.

Explores the potential of color printing and output in digital media as a form for creative expression. Student must furnish camera. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARTD 260.

ARTD 270 Design Methods credit: 3 Hours.

A hybrid studio and seminar that introduces students to the principles and process of human-centered design through a focus on research and observation outside of the studio. This approach will allow students to address the social and cultural contexts in which designers intervene. Through a series of exercises and projects, students will begin to develop competencies in conducting research in specific environments in order to inform and inspire the direction of their design projects. Students will also learn how to iterate design solutions and prototypes based on expert input, testing and user feedback. Students will better understand and articulate the tools and methodologies shared by all design disciplines as it relates to a variety of actions and outcomes: visual communication and the design objects, services, interactions and experiences. Additional fees may apply. See Class Schedule.

ARTD 299 Spec Topics in Design Courses credit: 1 to 5 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTD 301 Industrial Design III credit: 4 Hours.

Design of user centered products for mass production; experience in the iterative problem solving processes and methods. Addresses practical constraints such as sustainability, environmental factors/ergonomics, manufacturing and materials, social and political and economic. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 202.

ARTD 302 Industrial Design IV credit: 4 Hours.

Industrial design problems of increasing complexity, scope and size. Continuation of ARTD 301. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 301.

ARTD 310 Intermediate Graphic Design I credit: 3 Hours.

This intermediate studio expands student knowledge of contemporary research methodologies that focus on user experience, collaboration, sustainability, and social responsibility. Projects are designed to provide students with the basic knowledge to become agents of positive social and commercial change. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design curriculum and ARTD 215, ARTD 216, and ARTD 217.

ARTD 311 Intermediate Graphic Design II credit: 3 Hours.

This intermediate studio tasks student teams analyze a system of designed products or services and propose/manage an intervention strategy. Students develop inclusive practices with stakeholders, who are addressed with empathy as co-creators. This topic studio changes in content with each semester. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design curriculum and ARTD 310.

ARTD 318 Digital Interaction credit: 3 Hours.

This studio explores the construction of compelling user experiences that incorporate the use of digital media. Students investigate both the theoretical and practical aspects of interaction through exercises involving information architecture, interface design, and creative code. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in graphic design or consent of instructor.

ARTD 326 Sustainability & Manufacturing credit: 3 Hours.

Exploration of environmental origins, theory and practice of sustainable product design. Environmentally-responsive design methodologies and topics such as industrial ecology, dematerialization, design for disassembly, design for recycling and life-cycle assessment. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 328 Human-Centered Product Design credit: 3 Hours.

Principles of human-centered design and usability applied to products, product systems, and product environments to enhance the user experience; strategies to enhance independent learning for professional development, to further research, and to acquire new skills. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 333 Type & Image credit: 3 Hours.

This studio extends typographic study with representational strategies for image reproduction technology. Students engage in practices for incorporating existing and created imagery into typographic systems. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 222.

ARTD 351 Graphic Design Inquiry credit: 1 to 4 Hours.

A series of topical studios that touch upon the myriad practices of graphic design. Students produce and analyze form and content according to each individual topic. Media engagement varies across sections. Additional fees may apply. See Class Schedule. May be repeated up to 8 hours.

ARTD 360 Photography III credit: 3 Hours.

Explores creative expression through various media but primarily photography. Students select format based on prior experience; group critiques held weekly; initial opportunity to experiment in personally selected directions and assignments which will be refined and amplified in ARTD 460. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing in Photography or consent of instructor.

ARTD 362 Photography Workshop credit: 3 Hours.

Advanced course on a special topic: see Class Schedule section note for description. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: Junior or senior standing in art and design; or consent of instructor based upon announced criterion that varies with topic.

ARTD 363 RAW Photography credit: 3 Hours.

An advanced Photoshop course for the student interested in a digital approach to Fine Art Photography. Students will explore the use and conversion methods of the RAW digital process, and learn how to extract, control, and enhance digital image files. Over the course of the semester, an effective and personal workflow within the Photoshop environment will be developed. Access to a digital SLR camera is required. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Junior or above standing in Art and Design, or consent of the instructor. ARTD 260 and ARTD 261 are suggested.

ARTD 371 Graphic Design Practicum credit: 2 Hours.

This analytical studio prepares students for entry into the field of graphic design. Professional practice is parsed into areas of opportunity, to which students ultimately align themselves and by which they structure their preparatory endeavors. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 207 and ARTD 333. For majors only.

ARTD 391 Special Problems in Design credit: 1 to 4 Hours.

Directed independent creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Art and Design; and consent of instructor, advisor, and associate director of the School. A contract must be completed & approved by the instructor & advisor. Must be Junior. 3.3 GPA, & only 6 hours total Ind. Study.

ARTD 393 Contemporary Art and Ideas credit: 3 Hours.

Advanced study of photographic issues and the creative process. Discusses creativity, aesthetics, criticism, and current imagery, as well as photography's relationship to other media. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Photography or consent of instructor.

ARTD 399 Internship in Design credit: 1 to 4 Hours.

Internships to be pre-approved for variable credit. Students will be required to document work completed during the internship with verification of supervisor. Supervisor will also be required to fill out a questionnaire either by mail or on-line. Faculty members will assess work and questionnaires to assign a grade. Approved for S/U grading only. Prerequisite: Junior standing in School of Art and Design.

ARTD 401 Industrial Design V credit: 4 Hours.

Advanced design projects in the context of the business environment in which product design and development takes place; marketing, branding, merchandizing, entrepreneurship within the context of globalized marketing and manufacturing. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 302.

ARTD 402 Industrial Design VI credit: 4 Hours.

Capstone project integrating all aspects of the design process from concept through final design, documentation and presentation; reconciliation of user centered constraints such as socio-economic, environmental-sustainability, manufacturability, health and safety and ethical. Standard approach that of an entry level industrial design professional. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 401.

ARTD 410 Advanced Graphic Design I credit: 4 Hours.

This advanced studio challenges students to seek and define problems within a shared topic. Emphasis is placed on the articulation of self-initiated narratives and consequent development of appropriate design strategies. This studio promotes a deeper understanding of design as a change agent within societal and economic systems that will lead to a comprehensive plan for the capstone project undertaken in ARTD 411. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 311 and senior standing in graphic design; for graduate credit - consent of graphic design program chair.

ARTD 411 Advanced Graphic Design II credit: 4 Hours.

This capstone studio continues design investigations in the interest of understanding and confidently articulating individual interests and abilities. This studio also focuses on the refinement of a comprehensive portfolio; self, peer, faculty, and outside review of student work; and an enhanced study of the field in preparation for professional practice. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 410 and senior standing in graphic design; for graduate credit - consent of graphic design program chair.

ARTD 415 Ninth Letter credit: 3 or 4 Hours.

Students develop, design, and produce issues of the national literary and arts journal, Ninth Letter. Also involves students in curating and designing content for the companion website, ninthletter.com. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 8 graduate hours. Prerequisite: Consent of instructor.

ARTD 418 Digital Interaction Sandbox credit: 2 Hours.

This advanced studio immerses students in design investigations that stimulate awareness of emergent digital interaction paradigms. Potential areas of exploration include design and development for both mobile devices and interactive environments. Additional fees may apply. See Class Schedule. 2 undergraduate hours. 2 graduate hours. Prerequisite: ARTD 318. Junior standing.

ARTD 420 Disability Design credit: 3 Hours.

Focuses on user-oriented, collaborative approaches to designing new products and services, with special emphasis on designing for people with disabilities. Students gain an understanding of the product development process by exploring empathic design research approaches, while working directly with prospective clients. Course work centers on designing products for mass production, and on recognizing opportunities to re-engineer existing products. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

ARTD 426 Product Innovation credit: 3 Hours.

Presents an overview of the product development process from concept generation to design for manufacturing and project management. Emphasis on product definition, innovation, the early phases of development and the role of designer in new product development. 3 undergraduate hours. 3 graduate hours.

ARTD 444 Typographic Systems credit: 3 or 4 Hours.

Students engage with complex typographic systems across varied media in a studio setting. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARTD 318 and ARTD 333. Junior standing required.

ARTD 445 Seminar in Design credit: 3 or 4 Hours.

Investigation of special problems and current topics in industrial and/or graphic design. Students will conduct original research which will be shared through papers, presentations, and discussions. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: Junior standing in Art and Design or consent of instructor.

ARTD 448 Professional Design Practice credit: 3 Hours.

Concentrates on developing presentation and communication skills that form the basis of a successful design career. Students will engage in portfolio reviews, plan and install exhibitions, prepare client presentations, and rehearse job interviews. Written work will include CV preparation. Emphasis will be placed on familiarizing students with professional practices and contexts. 3 undergraduate hours. No graduate credit.

ARTD 451 Graphic Design Problems credit: 1 to 4 Hours.

A series of topical studios that present complex problems of graphic design practice. Individual sections address professional, theoretical, or exploratory problems. Media engagement varies across sections. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours in the same term and 12 hours in separate terms. Prerequisite: ARTD 333.

ARTD 452 Interaction Design Problems credit: 1 to 4 Hours.

This series of topical studios presents complex problems of user experience through interactive media. Individual sections address professional, theoretical, or exploratory problems. Technological engagement varies across sections. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Prerequisite: ARTD 222 and ARTD 318.

ARTD 460 Advanced Photography credit: 3 Hours.

Concentrated use of photographic processes for creative expression with emphasis on professionalism and the production of a photographic portfolio. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing in Photography, or consent of instructor.

ARTD 471 Graphic Design Capstone credit: 3 Hours.

Students in this advanced studio articulate individual interests and conduct corresponding investigations to develop specialized expertise. The coursework represents the student's final preparation for practice in graphic design. Additional fees may apply. See Class Schedule. 3 undergraduate hours. No graduate credit. Prerequisite: ARTD 444 and ARTD 451. For majors only.

ARTD 490 Senior Honors credit: 2 to 5 Hours.

Independent creative activity, guided study, or research for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Industrial Design, a cumulative grade point average of 3.0; and consent of instructor and department.

ARTD 499 Special Topics in Design credit: 1 to 4 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated as topics vary to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: Senior standing or consent of instructor.

ARTD 501 Industrial Design I credit: 6 Hours.

Introductory graduate-level course emphasizing in-depth design research used to evaluate set studio projects. Focuses on the development of critical thinking and product evaluation, and the development of inherent skills required to communicate that thinking through designed artifacts. This course is the first level of a six-term study in a three-year program leading to a terminal degree of MFA in Industrial Design. Additional fees may apply. See Class Schedule. Prerequisite: BFA in Industrial Design or a related field (as accepted by the faculty), or consent of instructor.

ARTD 502 Industrial Design II credit: 6 Hours.

Second term of the introductory level year of the Industrial Design MFA degree program. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 501.

ARTD 503 Industrial Design III credit: 6 Hours.

Start of the second level of a six-term study in a three-year program leading to a terminal degree of MFA in Industrial Design. For two-year program, emphasis is solely directed to a research and design project that is the first stage of a comprehensive written thesis. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 502.

ARTD 504 Industrial Design IV credit: 6 Hours.

Completion of the second level of a six-term study in a three-year program leading to a terminal degree of MFA in Industrial Design. For two-year program, emphasis is solely directed to a research and design project that is the final stage of a comprehensive written thesis. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 503.

ARTD 505 Industrial Design V credit: 6 Hours.

Beginning of the third year of six-term study in a three-year program leading to a terminal degree of MFA in Industrial Design. Emphasis is solely directed to a research and design project that is the first stage of a comprehensive written thesis. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 504.

ARTD 506 Industrial Design VI credit: 6 Hours.

Final term of a three-year program leading to a terminal degree of MFA in Industrial Design. Emphasis is solely directed to a research and design project accompanied by a comprehensive written thesis. Additional fees may apply. See Class Schedule. Prerequisite: ARTD 505.

ARTD 570 Design Methods Workshop credit: 4 Hours.

A hybrid studio and seminar course that introduces students to the principles and process of human-centered design through a focus on research and observation outside of the studio. Students address the role of pedagogy in establishing design practices. Students enrolled in this course will take leadership roles in the corresponding Design Methods (ARTD 270). 4 graduate hours. No professional credit. Prerequisite: MFA students in Graphic Design.

ARTD 591 Special Problems in Design credit: 2 to 8 Hours.

Directed individual creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in Design.

ARTD 595 Design Laboratory credit: 2 to 6 Hours.

Individually directed research in the studio with concentration in design. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Enrollment in the MFA program in graphic design or consent of departmental graduate committee.

ARTD 599 Industrial Design Thesis credit: 0 to 2 Hours.

Faculty guidance in research and writing thesis for advanced degree in Industrial Design. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated. Prerequisite: Graduate study in Industrial Design.

Art--Education (ARTE)

ARTE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTE>)

Courses

ARTE 101 Art, Design, and Society credit: 2 Hours.

This course provides an introductory forum for beginning artists, designers, art historians, and art educators to think through the motivation(s) behind their/our creative work(s), research, and practices. Through topical examinations of contemporary art, craft, design, art history scholarship, art education scholarship, and interdisciplinary projects, developing artists will sift through pertinent issues around sustainability, ethics, ecologies, pedagogies, and civic engagement in order to inform our own burgeoning motivations and creative practices. Additional fees may apply. See Class Schedule. Prerequisite: For Art +Design majors only.

ARTE 201 Foundations of Art Education credit: 3 Hours.

Provides students with philosophical foundations for teaching art including in public schools. The primary emphasis will be on understanding recent and contemporary orientations through readings and practical activities. Particular emphasis will be placed on emerging trends in Art Education, especially the use of technology and the value of visual culture in student lives. It is envisaged that this course will provide the primary theoretical foundation for further practical and pre-service teaching courses in Art Education. Additional fees may apply. See Class Schedule.

ARTE 202 Methods of Teaching Art credit: 3 Hours.

Considers how competencies identified by the Illinois State Board of Education and the National Art Education Association inform the development of knowledge, dispositions, and resources for teaching art in a culturally diverse society, with particular attention to current theories and approaches to teaching art in Pre-School to Grade 12 settings. Emphasis is placed on professional development and reflective practices that engage inquiry-based teaching strategies. Teaching strategies for both making and appraising images are emphasized. Additional fees may apply. See Class Schedule.

ARTE 203 Everyday Arts Lab credit: 3 Hours.

This class examines community-based art projects that partner undergraduates with youth (K-12) in non-university settings including community centers and schools. Through this course, students will design and teach arts and public engagement projects. They will explore their identities as artists, educators, and citizens. Students will learn how to assess impact of their projects and teaching. The course welcomes all students; no prior teaching or community-based education experience necessary. Additional fees may apply. See Class Schedule.

ARTE 204 Practicum Teaching Experience credit: 4 Hours.

Provides undergraduate and graduates seeking certification in Art Education structured and supervised teaching experience in the Saturday Art School program, held 10 Saturday mornings during the semester. Professional development in personal communication skills, lesson plan delivery, organizational abilities, use of technology in instruction, and art classroom management will comprise the goals of the course. Must be taken in conjunction with ARTE 203. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 202.

ARTE 260 Museums in Action credit: 3 Hours.

Considers how scholarly discourse in museum interpretation and educational program development are translated into practices that engage culturally diverse audiences. Readings, research, and professional activities provide students with opportunities for examination of museum interpretive practices, programming decisions, and public engagement activities, along with analysis of Krannert Art Museum's presence on the university campus, in the larger community, and on the World Wide Web.

ARTE 299 Spec Topics in Art Education credit: 3 Hours.

Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours in a semester or, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTE 301 Early Field Art Teaching credit: 3 Hours.

Early field experience in local elementary schools one half day weekly; includes identification, instruction, methods, and practicum on the psychology of the exceptional child. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 203 and ARTE 204; Art education majors only.

ARTE 302 Public School Art Programs credit: 3 Hours.

The selection and arrangement of content for different educational levels; study and evaluation of curricula, equipment, and supplies; and program supervision. Additional fees may apply. See Class Schedule. Prerequisite: ARTE 301 or junior standing in art, or consent of instructor.

ARTE 350 Creative Dance for Children credit: 3 Hours.

Same as DANC 350 and HDFS 361. See DANC 350.

ARTE 391 Independent Study credit: 1 to 4 Hours.

Directed independent research or creative activity. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in art and design; and consent of instructor, advisor, and associate director of the School.

ARTE 401 Teaching Seminar credit: 4 Hours.

Examines responsibilities, methods, and techniques specific to teaching art in elementary and secondary schools; includes the psychology of the exceptional child in conjunction with methods of instruction and student teaching experience. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARTE 302; concurrent registration in EDPR 438 and EDPR 442, art education sections only.

ARTE 402 Artistic Development credit: 3 or 4 Hours.

Historical and contemporary perspectives on children's artistic development, emphasizing relationships between general intellectual growth and the ability to create and respond to works of art. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing, and PSYC 100 and EPSY 201.

ARTE 475 Art Exhibition Practices credit: 3 or 4 Hours.

Explores issues pertaining to the preparation, installation and conservation of visual art. Students will learn how to organize, design, spot and install an exhibition; develop exhibition graphics; address conservation issues; handle works of art; and learn the business of art. Field trips and guest lectures by conservators, preparators, curators and exhibition designers will add further depth to the class. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing in Art and Design.

ARTE 480 Popular Visual Culture credit: 3 or 4 Hours.

Focuses primarily on contemporary popular culture, but also draws upon fine art, folk art, and indigenous art from both the past and the present. Considers the often troubled relationships between the pleasures of visual culture and its ideologies. Students examine the literature of visual culture studies and develop research skills by examining a specific site of visual culture of their own choosing in terms of aesthetic pleasures and ideology including but not limited to sexism, class, ethnicity, religion, homophobia, and xenophobia. Theories of the body, consumerism, and globalization, among others will be considered. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in separate terms to a maximum of 6 undergraduate hours or 8 graduate hours.

ARTE 490 Senior Honors credit: 2 to 5 Hours.

Independent guided research and study for honors. Additional fees may apply. See Class Schedule. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in art education, a cumulative grade point average of 3.0; and consent of instructor, advisor, and associate director of the School.

ARTE 501 Issues in Art Education credit: 4 Hours.

A range of topical issues are explored, which may vary from semester to semester, but may include children's artistic development, visual culture and curriculum, the philosophy of art, and cultural studies. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours.

ARTE 502 Curriculum Development in Art credit: 4 Hours.

Analysis of curriculum organization in the visual arts; particular emphasis given to a range of curriculum positions in education and general research related to curriculum design. Additional fees may apply. See Class Schedule. Prerequisite: Consent of instructor.

ARTE 503 Professional Teaching Seminar credit: 2 to 4 Hours.

Advanced laboratory experiences in two-dimensional visual art techniques for elementary teachers, supervisors, and principals. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ARTE 505 Foundations of Art Education credit: 4 Hours.

Designed for master's level students. Readings and discussions introduce the theories upon which classroom practices are based, and follow the historical sequence of three major movements within art education over the past 100 years: self-expression in art education, discipline-based art education, and the recent shift toward visual culture in art education. Primary emphasis will be on understanding recent and contemporary orientations. Designed to provide a basis for more in-depth study of curriculum and instruction, child development, multiculturalism, visual culture, and other areas germane to art education. Students compare and contrast the literature in terms of the theories offered, or assumed, of children, art, pedagogy, and society. In addition, students will be introduced to academic standards of writing.

ARTE 506 Theories of Art Education credit: 4 Hours.

Designed for doctoral level students. Readings and discussions introduce the theories upon which classroom practices are based, and follow the historical sequence of three major movements within art education over the past 100 years: self-expression in art education, discipline-based art education, and the recent shift toward visual culture in art education. Primary emphasis will be on understanding recent and contemporary orientations. Designed to provide a basis for more in-depth study of curriculum and instruction, child development, multiculturalism, visual culture, and other areas germane to art education. Students compare and contrast the literature in terms of the theories offered, or assumed, of children, art, pedagogy, and society. In addition, students will be introduced to academic standards of writing.

ARTE 591 Independent Graduate Studies credit: 1 to 8 Hours.

Individual direction in research and in creative activity; thesis. Additional fees may apply. See Class Schedule.

ARTE 599 Thesis Research credit: 0 to 16 Hours.

Guidance in research and writing theses for advanced degrees. Approved for S/U grading only. May be repeated. Prerequisite: Graduate standing in art education.

Art--Foundation (ARTF)

ARTF Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTF>)

Courses

ARTF 101 Contemporary Issues in Art credit: 2 Hours.

Exposes the first year student in an interactive lecture/discussion format to contemporary issues and disciplines in the visual arts. Course requirements include attendance of course lectures, field trips, visiting artist presentations, keeping of a journal and the writing of a paper. Additional fees may apply. See Class Schedule.

ARTF 102 Observational Drawing credit: 3 Hours.

Theory and practice in observational drawing with emphasis on fundamental principles such as mark/line, shape/form, space/composition, linear/perspective, scale/proportion, value/tonal range, and pattern/texture. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTF 103 Design I credit: 3 Hours.

Theory and practice in the elements, processes and principles of design. Course content is organized under three headings: COLOR, a study of the visual, material and psychological nature of color; COMMUNICATION, an introduction to the fundamentals of visual communication using primarily digital media; and 3D CRAFT, a survey of fabrication techniques using three-dimensional media. Additional fees may apply. See Class Schedule. Prerequisite: This course is open to Art and Design Majors only.

ARTF 104 Expressive Drawing credit: 3 Hours.

One of a suite of three drawing courses, this class includes the following drawing concepts: narrative, conceptual, applied, non-objective, format, process, seriality and collage. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTF 105 Design II credit: 3 Hours.

Theory and practice in the elements, processes and principles of design. Course content is organized under three headings: RESEARCH, an introduction to methods used in research-driven project; TIME, an examination of the formal and technical aspects of temporal media such as sound, video or animation; and 3D EXPLORATION, a process-driven exploration of three-dimensional space and form. Additional fees may apply. See Class Schedule. Prerequisite: ARTF 103.

ARTF 106 Visualization Drawing credit: 3 Hours.

This studio course introduces students to the graphic representation techniques of visualization utilized within the fields of design and arts, as well as teaches drawing as a tool for thinking. Lectures and studio projects examine the language of three-dimensional form and deal with a wide range of analysis and representation of form, including mechanical drawing, freehand sketching and various means of rendering. Additional fees may apply. See Class Schedule. Prerequisite: For Art+Design majors only.

ARTF 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule.

ARTF 201 Issues in Visual Communication credit: 2 Hours.

Survey ideas and movements that have had important impact on visual culture over the last century. Readings, discussions, presentations, and research projects, will introduce significant modern and contemporary theories, and the artists and designers who have exemplified and furthered those ideas. Students will gain an understanding of issues that have influenced visual art and design in recent history, improve their ability to analyze images, expand their concepts of how meaning gets attached to images and objects, and increase their ability to engage in debate and discussion about art and design practices.

ARTF 301 Art + Design Matters credit: 3 Hours.

Students attend a weekly lecture series featuring well-known artists, designers, art historians, and art educators. Provides an opportunity to hear leading contemporary practitioners talk about the ideas, concepts, and agendas behind their work. Lectures are supplemented by weekly online directed writing assignments that further explore issues and ideas raised in the lectures. As a final project, students research and write about a contemporary artist or designer of their choosing. Prerequisite: Junior standing.

Art--History (ARTH)

ARTH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTH>)

Courses

ARTH 110 Introduction to the History of Art and Visual Culture credit: 3 Hours.

This course introduces participants to foundational questions that shape the disciplines of art history and visual studies. It is not a comprehensive survey. Rather, it provides students critical frames for examining the visual world from various temporal, geographic, and methodological perspectives. Students will investigate the history, interpretation, and criticism of selected cultural objects, images, places, and spaces across time and around the globe.

ARTH 111 Ancient to Medieval Art credit: 4 Hours.

Development of the visual arts in Western Europe and the Near East in their cultural contexts from prehistoric times until the early fifteenth century; includes Egyptian, Greek, Roman, and medieval art and architecture. Same as MDVL 111.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 112 Renaissance to Modern Art credit: 4 Hours.

Development of the visual arts in Western Europe and the United States in their cultural contexts from the early fifteenth century to the present.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 113 Introduction to African Art credit: 4 Hours.

An introduction to the arts of Africa. Sculpture, textiles, architecture, body adornment, and performance will be examined on the basis of aesthetic, religious, political, and social contexts. The main emphasis will be on traditional art, although the course will address many changes and continuities within African art as evidenced in the late 20th century. The course will proceed geographically from western through central to eastern and southern Africa. Videos, music, and museum visits will complement the lectures.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 114 Introduction to East Asian Art credit: 4 Hours.

Thematic introduction to the visual arts of China and Japan, including calligraphy and painting, woodblock prints, sculpture, gardens and architecture. Same as EALC 114.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

ARTH 115 Art in a Global Context credit: 4 Hours.

Introduces students to basic concepts necessary for understanding the visual arts. It orients students to the visual arts in a variety of international contexts, and in particular in our current globalizing world. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ARTH 211 Design History Survey credit: 3 Hours.

The historical, social and cultural context of design concentrating on manufactured products, communication, media and design from the Industrial Revolution to the present. Lectures, seminars and individual research projects.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 215 Greek Art credit: 3 Hours.

Survey of architecture, sculpture, and painting of the Greek world from the geometric period to the beginning of the Christian era. Same as CLCV 217.

ARTH 217 Development of Ancient Cities credit: 3 Hours.

Same as CLCV 231. See CLCV 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ARTH 218 Ancient Greek Sanctuaries credit: 3 Hours.

Same as CLCV 232 and REL 232. See CLCV 232.

ARTH 222 Medieval Art credit: 3 Hours.

The arts of Byzantium and Western Europe from the early Christian era to the Renaissance. Same as MDVL 222.

ARTH 230 Italian Renaissance Art credit: 3 Hours.

Architecture, painting, and sculpture of Italy during the Renaissance.

ARTH 231 Northern Renaissance Art credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of Europe outside Italy in the fifteenth and sixteenth centuries. Same as MDVL 231.

ARTH 235 Art, Power and Culture in 17th-Century Europe credit: 3 Hours.

Explores the diverse functions of the visual arts in Europe in a period of religious strife; expanding global trade; the rise of early capitalism, and the consolidation of absolutist regimes.

ARTH 240 Art of the Nineteenth Century credit: 3 Hours.

Architecture, painting, sculpture, and minor arts of France, Germany, Spain, and England in the nineteenth century.

ARTH 241 Modern Art, 1880-1940 credit: 3 Hours.

This course examines the ways in which artists reconceived how art should look and function in response to the many changes – social, political, and technological – that accompanied the modernization of Europe from 1880 to 1940. Topics to be covered include the avant-garde, modernism's relationship to "primitivism," pure abstraction, art's responses to the political upheavals of World War I and the Russian Revolution, the advent of design, and the politics of realism and representation. Although primarily focused in Europe, the course also touches on related modern movements globally.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ARTH 242 Art Since 1940 credit: 3 Hours.

The scope of this course begins amidst the devastation and geopolitical shifts that followed World War II and ends with the effects of globalization in the 1990s and 2000s. We will ask the same questions that faced artists and critics in between: Should art focus on its own material processes or open its borders to historical flux? Is it art's job to create the cultural myths that bind society together, or to deconstruct them? Who participates in modern and contemporary art, and who doesn't? What kinds of production should be considered art? How are specific formal strategies informed by the perspectives of different subject positions? What politics underwrite them? We will consider, and reconsider, the existing narratives about art during this period with a dual aim: first, to better understand the historical positions of the artists in question, and, second, to piece together a prehistory of the moment in which we currently find ourselves.

ARTH 249 American Visual Humor credit: 3 Hours.

Investigates the mechanics of visual humor in nineteenth-century American visual and material culture, including graphic satire, painting, sculpture, comics, and early film. Considers this material in the context of social and political attitudes, styles of communication, consumer culture, literary comedic strategies, aesthetic theory, and humor theory more generally. Incorporates in-class screenings of contemporary comedians, visits to the Rare Book Room at the University library, and visits to the Krannert Art Museum.

ARTH 250 American Art credit: 3 Hours.

Surveys American art and architecture from the colonial period to the present.

ARTH 257 History of Photography credit: 3 Hours.

Examines a history of photography from its origin to the present, including both documentary and artistic approaches; considers relationships with other arts.

ARTH 260 Graffiti and Murals credit: 3 Hours.

From Bronx walls to the Berlin Wall, from ancient palatial decorations to spray-can art, murals and graffiti have been revolutionary political tools, objects of aesthetic contemplation, and vehicles for identity formation. Primarily a lecture course that examines ancient and early modern cases from different cultures, as well as focusing on modern examples from Latin America and the USA. Same as LLS 260.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ARTH 299 Spec Topics in Art History credit: 3 Hours.

Special topics in Art History Courses. Topics and subject matter to be published in course listings. May be repeated up to 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTH 310 African Art and Society I credit: 3 Hours.

Introduces the arts of Black Africa, i.e., dance, drama, songs, and poetry, as expressed in a multi-media framework and a social-religious context; surveys the art styles of the Dogon, Senufo, Mende, and Ashanti peoples.

ARTH 312 Central African Art credit: 3 Hours.

A one-semester introduction to the arts of central Africa. Sculpture, pottery, architecture, body adornment, contemporary art, and performance will be examined and discussed on the basis of aesthetic, religious, political, and social contexts. Discusses many changes and continuities within African artistic traditions as evidenced in late twentieth-century urban, popular, and political arts of central Africa. We shall also investigate some central African artistic influences found in African American arts. Same as AFST 312.

ARTH 313 Modern and Contemp African Art credit: 3 Hours.

Examines how multiple "modernisms" emerged from African independence movements, and thereby influenced the development of African and African-American art from the 1960s to the present. Same as AFST 313.

ARTH 342 Arts of Colonial Latin America credit: 3 Hours.

Introduction to the major art historical, stylistic and iconographic developments of several Latin American countries of the late sixteenth through eighteenth centuries. Themes to be investigate include: the pictorial representation of race; indigenous workshops, traditions, and the birth of European art academies; the constructions of gender; as well as the translation of styles. The course includes field trips to local museums and libraries. Previous introductory level art history or Latin American history course recommended. Same as LAST 342.

ARTH 343 Arts of Modern Latin America credit: 3 Hours.

This course is an introduction to the major visual materials, monuments, and critical debates of the arts of Latin America, from the 19th to the early 20th century. It studies a wide range of artistic media, including drawings, paintings, popular prints, performance, photography, film, murals, architecture, and urban planning, especially as they pertain to definitions of "Latin America". The course pays particular attention to constructions of race and gender in representing the modern nation. Same as LAST 343.

ARTH 344 Spanish Modern Art credit: 3 Hours.

Introduction to the rich visual cultures of Spain beginning with the Bourbon dynasty in the eighteenth century through the early decades of the twentieth century. The course examines a variety of themes: from the mythologized loves of Goya, to the grandeur of canvases recreating Spain's history; from Spanish Romanticism to the rise of vanguard movements and the advent of Pablo Picasso. 3 undergraduate hours. Prerequisite: Previous introductory level art history course recommended, but not required.

ARTH 345 Realism to Postimpressionism credit: 3 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting.

ARTH 350 American Art 1750-1900 credit: 3 Hours.

Studies the two major directions of art in the United States from independence to the centennial, with focus on major figures and the scientific and philosophical movements which influenced them. Prerequisite: One year of art history or consent of instructor.

ARTH 351 Early American Modernism credit: 3 Hours.

Examines American art, particularly painting and sculpture, 1876-1940, against its cultural background and the relation of the American artist to Europe in an attempt to isolate the roots of Modernism in the United States. Prerequisite: One year of art history or consent of instructor.

ARTH 360 Women and the Visual Arts credit: 3 Hours.

Explores the complex interconnections of women with the visual arts in Europe and North America from the classical era to the present, including the modes of artistic production and the representation of women in western society. Same as GWS 360.

ARTH 391 Individual Art History Topics credit: 1 to 4 Hours.

Directed independent research. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in art and design; and consent of instructor, advisor, and associate director of the School.

ARTH 395 Junior Seminar in Art History credit: 3 Hours.

Offers Art History majors grounding in the discipline's historiography and exposure to diverse historical methods. Provides students with experience in a range of research techniques as preparation for their Senior Seminar. Prerequisite: Junior standing in Art History curriculum or in Art History minor.

ARTH 402 Ways of Seeing in Edo Japan credit: 3 or 4 Hours.

Focuses on modes of seeing and technologies of vision manifest in the visual arts of Edo Japan, 1615-1868. At the time, imported European instruments of seeing, such as the microscope, made possible unusual visual experiences; revivals of classical Japanese painting manipulated different ways of recreating and visualizing the past. A variety of themes, organized chronologically, will demonstrate the importance of seeing in painting and calligraphy, ceramics, woodblock prints, and architecture. Same as EALC 402. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ARTH 114, or equivalent background in Japanese history or literature. Junior standing or consent of instructor.

ARTH 403 Word and Image in Chinese Art credit: 3 or 4 Hours.

Study of the diverse correlations between verbal texts and visual images in Chinese art and art theory from the twelfth through seventeenth centuries. Same as EALC 403. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 410 West African Art and Ideas credit: 3 or 4 Hours.

Study of West African art styles in chronological and cultural perspectives with a special interest in the use of interdisciplinary source materials. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 413 Sacred African Diaspora Arts credit: 3 or 4 Hours.

Explores African diaspora arts grounded in the diverse aesthetic, philosophical, historical, political, and religious consciousnesses of peoples of African descent living in the Caribbean and the Americas. Focuses on the preservation and ongoing transformations of African visual and religious cultures surviving in African diaspora communities from the period of the trans-Atlantic slave trade to the present. Same as AFST 421. 3 undergraduate hours. 4 graduate hours.

ARTH 415 The Archaeology of Greece credit: 3 Hours.

Same as CLCV 443. See CLCV 443.

ARTH 416 The Archaeology of Italy credit: 3 Hours.

Same as CLCV 444. See CLCV 444.

ARTH 423 Romanesque Art credit: 3 or 4 Hours.

Art and architecture of the Romanesque period. Same as MDVL 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 424 Gothic Art credit: 3 or 4 Hours.

Arts of western Europe from the end of the Romanesque period until the Renaissance. Same as MDVL 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 430 Topics: Italian Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and architecture of Italy during the Renaissance selected for intensive study. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 431 Topics: Northern Art 1300-1500 credit: 3 or 4 Hours.

Special topics in the history of painting, sculpture, and minor arts of France, Germany, Spain, and England during the Renaissance selected for intensive study. Same as MDVL 431. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 432 Sixteenth-Century Italian Art credit: 3 or 4 Hours.

Painting, sculpture, and architecture in Italy from 1500 to 1580. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 433 Fifteenth-Century Italian Art credit: 3 or 4 Hours.

Study of Italian painting, sculpture and architecture from circa 1300 to 1500. Same as MDVL 433. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 435 Italian Baroque Art credit: 3 or 4 Hours.

Italian painting and sculpture during the period 1580-1700, with particular emphasis on art in Rome. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 436 17th-Century Dutch & Flemish Art credit: 3 or 4 Hours.

Explores the functions of visual arts in the Netherlands in relation to shifting political and religious contexts; evolving notions of privacy, domesticity and subjectivity; the study of nature; and the expanding capital-based wealth of Northern Europe founded upon global trade. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 439 18th Century European Art credit: 3 or 4 Hours.

Critical survey of the major developments in European painting of the eighteenth century. Emphasis is placed on French artists, but major figures in England, Spain, and Italy are also considered. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 440 Romantic Art credit: 3 or 4 Hours.

Studies English, French, and German art from the end of the eighteenth century through 1840; focuses on revivalist movements, historicism, landscape art, and changing conceptions of art and artist during the period. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 441 Realism to Post-Impressionism credit: 3 or 4 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 445 European Art Between the Wars credit: 3 or 4 Hours.

Study of the leading personalities and movements in European painting, sculpture, and architecture, with emphasis on painting. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 447 France and Its Others credit: 3 or 4 Hours.

Examines the relationship between art and colonialism in nineteenth-century France. Topics include orientalism, primitivism, and exoticism; the central figures include Delacroix, Flaubert, Gerome, and Gauguin. 3 undergraduate hours. 3 or 4 graduate hours.

ARTH 460 Museum Management credit: 3 or 4 Hours.

This course is concerned with advanced theoretical issues of art museum work, taught by the professional staff of a museum. Topics covered include collections, curatorial issues, educational program planning, trustee relations, public outreach, fundraising, budgeting, and staff organization. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

ARTH 462 Museum Theory and Practice credit: 3 or 4 Hours.

Same as ANTH 462 and LA 472. See ANTH 462.

ARTH 489 Senior Art-History Honors-BA credit: 2 to 5 Hours.

Independent guided research and study in a selected area of art history for candidates for the Bachelor of Arts in Art History with departmental distinction. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. (Counts for advanced hours in LAS). Prerequisite: Senior standing in the art history curriculum; a cumulative grade point average of 3.25; an art history grade point average of 3.5; and consent of instructor, department advisor, and associate director of the School.

ARTH 490 Senior Art-History Honors-BFA credit: 2 to 5 Hours.

Directed independent research and study for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Fine and Applied Arts art history, a cumulative grade point average of 3.0, and consent of instructor, advisor, and associate director of the School.

ARTH 491 Topics in Art History credit: 1 to 4 Hours.

Variable content; consult the Class Schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Junior standing or consent of instructor.

ARTH 495 Senior Seminar in Art History credit: 3 Hours.

Required seminar for undergraduate majors that offers students practical experience in research techniques. Focuses on a specialized theme of the professor's choice, and will incorporate extensive reading in a specific field of Art History and the completion of a substantial research paper. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 undergraduate hours. Prerequisite: ARTH 395.

ARTH 501 Seminar in Chinese Art credit: 4 Hours.

Investigation of selected phases, concepts, and problems of the art of China; intensive reading and reports. Same as EALC 501. May be repeated to a maximum of 12 hours. Prerequisite: ARTH 401 or consent of instructor.

ARTH 510 Seminar in African Art credit: 4 Hours.

This seminar includes a variety of topics, such as African Diaspora Theory, Contemporary African Art, Performance Art in Africa, Tourist art in Africa. Each graduate seminar will have a significant reading list with weekly responses, as well as a research paper and presentation. Same as AFST 509. May be repeated to a maximum of 20 hours. Prerequisite: Consent of instructor.

ARTH 515 Seminar in Ancient Art credit: 4 Hours.

Research seminar in subject selected from the art and architecture of the ancient period. Same as CLCV 515. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 520 Seminar in Class Archaeology credit: 4 Hours.

Same as CLCV 520. See CLCV 520.

ARTH 522 Studies in Medieval Art credit: 4 Hours.

Research seminar in subjects selected from the art and architecture of the medieval period. Same as MDVL 522. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 530 Seminar Italian Art credit: 4 Hours.

Special problems in the history of Italian Renaissance art. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 531 Seminar in N. Renaissance Art credit: 4 Hours.

Research seminar in subjects selected from the art of the Northern Renaissance. Same as MDVL 540. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 535 Seminar in Baroque Art credit: 4 Hours.

Research seminar in problems selected from the art of seventeenth-century Europe. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 539 Academies of Art credit: 4 Hours.

Academies, schools of art, and training workshops, have been educational, administrative, political and economic centers for the debate, control, dissemination, and legitimization of the theories, teaching and practice of the "Fine Arts." This seminar analyzes the aims, parameters and meanings ascribed to these heavily invested and historically empowered sites through an examination of historiography, as well as models traditionally used in their defense or denigration.

ARTH 540 Seminar in Art 1750 to 1900 credit: 4 Hours.

Intensive study of selected problems in European art. 4 graduate hours. No professional credit.

ARTH 541 Seminar in Modern Art credit: 4 Hours.

Investigation of special problems in the history of twentieth-century art. Students present reports of their research. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 545 Realism to Postimpressionism credit: 4 Hours.

Studies European art from 1850 to 1900, with emphasis on French painting. 4 graduate hours. No professional credit.

ARTH 546 Seminar in Contemporary Art credit: 4 Hours.

Intensive study of selected problems or artists. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARTH 550 Seminar in American Art credit: 4 Hours.

Investigation of selected problems in the history of American art. May be repeated to a maximum of 12 hours. Prerequisite: ARTH 350 and ARTH 351, or consent of instructor.

ARTH 560 Collections, Museums & Patrons credit: 4 Hours.

Deals with specific aspects of art collecting practices, patronage, and/or museology. Introduces students to the major debates and history of private and public art collections, origins of museums and patronage, the new museology. Taught in alternate years by art history faculty with different specializations. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Graduate standing or consent of instructor.

ARTH 588 Pedagogy: Theory and Practice credit: 2 Hours.

This seminar offers professional preparation for graduate students in art history, art education, or the A+D MFA program who will be pursuing college or university teaching careers. Focus is on the development of course design and teaching techniques informed by current theories of teaching and learning. Special attention will be given to teaching the elements of visual analysis and interpretation. 2 graduate hours. No professional credit. Approved for S/U grading only.

ARTH 591 Individual Readings credit: 2 to 4 Hours.

Directed readings in special fields or aspects of history of art not provided in depth by the current course offerings. Registration allowed for each section is 2 to 4 hours. Prerequisite: Consent of instructor.

ARTH 593 Theory and Methodology credit: 4 Hours.

Investigation of the theory and practice of art history as a discipline. Discussions address historiographical and methodological issues and include both traditional and recent approaches to the discipline. Prerequisite: Consent of instructor.

ARTH 599 Thesis Research credit: 0 to 16 Hours.

Guidance in research and writing theses for advanced degrees. Approved for S/U grading only. May be repeated. Prerequisite: Graduate standing in art history.

Art--Studio (ARTS)

ARTS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARTS>)

Courses

ARTS 200 Introduction to Book Arts credit: 3 Hours.

Creative expression and communication through the production of a variety of unique and limited edition books. Students will learn the tools and techniques of binding books by hand while studying the physical and narrative properties of books. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing in Art and Design, in an Art History major, or in the Art History minor.

ARTS 201 Crafts Design credit: 3 Hours.

This course will provide students the opportunity to 1) explore craft practice as a medium of personal aesthetic expression 2) develop skills and a technical competency in working with a variety of craft materials to include glass, metal, paper, clay, enamel, wood 3) design objects of utility 4) experience creative and technical experimentation 5) establish an awareness of historical and contemporary movements in craft practice. This course includes field trips to the studios of practicing craft artist and visits to Krannert Art Museum and local art galleries. Patience, determination, fine motor skills, critical thinking, and problem solving skills will be developed and exercised in the course. This course satisfies the 3D requirement in the new Art + Design Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 205 Introduction to Printmaking credit: 3 Hours.

Introduction to the materials and techniques of printmaking, including intaglio, relief, lithography, and screenprint. Over the course of several projects, students will develop a familiarity with print processes while learning about the unique history and conceptual concerns of print media. Composition and technique are emphasized, and projects that relate to work developed in other studio and design areas are encouraged. Additional fees may apply. See Class Schedule.

ARTS 210 Ceramics Sculpture I credit: 3 Hours.

Introduction to materials and techniques involved in the ceramic process. By achieving technical expertise using clay, students can begin to develop a personal artistic language employing clay as an art medium. Students will explore a variety of assignments employing hand-building techniques, as well as investigating various firing processes. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing or consent of instructor. For Art majors only.

ARTS 230 Jewelry/Metals I credit: 3 Hours.

Design and execution of jewelry and related objects through fabrication, focusing on surface embellishment, joining, and finishing processes; exploring metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. Prerequisite: Sophomore standing or consent of instructor. For Art majors only.

ARTS 231 Jewelry/Metals II credit: 3 Hours.

Additional experience and experimentation in designing and executing jewelry and related objects through fabrication, refinement of surface embellishment, joining, and finishing skills; further exploration of metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 230.

ARTS 250 Life Drawing credit: 3 Hours.

Representational and interpretive drawing from life explored through close observation and structural analysis of the human figure and other subject matter. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTF 102 and ARTF 104. For Art majors only.

ARTS 251 Beginning Painting credit: 3 Hours.

This studio course familiarizes students with basic oil painting materials, techniques, and concepts. Topics to be addressed include composition, color theory, historical painting techniques, illusionistic space, and paint handling and application. Exploration and discussion of the ways in which paintings make meaning. This course satisfies the 2D requirement in the Art Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 252 Making and Meaning credit: 3 Hours.

Introduction to the relationship of material, method, and process to meaning in art practice. Through research, critique, and application of concepts in material studio processes, students will explore a diverse range of methods of achieving meaning in an artwork. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 102 and ARTS 104.

ARTS 254 Painting II credit: 3 Hours.

Continuation of ARTS 251. Further develops the materials, skills, and issues introduced in that course; also considers additional painting media; explores and examines traditional and contemporary issues in painting. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 251.

ARTS 280 Beginning Sculpture credit: 3 Hours.

Introduction to basic concepts, processes, and materials in sculpture, with an emphasis on the relationship among these three aspects of producing works of art. Materials including wood, plaster, and clay will be used additively to fabricate, model and cast forms. Subtractive methods utilizing carving, and the making of meaning via materials, methods and context are also discussed. This course satisfies the 3D requirement in the Art Foundations curriculum. Additional fees may apply. See Class Schedule. Prerequisite: For art and design majors only.

ARTS 281 Sculpture II credit: 3 Hours.

Continuation of ARTS 280. Explores the relationship of sculptural materials and media to meaning; research into the historical, contemporary, and contextual semiotics of materials in order to generate meaning. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 280.

ARTS 299 Spec Topics in Studio Art credit: 3 Hours.

Special topics in Studio Art Courses. Topics and subject matter to be published in course listings. Additional fees may apply. See Class Schedule. May be repeated up to 6 hours in a semester, to a maximum of 12 total hours. Prerequisite: Sophomore standing in Art and Design.

ARTS 310 Ceramics Sculpture II credit: 3 Hours.

Students will develop more sophisticated techniques and processes necessary to develop their personal voice and take more responsibility for concept, process and material in their work. Emphasis will stress processes related to creating ceramic sculpture such as hand construction techniques, kiln firing, clay and glaze experimentation. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 210.

ARTS 330 Jewelry Metals III credit: 3 Hours.

The design and production of jewelry and related objects with additional experience in manipulative techniques such as casting, electroforming, surface decoration, enamelling, complex construction and forming. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 231 and enrollment in the crafts curriculum. For Art majors only.

ARTS 331 Jewelry Metals IV credit: 3 Hours.

Expands the general techniques of ARTS 330 with emphasis on experimentation and development of personal style through advanced techniques of hollowware, complex construction, enamelling, electroforming and plating, forging and the use of varied materials. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 330. For Art majors only.

ARTS 332 Metal Technology credit: 2 Hours.

Understanding of the working properties of nonferrous metals. Experimentation with little known processes of metalwork to be subjects of individual research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 4 hours. Prerequisite: ARTS 330 and junior standing in crafts, or consent of instructor. For Metals majors only.

ARTS 333 Enamelling credit: 3 Hours.

Exploration and experimentation in image development and color through traditional enamelling processes; emphasis on cloisonne, champleve, bassetaille, plique-a-jour, limoges, and grisaille; exploration of enamel and metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 9 hours. Prerequisite: ARTS 230 or consent of instructor.

ARTS 334 Metalsmithing credit: 3 Hours.

Experience and experimentation in designing and executing hollowware through traditional forming processes; emphasis on sinking, angle raising, crimping, stretching, seaming and snarling, cold forging, tube and spiculum forming, planishing, surface embellishment, and patination; exploration of metal as a medium of personal aesthetic expression. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 12 hours. Prerequisite: ARTS 230 or consent of instructor.

ARTS 340 The Art of 3D Imaging credit: 3 Hours.

Investigation of the three-dimensional modeling capabilities of 3D Studio Max software through a series of original tutorials, class projects and individual problems. The emphasis will be on quality of form and content rather than technical expertise. The end result will culminate in the understanding and production of limited edition digital prints. Additional fees may apply. See Class Schedule. This course may not be repeated for credit.

ARTS 341 Image Practice credit: 3 Hours.

Looks at the production and reception of images through a combination of historical, theoretical and practical perspectives. A variety of contexts from contemporary art, design and popular culture will be explored through research and visual projects. Special consideration will be given to current forms of reproduction, with students learning and utilizing common methods for rendering and realizing still images, including both print and screen-based output. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing.

ARTS 343 Time Arts I credit: 3 Hours.

Explores the potential of time-based media for creative expression and communications within the context of visual art and design. Classroom discussion will focus on historical and contemporary examples of time arts, written materials, and student work. Hands-on projects will introduce tools, issues and strategies particular to creating and analyzing work based in time. Additional fees may apply. See Class Schedule.

ARTS 344 Interaction I credit: 3 Hours.

Introduction to the conceptualization and construction of interactive experience for art and design. Interaction will be examined as technical, structural, social, and historical. Work will include practice, research, discussion, and lecture. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing.

ARTS 350 Intermediate Studio I credit: 4 Hours.

Combined painting, sculpture and new media studio. Self-directed arts practice. Individual and group critique; includes seminars, discussions, demonstrations, visiting artists and critics, and field trips. Interaction and collaboration among students in painting, sculpture and new media. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 254 or ARTS 281 or ARTS 240. For Art majors only.

ARTS 351 Intermediate Studio II credit: 4 Hours.

Continuation of ARTS 350. Combined painting, sculpture and new media. Self-directed arts practice. Individual and group critique; includes seminars, discussions, demonstrations, visiting artists and critics, and field trips. Interaction and collaboration among students in painting, sculpture and new media. Additional fees may apply. See Class Schedule. Prerequisite: ARTS 350. For Art majors only.

ARTS 391 Independent Study credit: 1 to 4 Hours.

Directed independent creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Art and Design; and consent of instructor, advisor, and associate director of the School. For Art majors only.

ARTS 392 Current Art Issues Seminar credit: 3 Hours.

Seminar with readings, lectures, discussions on ideas and issues affecting contemporary art. Attendance is required at visiting artists' and scholars' lectures and field trips. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in Fine and Applied Arts or consent of instructor.

ARTS 399 Internship in Studio Arts credit: 1 to 4 Hours.

Internships to be pre-approved for variable credit. Students will be required to document work completed during the internship with verification of supervisor. Supervisor will also be required to fill out a questionnaire either by mail or on-line. Faculty members will access work and questionnaires to assign a grade. Approved for S/U grading only. Prerequisite: Junior standing in School of Art and Design.

ARTS 400 Advanced Book Arts credit: 3 or 4 Hours.

Advanced study of the history and techniques of hand bookbinding. Variations on binding structures and emphasis on creative expression through mixed media, collage, painting, photography, and writing. Field trips to book collections. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Prerequisite: ARTS 200, and junior standing in Art and Design or consent of instructor.

ARTS 405 Special Topics in Printmaking credit: 3 or 4 Hours.

Advanced exploration of specific printmaking processes. Students will develop skills through a progression of projects, while increasing their awareness of conceptual concerns unique to printmaking through discussion and field trips. Projects that relate to work developed in other studio and design areas are encouraged. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours if topics vary. A student registered in one or more Art & Design course(s) exhibiting this message, will be assessed a \$95 facility use fee once each term. Prerequisite: ARTS 205. Junior standing or higher in Art & Design required.

ARTS 410 Advanced Ceramics Sculpture credit: 3 or 4 Hours.

Students will develop more sophisticated techniques and processes necessary to develop their personal ideas. Emphasis will be placed on processes related to creating ceramic sculpture such as kiln firing, clay and glaze experimentation. At this level, the student begins to take more responsibility for concept, process and material in their work. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated up to 15 undergraduate hours or 20 graduate hours. Prerequisite: ARTS 210 and ARTS 310.

ARTS 412 Ceramics credit: 2 to 4 Hours.

Ceramic design with emphasis on the development of professional style and personal expression. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

ARTS 430 Jewelry Metals V credit: 5 Hours.

Expands the general techniques of ARTS 331 with emphasis on experimentation and development of personal style. Additional fees may apply. See Class Schedule. 5 undergraduate hours. No graduate credit. Prerequisite: ARTS 331.

ARTS 431 Jewelry Metals VI credit: 5 Hours.

Continuation of ARTS 430; emphasis on experimentation and development of personal style, a portfolio, and a senior exhibition. Additional fees may apply. See Class Schedule. 5 undergraduate hours. No graduate credit. Prerequisite: ARTS 430. For Art majors only.

ARTS 443 Time Arts II credit: 3 or 4 Hours.

Provides semester-long, in-depth explorations of single time arts topics. Using the ideas and basic tools from Time Arts I, students will study the advanced concepts and techniques particular to individual time arts genres while producing their own work. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 343 or consent of instructor.

ARTS 444 Interaction II credit: 3 or 4 Hours.

Further exploration of interaction, with an increased emphasis on realization and application of designed interactive experience, and depth of exposure to particular technical platforms. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate or 8 graduate hours. Prerequisite: ARTS 344 and consent of instructor.

ARTS 445 Special Topics in New Media credit: 3 or 4 Hours.

Course will explore one specialization within the field of New Media. Topics will rotate through each semester; possible subjects include Performance, Sound, Radio, Public Art, and Social Media. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 undergraduate hours or 16 graduate hours as topics vary. Prerequisite: Junior standing.

ARTS 449 Advanced Seminar in New Media credit: 3 Hours.

Students will explore current issues in New Media with the goal of understanding their own artwork in a disciplinary context. Through reading, writing, research and discussions, students will be exposed to significant work in their field. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 undergraduate hours. Prerequisite: Open to New Media majors or consent of instructor.

ARTS 450 Advanced Studio I credit: 4 Hours.

First of two capstone courses in studio arts practice, individualized study for painting, sculpture, and new media majors. Explores and develops conceptual and aesthetic interests, topics, and projects; expands and refines material knowledge and expertise; develops research strategies and methodologies. Includes individual and group critiques, dynamic interaction with faculty and peers. Additional fees may apply. See Class Schedule. 4 undergraduate hours. No graduate credit. Prerequisite: ARTS 351 Intermediate Studio II. For Art majors only.

ARTS 451 Advanced Studio II credit: 4 Hours.

Continuation of ARTS 450. Second of two capstone courses in studio arts practice, providing individualized study for painting, sculpture, and new media majors. Explores and develops conceptual and aesthetic interests, topics, and projects; expands and refines material knowledge and expertise; develops research strategies and methodologies. Includes individual and group critiques, dynamic interaction with faculty and peers. Additional fees may apply. See Class Schedule. 4 undergraduate hours. No graduate credit. Prerequisite: ARTS 450. For Art majors only.

ARTS 454 Advanced Drawing credit: 3 Hours.

An advanced studio course that considers a variety of activities defined traditionally, historically and contemporarily as drawing. Students will investigate the questions of what drawing is and how it communicates meaning. They will use and experiment with a wide variety of materials and concepts as they work on in-class projects and outside assignments, investigate the work of contemporary artists to see how the practice of drawing is being redefined, and consider the influence drawing has had on design and visual culture. Students will be encouraged to experiment, innovate, and develop new visual vocabularies. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Two prior courses in drawing; junior standing.

ARTS 455 Advanced Painting credit: 3 Hours.

An advanced studio course focusing intensively on the practice of painting. Students will research contemporary painting and its recent history, discuss its relevance and place in contemporary art, and investigate and articulate their own conceptual motivations in using painting media. Topics will include the relationship of the history of painting to how its use generates meaning in a contemporary context. Students will engage in self-generated studio practice; this work will be the basis of group and individual discussion and critique. 3 undergraduate hours. No graduate credit. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 251 and ARTS 254; junior standing.

ARTS 456 Advanced Sculpture credit: 3 Hours.

Advanced studio course designed to integrate basic sculpture and other 3-D studio skills with advanced knowledge of contemporary sculptural practices and materials, along with an understanding of concepts and theories influencing contemporary sculptural art. Studies will investigate topics including site specificity, context, and criticality as they develop research and studio production methods that allow them to generate work that is relevant to current and future discourse in the field. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: ARTS 280 and ARTS 281; junior standing.

ARTS 457 Art in Context credit: 3 Hours.

Focuses on the relationship between artworks and their historical, institutional, spatial, geographic, architectural or other contexts for the purpose of engaging in a critical analysis of artworks, as well as developing informed, intentional studio production. Students will encounter topics related to a critical and ethical understanding of context including site-specificity, phenomenology, public art, Situationism, relational aesthetics, and the production of space through social and political process such as building and mapping. The goal is to investigate and understand the dynamic relationship between art and its context. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing.

ARTS 490 Senior Honors credit: 2 to 5 Hours.

Independent creative activity, guided study, or research for honors. 2 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 5 hours. Prerequisite: Senior standing in Art & Design, a cumulative grade point average of 3.0; and consent of instructor, advisor, and associate director of the School. For Art majors only.

ARTS 499 Special Topics in Studio Art credit: 1 to 4 Hours.

Special topics in studio arts. Topics and subject matter to be published in course listings. Additional course materials fee may apply. See Class Schedule. 1 to 3 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours if topics vary. Prerequisite: Senior standing or consent of instructor.

ARTS 591 Graduate Studio credit: 2 to 8 Hours.

Directed individual creative activity or research. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing. For Art majors only.

ARTS 593 Seminar: Methods Criticism credit: 1 to 4 Hours.

Prerequisite: Graduate standing in art.

ARTS 595 Graduate Laboratory credit: 4 to 12 Hours.

Individually directed research and personal. Additional fees may apply. See Class Schedule. Prerequisite: Enrollment in the MFA program in Art & Design or consent of departmental graduate committee. For Art majors only.

Asian American Studies (AAS)

AAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/AAS>)

Courses

AAS 100 Intro Asian American Studies credit: 3 Hours.

Interdisciplinary introduction to the basic concepts and approaches in Asian American Studies. Surveys the various dimensions of Asian American experiences including history, social organization, literature, arts, and politics.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 120 Intro to Asian Am Pop Culture credit: 3 Hours.

Introductory understanding of the way U.S. popular culture has affected Asian Americans and the contributions Asian Americans have made to U.S. media and popular culture since the mid 1880's.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AAS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 6 hours.

AAS 200 U.S. Race and Empire credit: 3 Hours.

Invites students to examine histories and narratives of U.S. imperialism and racism, drawing upon multiple theoretical and methodological works in Asian American studies and related fields. Same as LLS 200.

AAS 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AFRO 201, LLS 201, and PS 201. See PS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 211 Asian Americans and the Arts credit: 3 Hours.

Examination of Asian American artistic expressions in the visual and the performing arts providing historical, theoretical, and conceptual foundations of understanding the history of various art genres in Asian American communities. Prerequisite: AAS 100 or AAS 120, or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

AAS 215 US Citizenship Comparatively credit: 3 Hours.

Examines the racial, gendered, and sexualized aspects of US citizenship historically and comparatively. Interdisciplinary course taught from a humanities perspective. Readings draw from critical legal studies, history, literature, literary criticism, and ethnography. Same as AFRO 215, AIS 295, GWS 215, and LLS 215. Prerequisite: One of: AAS 100, AAS 120, AFRO 100 AIS 101, GWS 250, LLS 100.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

AAS 224 Asian Am Historical Sociology credit: 3 Hours.

Explores concepts of colonization, international labor migration, race, nation, assimilation, and class formation through socio-historical examinations of diverse groups categorized as Asian Americans. Same as SOC 224. Prerequisite: AAS 100.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

AAS 246 Asian American Youth in Film credit: 3 Hours.

Examines both mainstream and independent films and documentaries representing and/or produced by Asian American youth. Explores the role of multiculturalism and diversity issues in informing young people's experiences.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 250 Asian American Ethnic Groups credit: 3 Hours.

Intensive interdisciplinary study of a particular Asian American Ethnic group (specific ethnic group focus will change every semester). May be repeated in the same or separate terms to a maximum of 9 hours. Prerequisite: Any AAS course at the 100- or 200-level or consent of instructor.

AAS 258 Muslims in America credit: 3 Hours.

Introduction to the study of Muslims in the United States and broadly the history of Islam in the Americas. Using a comparative approach, we study how the historical narrative of African American and Latino Muslims relates to newer immigrant populations, primarily Arab American and South Asian American Muslim communities. Same as LLS 258 and REL 258.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 260 Intro Asian American Theatre credit: 3 Hours.

Same as THEA 260. See THEA 260.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

AAS 265 Politics of Hip Hop credit: 3 Hours.

Same as LLS 265. See LLS 265.

AAS 281 Constructing Race in America credit: 3 Hours.

Same as AFRO 281, HIST 281, and LLS 281. See HIST 281.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AAS 283 Asian American History credit: 3 Hours.

Same as HIST 283. See HIST 283.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

AAS 286 Asian American Literature credit: 3 Hours.

Same as ENGL 286. See ENGL 286.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

AAS 287 Food and Asian Americans credit: 3 Hours.

Introduction to the interdisciplinary study of food to better understand the historical, social, and cultural aspects of Asian American food preparation, distribution and consumption. Students will investigate the politics and poetics of Asian American foodways by examining social habits, and rituals around food in restaurants, ethnic cookbooks, fictional works, memoirs, magazines, and television shows. Prerequisite: AAS 100 or AAS 120, or consent of instructor.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 290 Individual Study credit: 2 to 3 Hours.

Supervised reading and research in Asian American Studies chosen by the student with instructor approval. May be repeated to a maximum of 6 hours. Prerequisite: AAS 100.

AAS 291 Hinduism in the United States credit: 3 Hours.

Same as REL 291. See REL 291.

AAS 297 Asian Families in America credit: 3 Hours.

Same as HDFS 221 and SOCW 297. See SOCW 297.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

AAS 299 Begin Topics Asian Am Studies credit: 3 Hours.

May be repeated in the same or subsequent terms to a maximum of 6 hours.

AAS 300 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Explores theories for performing interdisciplinary, intersectional and comparative studies within the field of Asian American studies. Follows multiple genealogies of critical work in ethnic and American studies. Same as GWS 305 and LLS 305.

This course satisfies the General Education Criteria for:
Advanced Composition

AAS 310 Race and Cultural Diversity credit: 4 Hours.

Same as AFRO 310, EPS 310, and LLS 310. See EPS 310.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - US Minority

AAS 315 War, Memory, and Cinema credit: 3 Hours.

Interdisciplinary examination of the ways that memories of war, trauma, and immigration are produced through the medium of film. Because war has been key to discourses and practices of imperialism and globalization, some questions addressed will include how these wars have impacted the nation and the global order, as well as how images about these wars produced important constructions of race, gender, and sexuality for national and cultural identities. Also examines the aftereffects of war by analyzing connections between war's trauma, race, immigration, and incarceration. Students will read critical texts, film theory, screenplays, and view films. Same as GWS 315. Prerequisite: AAS 100 or AAS 120, or consent of the instructor.

AAS 317 Asian American Politics credit: 3 Hours.

Same as PS 317. See PS 317.

AAS 328 Asian Americans & Inequalities credit: 3 Hours.

Same as SOC 328. See SOC 328.

AAS 346 Asian American Youth credit: 3 Hours.

Explores cultural production of second-generation Asian American youth as a historical and social formation. Course examines how youth are actively shaping the U.S. landscape in terms of identity formation, youth, culture, education, juvenile justice, politics and activism, and community formations. These experiences are examined in backdrop of larger historical, economic, racial, social and political forces in the United States. Same as HDFS 341.

AAS 355 Race and Mixed Race credit: 3 Hours.

Same as LLS 355 and SOC 355. See LLS 355.

AAS 365 Asian American Media and Film credit: 3 Hours.

An examination of media generally and films and videos more specifically (experimental, documentary, independent, and Hollywood features) by, for, and about Asian Americans. Same as MACS 365. Prerequisite: Any AAS course at the 100- or 200-level, or consent of instructor.

AAS 370 Immigration, Law, and Rights credit: 3 Hours.

Exploration of the histories, cultures, and experiences of immigration to the United States by examining cultural production (literary and visual narratives and texts) alongside legal discourses (legislation, federal court cases). Same as LLS 372.

AAS 375 Prisons, Race, and Terror credit: 3 Hours.

Examination of the U.S. prison regime, focusing on three dimensions of U.S. imprisonment – criminal justice, immigrant detention, and martial imprisonment, particularly under the War on Terror. Same as LLS 377.

AAS 390 Intermed Topics Asian Am St credit: 3 Hours.

May be repeated in the same or subsequent terms to a maximum of 6 hours.

AAS 395 Adv Asian Am Undergrad Reading credit: 2 or 3 Hours.

Supervised reading and research in upper level Asian American Studies topics chosen by the student with instructor approval. May be repeated to a maximum of 6 hours. Prerequisite: AAS 100.

AAS 400 Critical Ethnic Studies credit: 3 or 4 Hours.

Examines the formation of the field of Critical Ethnic Studies and elaborates its key concepts, such as settler colonialism, indigeneity, heteropatriarchy, decolonization, and liberation. Same as LLS 460. 3 undergraduate hours. 4 graduate hours.

AAS 402 Asian American Education credit: 4 Hours.

Same as EPS 402. See EPS 402.

This course satisfies the General Education Criteria for:

Advanced Composition

Cultural Studies - US Minority

AAS 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AFRO 435, GWS 435, LLS 435, and MACS 432. See LLS 435.

AAS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AFRO 465, GWS 465, and LLS 465. See LLS 465.

AAS 479 Race, Medicine, and Society credit: 3 or 4 Hours.

Same as ANTH 479 and LLS 479. See LLS 479.

AAS 485 The Politics of Fashion credit: 3 or 4 Hours.

Same as GWS 485. See GWS 485.

AAS 490 Adv Topics in Asian Am Studies credit: 3 or 4 Hours.

Research seminar on specialized topics in Asian American Studies. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary. Students may register in more than one section per term if topics vary. Prerequisite: AAS 100 or any Asian American Studies course, or consent of instructor.

AAS 501 Theory and Methods in AAS credit: 4 Hours.

Foundational gateway course for graduate study in Asian American Studies, examining the political, historical, epistemological, and cultural bases of the field through an intensive reading of canonical works and study of core concepts in the field. Also highlights the problems of interdisciplinary research and scholarship and adopts an intersectional and coalitional approach to Asian American Studies as it assumes the necessary linkages between other areas in ethnic/racial and gender/sexuality studies.

AAS 539 Youth, Culture and Society credit: 4 Hours.

Same as EPS 539 and HDFS 539. See HDFS 539.

AAS 561 Race and Cultural Critique credit: 4 Hours.

Introduction to graduate level theoretical and methodological approaches in Comparative Race Studies. As a survey of theories of race and racism and the methodology of critique, this course offers an interdisciplinary approach that draws from anthropology, sociology, history, literature, cultural studies, and gender/sexuality studies. In addition, the study of racial and cultural formation is examined from a comparative perspective in the scholarship of racialized and Gender and Women's Studies. Same as AFRO 531, ANTH 565, GWS 561, and LLS 561.

AAS 585 Doctoral Training & Beyond credit: 2 Hours.

Same as GWS 585 and LLS 585. See GWS 585.

AAS 589 Readings in Asian Am Studies credit: 1 to 4 Hours.

Individual guidance in intensive readings in the literature of one or more subdivisions of the field of Asian American Studies. May be repeated to a maximum of 8 hours. Students may register in more than one section per term if topics vary. Prerequisite: Graduate standing or consent of instructor.

AAS 590 Asian Am Studies Seminar credit: 2 to 4 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing or consent of instructor.

Asian Studies (ASST)

ASST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ASST>)

Courses

ASST 104 Asian Mythology credit: 3 Hours.

Same as REL 104. See REL104.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

ASST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ASST 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as CWL 208, REL 208 and SAME 208. See REL 208.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

ASST 218 S Asian Cultural Landscapes credit: 3 Hours.

Same as LA 218. See LA 218.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

ASST 286 Southeast Asian Civilizations credit: 3 Hours.

Same as ANTH 286 and HIST 225. See ANTH 286.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

ASST 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, EURO 325, INFO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

ASST 346 Gov & Pol of South Asia credit: 3 Hours.

Same as PS 346. See PS 346.

ASST 347 Gov & Pol of Middle East credit: 3 Hours.

Same as PS 347. See PS 347.

ASST 390 Individual Study credit: 2 to 4 Hours.

Directed readings in the languages and literatures of South Asia, Southeast Asia, or the Near East. The area selected depends on the student's interest. Prerequisite: Consent of instructor.

ASST 391 Honors Tutorial credit: 2 to 4 Hours.

Tutorial in the civilizations of South Asia, Southeast Asia, or the Near East. The geographical area or nation and discipline depend on student interests. All students submit a substantial paper. May be repeated to a maximum of 6 hours. Prerequisite: Completion of two honors activities, work in Asian studies, and consent of instructor.

ASST 398 Colloquium in Asian Studies credit: 3 Hours.

Prerequisite: Junior standing.

ASST 402 Transnational Islam, Europe-US credit: 3 or 4 Hours.

Same as ANTH 402 and REL 409. See ANTH 402.

ASST 465 Oceania's Peoples and Cultures credit: 3 or 4 Hours.

Same as ANTH 465. See ANTH 465.

ASST 486 Peoples of Mainland SE Asia credit: 3 or 4 Hours.

Same as ANTH 486. See ANTH 486.

ASST 550 Seminar in Asian Studies credit: 4 Hours.

Seminar on selected Asian topics. May be repeated to a maximum of 12 hours if topics vary. Topics will vary with instructor. Prerequisite: Consent of instructor.

ASST 590 Individual Study and Research credit: 2 to 12 Hours.

Supervised individual investigation or study of a topic not covered by regular course offerings. The topic selected by the student and the proposed plan of study must be approved by the student's adviser and the instructor who supervises the work. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

Astronomy (ASTR)

ASTR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ASTR>)

Courses

ASTR 100 Introduction to Astronomy credit: 3 Hours.

Introduces the student to the basic concepts of modern astronomy. Covers topics including the night sky; the solar system and its origin; the nature and evolution of stars; stellar remnants, including white dwarfs, neutron stars, and black holes; extrasolar planetary systems; galaxies and quasars; dark matter and dark energy; the Big Bang and the fate of the universe; and life in the universe. Credit is not given for ASTR 100 if credit in any of ASTR 121, ASTR 122, ASTR 210, or equivalent has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ASTR 121 Solar System and Worlds Beyond credit: 3 Hours.

Introductory survey of the Solar System; structure and motions of the Earth and Moon; planetary motions; natures and characteristics of the planets and smaller solar system bodies; planetary moons and rings; meteors, meteoroids, and meteorites; properties of the Sun; origin and evolution of the Solar System; discovery of extrasolar planetary systems; architecture of extrasolar planetary systems and comparison to our solar system; habitable extrasolar planets. Emphasis will be placed on problem-solving and scientific methods. Credit is not given for ASTR 121 if credit in either ASTR 100 or ASTR 210 has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ASTR 122 Stars and Galaxies credit: 3 Hours.

Introduction to celestial objects and phenomena beyond the Solar System, and their governing basic physical principles; galaxies, quasars, and structure of the universe; dark matter and dark energy; the Big Bang and the fate of the universe; the Milky Way; the interstellar medium and the birth of stars; stellar distances, motions, radiation, structure, evolution, and remnants, including neutron stars and black holes. Emphasis will be placed on problem-solving and scientific methods. Credit is not given for ASTR 122 if credit in either ASTR 100 or ASTR 210 has been earned. Students with credit in PHYS 211 are encouraged to take ASTR 210.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ASTR 131 The Solar System Lab credit: 1 Hour.

Laboratory studies which complement the lecture course, ASTR 121. Laboratory exercises will include properties of telescopes, observations of the Moon and planets using telescopes at the Campus Observatory, and computer-based activities that illustrate modern astronomical techniques using digital data. Prerequisite: Credit in ASTR 100 or ASTR 121, or concurrent registration in ASTR 121.

ASTR 132 Stars and Galaxies Lab credit: 1 Hour.

Laboratory studies which complement the lecture course, ASTR 122. Laboratory exercises will include properties of telescopes, observations of star clusters, nebulae and galaxies using telescopes at the Campus Observatory, and computer-based activities that illustrate modern astronomical techniques using digital data. Prerequisite: Credit in ASTR 100 or ASTR 122, or concurrent registration in ASTR 122.

ASTR 150 Killer Skies: Astro-Disasters credit: 3 Hours.

Exploration of the most dangerous topics in the Universe, such as meteors, supernovae, gamma-ray bursts, magnetars, rogue black holes, colliding galaxies, quasars, and the end of the Universe, to name just a few.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ASTR 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

See course schedule for topics. Approved for Letter and S/U grading. May be repeated in the same term up to 5 hours or separate terms up to 8 hours, if topics vary.

ASTR 210 Introduction to Astrophysics credit: 3 Hours.

Survey of modern astronomy for students with background in physics. Topics include: the solar system; nature and evolution of stars; white dwarfs, neutron stars, and black holes; galaxies, quasars and dark matter; large scale structure of the universe; the Big Bang; and Inflation. Emphasis will be on the physical principles underlying the astronomical phenomena. Prerequisite: PHYS 211.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ASTR 330 Extraterrestrial Life credit: 3 Hours.

Scientific discussion of the search for extraterrestrial life. Topics include: cosmic evolution (protons to heavy elements to molecules); terrestrial evolution (chemical, biological, and cultural); high technology searches for extraterrestrial life in the solar system (Mars, Venus, outer planets); and beyond the solar system (Drake equation and current SETI projects).

ASTR 350 The Big Bang, Black Holes, and the End of the Universe credit: 3 Hours.

Studies the origin, evolution, and eventual fate of the universe, and the scientific tools used to study these issues. Topics include aspects of special and general relativity; curved spacetime; the Big Bang; inflation; primordial element synthesis; the cosmic microwave background; dark matter and the formation of galaxies; observational evidence for dark matter, dark energy, and black holes. Credit is not given for ASTR 350 if credit in ASTR 406 has been earned. Prerequisite: ASTR 100, or ASTR 121, or ASTR 122, or ASTR 210, or consent of instructor.

ASTR 390 Individual Study credit: 0 to 4 Hours.

Individual study at an advanced undergraduate level. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of advisor and of faculty member who supervises the work.

ASTR 401 Scientific Writing for Astronomy credit: 2 Hours.

Development of journal-style writing skills. Papers written in accordance with the Astrophysical Journal Manual of Style on topics approved by the instructor. Emphasis on developing adequate and critical coverage of the topic, brevity compatible with clarity, and effective presentation. Proper referencing, footnotes, and bibliography are covered. 2 undergraduate hours. No graduate credit. Prerequisite: Completion of campus Composition I general education requirement. Concurrent enrollment in a designated 400-level astronomy course. Not intended for graduate students.

This course satisfies the General Education Criteria for:
Advanced Composition

ASTR 404 Stellar Astrophysics credit: 3 Hours.

Introduction to astrophysical problems, with emphasis on underlying physical principles; includes the nature of stars, equations of state, stellar energy generation, stellar structure and evolution, astrophysical neutrinos, binary stars, white dwarfs, neutron stars and pulsars, and novae and supernovae. 3 undergraduate hours. 3 graduate hours.

Prerequisite: PHYS 212; or consent of instructor. Recommended: ASTR 210, PHYS 213, PHYS 214.

ASTR 405 Planetary Systems credit: 3 Hours.

This course traces, from a physical perspective, the evolution of planetary systems from star formation in molecular clouds to the emergence of habitable worlds. Topics include the properties of HII regions and molecular clouds, gravitational collapse and disk formation, formation of planetesimals and planets, dynamics of the solar system, physics of planetary atmospheres, properties of individual planets and their rings and satellites, detection and characterization of extra-solar planets, and searches for life in the Solar System and beyond. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 212 or consent of instructor. Recommended: ASTR 210, PHYS 213.

ASTR 406 Galaxies and the Universe credit: 3 Hours.

Nature of the Milky Way galaxy: stellar statistics and distributions, stellar populations, spiral structure, the nucleus and halo. Nature of ordinary galaxies; galaxies in our Local Group, structure of voids and superclusters. Nature of peculiar objects: Seyfert galaxies, starburst galaxies, and quasars. Elementary aspects of physical cosmology. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 212; or consent of instructor. Recommended: ASTR 210, PHYS 213, PHYS 214.

ASTR 414 Astronomical Techniques credit: 4 Hours.

Introduction to techniques used in modern optical and radio astronomy with emphasis on the physical and mathematical understanding of the detection of electromagnetic radiation; includes such topics as fundamental properties of radio and optical telescopes and the detectors that are used with telescopes. Lectures and laboratory. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or equivalent; PHYS 212; or consent of instructor. Recommended: ASTR 210, PHYS 213, PHYS 214.

ASTR 450 Astrochemistry credit: 4 Hours.

Same as CHEM 450. See CHEM 450.

ASTR 451 Astrochemistry Laboratory credit: 3 or 4 Hours.

Same as CHEM 451. See CHEM 451.

ASTR 490 Senior Thesis credit: 3 Hours.

Research with thesis, under the direction of a faculty member in astronomy. This course is recommended for all students who plan to do research and graduate study, and it is a prerequisite for graduation with highest distinction in astronomy. In the term preceding their initial enrollment, those interested in taking the course should consult with an academic advisor as well as the potential research advisor. A thesis must be presented for credit to be received. 3 undergraduate hours. No graduate credit. Prerequisite: Two 400-level Astronomy courses and consent of academic advisor and of faculty member who supervises the work. Intended for Astronomy majors of senior standing.

This course satisfies the General Education Criteria for:
Advanced Composition

ASTR 496 Seminar in Astronomy credit: 1 to 4 Hours.

Lectures on topics of current interest in astronomy and astrophysics; for advanced undergraduates and graduates. See Class Schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

ASTR 499 Astronomy Laboratory credit: 2 Hours.

Provides hands-on observational experience: how to use a telescope, how to image sources using a modern CCD camera, how to use a modern CCD spectrometer, and how to apply data analysis to astrophysical problems. 2 undergraduate hours. 2 graduate hours. Prerequisite: One 400-level astronomy course.

ASTR 501 Radiative Processes credit: 4 Hours.

Fundamentals of radiative processes in astronomy. Topics include radiative transfer, classical theory of radiation fields, relativistic covariance and kinematics, synchrotron emission and absorption, bremsstrahlung, plasma effects, atomic and molecular spectroscopy, and dust. Prerequisite: ASTR 404 or consent of instructor.

ASTR 502 Astrophysical Dynamics credit: 4 Hours.

Introduction to stellar dynamics and fluid dynamics. Topics include two body collisions, two body relaxation, potential theory for stellar systems, adiabatic invariance, stellar system models, Jeans equations, and the virial theorem. Also hydrodynamics, magnetohydrodynamics, waves, instabilities, shocks, explosions, density waves, and wind-blown bubbles. Prerequisite: PHYS 436, PHYS 427, and PHYS 486; or consent of instructor.

ASTR 503 Observational Astronomy credit: 4 Hours.

Techniques and basic results of observational astronomy; gamma ray, x-ray, ultraviolet, visible, infrared, and radio astronomy; photometry, imaging, spectroscopy, and polarimetry; gravitational waves; cosmic rays; neutrinos; positional astronomy; noise; statistics; data analysis; optics. Prerequisite: Consent of instructor.

ASTR 504 Theoretical Stellar Physics credit: 4 Hours.

Application of physical principles to energy generation and flow in astrophysical environments: equations of state; thermonuclear reactions; radiative transport; convection; stellar spectra; nebular spectra; evolution of both single and binary stars; compact stars; accretion disks; thermal and particle history of the universe. Same as PHYS 542. Prerequisite: PHYS 436, PHYS 427, and PHYS 486; or consent of instructor.

ASTR 505 Star Formation credit: 4 Hours.

Survey of the current state of astrophysical research into the topic of star formation. Particular emphasis placed on interpreting observations and how they relate to the theory of star formation. Prerequisite: ASTR 405 or consent of instructor.

ASTR 506 Galaxies credit: 4 Hours.

Survey of the different constituents of the Universe, including galaxies, active galaxies, galaxy clusters, and intergalactic gas. Particular emphasis will be placed on observable properties of the Milky Way and other galaxies, as well as relating such observations to the understanding of the dynamics and evolution of galaxies. Prerequisite: ASTR 406 or consent of instructor.

ASTR 507 Physical Cosmology credit: 4 Hours.

A survey of the essentials of modern cosmology, providing an overview of the state of the field, of open questions, and of observational and theoretical tools. Topics include: classical cosmology—the Friedmann universe; the early universe—inflation, nucleosynthesis, dark matter; the cosmic microwave background—basic physics, anisotropies, polarization; large scale structure formation—theoretical models and observational tests; dark energy—observational evidence, theoretical ideas. Emphasizes applying physical principles to understand observations, and on using observations to constrain the nature of matter and spacetime on cosmic scales—viewing the universe as a laboratory for fundamental physics. Course work focuses heavily on problem solving. Prerequisite: ASTR 406 or consent of instructor.

ASTR 510 Computational Astrophysics credit: 4 Hours.

Prepares students to use numerical simulations to study complex problems in astrophysics and cosmology. Numerical methods and parallel computing will be covered together with the design, validation, and analysis of simulations. Emphasis is placed on solving ordinary and partial differential equations that arise in astrophysical contexts. Students work on assigned numerical problems and perform simulations using existing simulation codes, writing a final paper which presents the results of simulations using one of these codes. There are no formal prerequisites except knowledge of a scientific programming language such as Fortran, C, and C++. Familiarity with Unix/Linux and astronomical analysis tools is useful but not required.

ASTR 515 General Relativity I credit: 4 Hours.

Same as PHYS 515. See PHYS 515.

ASTR 516 General Relativity II credit: 4 Hours.

Same as PHYS 516. See PHYS 516.

ASTR 540 Astrophysics credit: 4 Hours.

Same as PHYS 540. See PHYS 540.

ASTR 541 Physics of Compact Objects credit: 4 Hours.

Same as PHYS 541. See PHYS 541.

ASTR 590 Individual Study credit: 2 to 16 Hours.

Individual study or non-thesis research. May be repeated. Prerequisite: Consent of adviser and of faculty member who supervises the work.

ASTR 596 Seminar in Special Topics credit: 0 to 16 Hours.

Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

ASTR 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Atmospheric Sciences (ATMS)

ATMS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ATMS>)

Courses

ATMS 100 Introduction to Meteorology credit: 3 Hours.

Introduces the student to the basic concepts and principles of meteorology via the interpretation of weather maps and charts; uses current weather information to illustrate key concepts, emphasizes the physical atmospheric processes responsible for weather. By the end of the class students will be able to interpret and make basic weather forecasts as well as be able to explain basic atmospheric phenomena. Same as GEOG 100.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

ATMS 120 Severe and Hazardous Weather credit: 3 Hours.

Most extreme manifestations of weather and climate are analyzed in terms of their physical basis and their historical, economic and human consequences. Emphasis is placed on the interplay between technological advances, the evolution of meteorology as a science, and the impacts of extreme weather (winter storms, floods, severe thunderstorms, hurricanes, El Nino). Technological advances include satellites, weather radars and profilers, and computer models used for weather prediction. Same as ESE 120.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

ATMS 140 Climate and Global Change credit: 3 Hours.

Introduces climate change and its interactions with the global environment; surveys the physical, chemical, biological and social factors contributing to global change; includes topics such as greenhouse warming, acid rain, ozone depletion, distinguishes anthropogenic influences and natural variability of the earth system; addresses societal impacts, mitigation strategies, policy options and other human responses to global change. Same as ESE 140.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

ATMS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics each term. May be repeated.

ATMS 201 General Physical Meteorology credit: 3 Hours.

Introduction to physical processes in the atmosphere, focusing on those relevant to weather and storms. Emphasizes quantitative problem solving. Topics include atmospheric structure, atmospheric thermodynamics, clouds, synoptic meteorology, weather forecasting, and storms. For students in atmospheric sciences, physics, mathematics, engineering, and other physical and natural sciences. Prerequisite: MATH 220 or MATH 221; credit or concurrent registration in MATH 231 and PHYS 211.

ATMS 205 Introduction to Computational Geosciences credit: 3 Hours.

Enables students to use computers to solve real-world problems in the geosciences. Students will: Develop a fundamental level of programming knowledge, including Linux computing; Learn to use MATLAB and Python on local and remote computing systems to address geosciences problems; Understand the structure and use of geosciences datasets; Use computers for data representation, presentation and visualization; and Understand introductory methods for geosciences data reduction and statistical analysis. No programming background is required.

ATMS 301 Atmospheric Thermodynamics credit: 3 Hours.

Introduction to fundamental thermodynamic processes that occur in Earth's atmosphere. Defines, describes, and derives various thermodynamic concepts including (1) the conservation of energy, (2) laws of thermodynamics, (3) kinetic theory, (4) phase transitions of water, and (5) thermodynamic processes of the atmosphere. Applies thermodynamic concepts to atmospheric structure and stability, water phase transformations, and energy and mass transport within the atmosphere. Prerequisite: ATMS 201, MATH 241, and PHYS 211.

ATMS 302 Atmospheric Dynamics I credit: 3 Hours.

Introduction to fundamental dynamical processes in the atmosphere through a descriptive and quantitative analysis of dynamical meteorology at the synoptic and global scale. Covers basic laws of fluid mechanics as applied to the atmospheric sciences, vorticity and circulation in 2-D and 3-D flows, boundary layer dynamics and friction, basic concepts of geophysical waves, and baroclinic instability. These topics will be covered both descriptively and mathematically with emphasis on computer representation of the fundamental processes governing atmospheric motion and application of theory to real-world examples. Same as PHYS 329. Prerequisite: ATMS 201, MATH 241 and PHYS 211.

ATMS 303 Synoptic-Dynamic Wea Analysis credit: 4 Hours.

Conceptualizes the structure and dynamics of the atmosphere through interpretation and analysis of weather charts, time and cross sections, soundings, and forecast products. Students develop case studies of weather system structure, and participate in discussions of weather processes as depicted by weather maps. Depiction of atmospheric kinematic and dynamic processes on weather charts is emphasized. Students learn conceptual models of the structure of mid-latitude cyclones and convective weather systems, including cyclogenesis, frontogenesis, the process of storm intensification, occlusion and frontolysis. Prerequisite: ATMS 201 and credit or concurrent registration in MATH 241.

ATMS 304 Radiative Transfer-Remote Sens credit: 3 Hours.

Introduction to the laws governing the propagation of electromagnetic radiation in the Earth's atmosphere. Topics include absorption, emission, and scattering of radiation, absorption and scattering properties of atmospheric constituents, the Sun as a source of radiation, the radiative transfer equation, and simple radiative balance models. Emphasis will be placed on the role of radiation in weather and climate, the description of atmospheric optical phenomena, and the application to remote sensing. Prerequisite: MATH 241 and PHYS 212.

ATMS 305 Computing and Data Analysis credit: 3 Hours.

Introduction to the statistical treatment and graphical representation of atmospheric sciences data, both in the space and time domain. Emphasis is placed on applications and real-world examples. Discusses relevant statistics, methods of interpolation and least squares, and linear and nonlinear correlations. Students gain experience using PYTHON for data analysis, develop theoretical skills for analyzing and modeling data, and perform virtual experiments and analyze real-world publicly available data sets. Prerequisite: MATH 241 or consent of instructor.

ATMS 306 Cloud Physics credit: 3 Hours.

Develops an understanding of microphysical processes occurring within clouds through use of in-situ observations, modeling, and theoretical studies; topics covered include nucleation, diffusional growth of water and ice particles, the warm rain process, the cold rain process (including riming, aggregation, graupel and hail), weather modification, and an introduction to radar meteorology. Prerequisite: ATMS 301.

ATMS 307 Climate Processes credit: 3 Hours.

Introduces students to Earth's climates and the processes that determine them. Examines factors that control natural climate change over long and short time scales, processes by which humans impact climate and climate change, methods to predict climate change, and climate change response by policymakers. Prerequisite: ATMS 201.

ATMS 311 Environmental Issues Today credit: 3 Hours.

Same as ESE 311. See ESE 311.

ATMS 312 Atmospheric Dynamics II credit: 3 Hours.

Rigorous examination of the dynamical nature of various manifestations of the atmospheric circulation. Topics include the intrinsic effects of earth's rotation and stratification, vorticity and potential vorticity dynamics, various forms of boundary layer, wave dynamics (gravity waves and Rossby waves), geostrophic adjustment, cyclogenesis, frontogenesis and a potpourri of instability theories. Same as PHYS 330. Prerequisite: ATMS 301, ATMS 302.

ATMS 313 Synoptic Weather Forecasting credit: 4 Hours.

Examines the tools and techniques of weather forecasting, with heavy emphasis on actual forecasting. Numerical models used to forecast weather are reviewed and compared. Forecasting using numerical, statistical and probabilistic forecasting techniques is studied. Forecasts of significant winter weather, convection, floods and other weather hazards are emphasized. Students learn the process behind Severe Weather Watches and Warnings, Quantitative Precipitation Forecasts, precipitation type forecasts, flood forecasts and forecasts of other significant weather. Prerequisite: ATMS 302, ATMS 303 or consent of instructor.

ATMS 314 Mesoscale Dynamics credit: 3 Hours.

Examination of the structure and dynamics of weather systems that occur on the mesoscale. The course first reviews what is meant by "mesoscale". Examines the structure and dynamics of both free and forced mesoscale circulations. Free circulations are those internal to the atmosphere, such as thunderstorms, mesoscale convective systems, squall lines, hurricanes, jet streaks, and fronts. Forced circulations are those tied to features external to the atmosphere, such as shorelines (the sea breeze), lakes (lake effect storms), and mountains. Prerequisite: ATMS 301, ATMS 302, ATMS 303, or consent of instructor.

ATMS 315 Meteorological Instrumentation credit: 3 Hours.

Introduction to the instruments and meteorology of measuring weather variables. The focus is to explore modern methods of weather observation while training each student to gather, assess and interpret weather data. This class will also focus on research applications, and industrial applications in addition to routine weather observation. Prerequisite: ATMS 201.

ATMS 322 Soc Impacts Weather & Climate credit: 3 Hours.

Examines the interconnectedness of weather, climate and society. Focus is on the complex relationship between weather, climate and society from both a physical and social perspective with an examination of the role of sustainability in both impacts and future mitigation. Discussions focused on the physical principles driving the weather and climate and how they interact with all aspects of society. Same as ENSU 301. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

ATMS 323 Air Pollution to Global Change credit: 3 Hours.

Develops the science of air pollution across spatial scales with an Earth-systems approach. Considers how fossil fuel combustion, agriculture development, waste generation, synthetic chemicals production, biomass burning, and changes in land use are significantly altering levels of radiatively and chemically active gases and aerosols in the atmosphere, and how these pollutants interact at local, regional, and global scales. The systems nature of the processes through which air pollution is linked to global change will be examined via integrated science assessment modeling that includes feedbacks from societal policies, industrial practices, and human populations. Same as ENSU 302.

ATMS 324 Field Studies of Convection credit: 2 Hours.

Students learn to recognize the structural features characteristic of supercellular convection, organized mesoscale convective systems, frontal squall lines, and ordinary thunderstorms, and to relate these structures to theory and conceptual models. Students forecast atmospheric convection, providing daily meteorological forecast discussions and analysis of current and future weather conditions. This course includes a mandatory 12-14 day field trip. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ATMS 201. ATMS Majors or Minors only with consent of instructor.

ATMS 391 Topics in Atmospheric Sciences credit: 1 to 3 Hours.

Special topics in atmospheric sciences at the undergraduate level. See Class Schedule for topics and prerequisites. Additional fees may apply. See Class Schedule. May be repeated in the same or separate terms to a maximum of 12 hours if topics vary.

ATMS 401 Applied Meteorology credit: 3 Hours.

Examines how providers of meteorological information work with stakeholders who value that information to develop decision support systems in fields such as aviation, hydrometeorology, energy, health, national security, transportation, agriculture, emergency management, air quality, and climate sustainability. 3 undergraduate hours. 3 graduate hours.

ATMS 404 Risk Analysis in Earth Science credit: 3 or 4 Hours.

Introduction to concepts and methods of quantitative risk analysis in the Earth system. Key concepts will include probability, impacts, risk, uncertainty, statistical estimation, and decision making. Students will use simple risk analysis methods to apply these concepts to example problems related to drought, flooding, weather extremes, and anthropogenic climate change. The students will learn the R programming language for statistical computing, which will be used to integrate concepts and methods using observational data sets and model output. Same as GEOL 485. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or consent of instructor.

ATMS 405 Boundary Layer Processes credit: 4 Hours.

Course will qualitatively and quantitatively describe atmospheric boundary layer characteristics and processes. The course will focus on the turbulent structure of the boundary layer and the factors that influence this structure over a variety of surfaces (e.g., soil, vegetation, marine) and under a variety of atmospheric conditions (e.g., stability, diurnal/nocturnal). This atmospheric layer is important to our daily lives because it is where humans live and it connects the small-scale fluxes of energy and mass to the large-scale atmospheric circulation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 301, ATMS 302, and ATMS 304; MATH 285; or consent of instructor.

ATMS 406 Tropical Meteorology credit: 4 Hours.

Covers the mesoscale, synoptic scale and planetary scale motions in the tropical circulation. Emphasis will be on delineating the unique characteristics of tropical dynamics. Topics include Hadley circulation, Walker circulation, Madden-Julian oscillation, monsoons, easterly waves, equatorial waves, hurricanes, the quasi-biennial oscillation, El Niño and the Southern Oscillation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 301 and ATMS 302 and MATH 285; or consent of instructor.

ATMS 410 Radar Remote Sensing credit: 4 Hours.

Basic principles of radar and references to other ground based remote sensing systems, with emphasis on radar. Discusses principles of conventional and Doppler radar, data processing, and use of Doppler radar in meteorology. Emphasizes radar observations of meteorological phenomena, such as severe thunderstorms and wind shear. Students analyze data from national radar facilities. 4 undergraduate hours. 4 graduate hours. Prerequisite: ATMS 201 and MATH 231 and credit or concurrent registration in MATH 241; or consent of instructor.

ATMS 411 Satellite Remote Sensing credit: 4 Hours.

Review of the basic techniques used in satellite remote sensing of the Earth's surface and atmosphere, as well as other planets in our solar system. Topics include radiative transfer, scattering and absorption processes, the Sun, mathematics of inversion, atmospheric properties and constituents, surface properties, precipitation, radiation budgets, image classification, satellite technology and orbital configurations. Laboratory work on radiative transfer modeling and satellite data analysis emphasized. All students participate in a team project that has novel and practical applications. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285 and PHYS 212.

ATMS 420 Atmospheric Chemistry credit: 4 Hours.

Biochemical cycles of atmospheric trace gases, their interactions on global and regional scales, and their significance for the chemistry in the atmosphere. Important fundamental concepts central to understanding air pollutants, e.g., the formation of aerosols and the transformation and removal of species in the atmosphere. Same as CEE 447. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 102, PHYS 211, and MATH 241.

ATMS 421 Earth Systems Modeling credit: 4 Hours.

Introduction to systems modeling with applications to the earth and environmental sciences. Basic systems concepts and systems thinking in the contexts of hydrological, climatic, geochemical, and other environmentally relevant systems. Students identify key processes and relationships in systems, represent these elements quantitatively in models, test the models, use them to predict system behavior, and assess the validity of the predictions. No special mathematical or computing background is required. Same as ESE 421, GEOG 421, GEOL 481, and NRES 422. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing in a natural science, geography, natural resources and environmental studies, or engineering.

ATMS 422 Environmental Stable Isotopes credit: 3 Hours.

Same as GEOL 488, IB 488, and NRES 478. See IB 488.

ATMS 425 Air Quality Modeling credit: 4 Hours.

Same as CEE 445. See CEE 445.

ATMS 446 Climate & Social Vulnerability credit: 3 or 4 Hours.

Same as GEOG 496 and SOC 451. See GEOG 496.

ATMS 447 Climate Change Assessment credit: 3 Hours.

Provides students with first-hand experience with computer models used to study climate change and permits them to test hypotheses, develop scenarios, learn about the implications of various structures of the modeled system, and evaluate the climatic impacts of anthropogenic emissions. Students perform calculations and produce model scenarios using a web interface to our Integrated Science Assessment Model (ISAM). 3 undergraduate hours. 3 graduate hours.

ATMS 449 Biogeochemical Cycles credit: 4 Hours.

Presents the key physical, biological, and chemical concepts of biogeochemical cycles central to understanding the causes of global changes in climate and air quality, focusing on an atmospheric sciences view of these cycles and their influences. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

ATMS 490 Individual Study credit: 1 to 4 Hours.

Individual study or reading at an advanced undergraduate level in a subject not covered in normal course offerings. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. May not be used to satisfy requirements for an M.S. or Ph.D. degree in Atmospheric Sciences. Prerequisite: Consent of advisor and of staff member supervising work.

ATMS 491 Adv Topics in Atmospheric Sci credit: 2 to 4 Hours.

Special topics in atmospheric sciences. See Class Schedule for topics and prerequisites. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated in the same or separate terms as topic varies to a maximum of 12 hours.

ATMS 492 Capstone Undergraduate Research credit: 4 Hours.

All senior Atmospheric Sciences undergraduate majors have the opportunity to take a Capstone Undergraduate Research experience. Students will either be engaged in an atmospheric science research project or will participate in an approved internship program with an agency involved in atmospheric science research or in meteorological operations. A research or internship project will be with a program at UIUC or with an allied organization. The student will need to first gain approval for their research or internship. 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 undergraduate hours. Prerequisite: Senior standing in Atmospheric Sciences, or permission of Department Head.

ATMS 500 Dynamic Meteorology credit: 4 Hours.

Examines the observed behavior of the atmosphere through the application of physical and hydrodynamical principles to analyses of real meteorological data; develops concepts for studying atmospheric circulations, particularly extratropical cyclones and anticyclones. Laboratory work includes the development of diagnostic techniques suitable for a better understanding of the current weather.

ATMS 501 Mesoscale Meteorology credit: 4 Hours.

Basic concepts and ideas on atmospheric processes that occur on scales of motions from a few kilometers to a few hundred kilometers, a scale loosely classified by meteorologists as "mesoscale". After an introductory discussion of mesoscale classifications and attendant forecast problems, the course will introduce various mesoscale phenomena, internally generated circulations, externally forced circulations, and mesoscale instabilities. Covers all three fundamental aspects of mesoscale meteorology: observations, theory and modeling, with particular emphasis on the dynamics of precipitating mesoscale systems. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 502 Numerical Fluid Dynamics credit: 4 Hours.

Addresses numerical techniques for solving linear and nonlinear differential equations in initial value fluid flow problems. Students receive a thorough background in the principles used to evaluate numerical methods, the ability to critically interpret these methods as presented in the literature, and in particular, the practical application of these techniques in modeling multi-dimensional flow on high-performance computers. Temporal and directional splitting, finite differencing/volume methods, and adaptive nesting will be discussed. Same as CSE 566. 4 graduate hours. No professional credit. Prerequisite: MATH 285 or equivalent. Graduate Standing or Consent of Instructor.

ATMS 504 Physical Meteorology credit: 4 Hours.

Examines the physical processes that occur in the atmosphere. Topics include atmospheric thermodynamics, cloud physics and atmospheric radiation. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 505 Weather Systems credit: 4 Hours.

Examination of the structure and dynamics of mid-latitude weather systems, integrating weather observations, with the current state of dynamic theory, numerical weather prediction models, and the physical principles of atmospheric thermodynamics, cloud and precipitation physics, and radiation to the problems of weather analysis and forecasting. Students will be required to give weather forecast briefings to develop an understanding of the weather forecasting process, and gain experience in communicating weather forecasts. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 507 Climate Dynamics credit: 4 Hours.

Investigates the dynamical and physical processes that govern Earth's paleo, current, and future climates. Emphasizes principles of climate change, natural and anthropogenic, and regional, national, and global. Global climate models and their predictions are examined in the context of scenarios for future population growth and energy consumption. 4 graduate hours. No professional credit. Prerequisite: Graduate standing or consent of instructor.

ATMS 510 Precipitation Physics credit: 4 Hours.

Develops an understanding of precipitation processes through cloud observations, microphysics, dynamics, and comprehensive theoretical models; includes growth by condensation, coalescence, and riming; and studies ice crystals, hail, and weather modification. Prerequisite: ATMS 504 or consent of the instructor.

ATMS 511 Atmospheric Radiation credit: 4 Hours.

Physical concepts and various methods of analysis of radiation scattering by atmospheric molecules, particulates, and clouds; infrared radiative transfer in a stratified inhomogeneous atmosphere; radiation and ozone photochemistry in the stratosphere; and remote temperature and composition sensing techniques using satellite radiation data. Prerequisite: ATMS 504 or consent of the instructor.

ATMS 512 Clouds and Climate credit: 4 Hours.

The following topics are addressed to examine the role of clouds in the climate system: aerosols and aerosol cloud interactions, direct, semi-direct and indirect aerosol effects, in-situ measurements of clouds, properties of liquid and ice clouds, precipitation mechanisms and representation in models, scattering by cloud particles and model representations, remote sensing of cloud properties, and representation of clouds in climate models. Prerequisite: ATMS 504 or consent of instructor.

ATMS 535 Aerosol Sampling and Analysis credit: 4 Hours.

Same as CEE 545. See CEE 545.

ATMS 571 Professional Development credit: 1 Hour.

Aimed at professional development in the atmospheric sciences so that students recognize the importance of breadth of knowledge, effective oral and written scientific communication, and other skills they will need as professionals. 1 graduate hour. No professional credit. Approved for S/U grading only. Prerequisite: Graduate student in Atmospheric Sciences or consent of instructor.

ATMS 590 Individual Study credit: 2 to 4 Hours.

Individual study or reading in a subject not covered in normal course offerings. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

ATMS 591 Atmospheric Sciences Seminar credit: 0 Hours.

Seminar on topics of current interest. Approved for S/U grading only. Prerequisite: Consent of instructor.

ATMS 596 Non-Thesis Research credit: 0 to 12 Hours.

Non-thesis research in the Atmospheric Sciences. Approved for S/U grading only. May be repeated. No more than 4 hours may be counted toward a master's degree in ATMS. Prerequisite: Restricted to students in the non-thesis option.

ATMS 597 Special Topics in Atmospheric Sciences credit: 0 to 4 Hours.

Lecture course in topics of current interest; subjects such as tropical meteorology, aerosol physics, and geophysical fluid dynamics will be covered in term offerings on a regular basis. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Graduate standing or consent of instructor.

ATMS 599 Thesis Research credit: 0 to 16 Hours.

Check with the department to identify which CRN is needed for your advisor and any related registration questions. Approved for S/U grading only. Prerequisite: Consent of instructor.

Bamana (BMNA)

BMNA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BMNA>)

Courses

BMNA 201 Elementary Bamana I credit: 5 Hours.

Introduction to Bamana (Bambara), a West African language spoken from Mauritania to Benin; emphasis on grammar, pronunciation, reading and conversation in standard Bamana. Participation in the language laboratory required. Same as AFST 201.

BMNA 202 Elementary Bamana II credit: 5 Hours.

Continuation of BMNA 201, with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Bamana. Participation in the language laboratory required. Same as AFST 202. Prerequisite: BMNA 201.

BMNA 403 Intermediate Bamana I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, compositional skills, study of written texts in standard Bamana, and discussion of grammatical variations. Same as AFST 403. 4 undergraduate hours. 4 graduate hours. Prerequisite: BMNA 202.

BMNA 404 Intermediate Bamana II credit: 4 Hours.

Continuation of BMNA 403; emphasis on ability to engage in reasonably fluent discourse in Bamana and comprehensive knowledge of formal grammar, and ability to read ordinary texts in standard Bamana. Same as AFST 404. 4 undergraduate hours. 4 graduate hours. Prerequisite: BMNA 403.

BMNA 405 Advanced Bamana I credit: 3 Hours.

Third year Bamana with emphasis on conversational fluency and on increased facility in reading, comprehension, writing in response to authentic Bamana texts such as those documented in selected newspapers, magazines, and other Bamana-speaking communities' cultural materials. Same as AFST 431. 3 undergraduate hours. 3 graduate hours. Prerequisite: BMNA 404.

BMNA 406 Advanced Bamana II credit: 3 Hours.

Continuation of BMNA 405 with increased emphasis on conversational fluency and on increased facility in reading, comprehending authentic Bamana literary texts, including prose and cultural materials from Bamana-speaking communities in West Africa (i.e., Burkina Faso, Cote d'Ivoire, and Mali.) Same as AFST 432. 3 undergraduate hours. 3 graduate hours. Prerequisite: BMNA 405.

Basque (BASQ)

BASQ Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BASQ>)

Courses

BASQ 401 Beginners' Basque credit: 3 Hours.

Basic communication skills in Basque (listening, speaking, reading and writing). Introduction to basic information on Basque culture and history. 3 undergraduate hours. 3 graduate hours. Prerequisite: Four semesters or equivalent of Spanish, French or another Romance language.

BASQ 402 Readings in Basque Studies credit: 3 Hours.

Directed research providing individualized instruction on specific topics in Basque linguistics and culture. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: BASQ 401 or consent of instructor.

Biochemistry (BIOC)

BIOC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOC>)

Courses

BIOC 190 Biochemistry Orientation credit: 1 Hour.

Lectures designed to acquaint biochemistry majors with the various specializations available in the field, career exploration procedures, and a wide range of opportunities of special interest to biochemistry students. Prerequisite: Biochemistry Specialized Curriculum majors, transfers and first year freshmen only.

BIOC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

BIOC 290 Individual Topics credit: 1 to 5 Hours.

Laboratory work and/or reading in fields selected in consultation with an appropriate faculty member. May be repeated in separate terms to a maximum of 10 hours. Prerequisite: Consent of instructor.

BIOC 406 Gene Expression & Regulation credit: 3 Hours.

Same as MCB 406. See MCB 406.

BIOC 440 Physical Chemistry Principles credit: 4 Hours.

Same as CHEM 440. See CHEM 440.

BIOC 445 Current Topics in Biochemistry credit: 3 Hours.

Capstone course of the Biochemistry Specialized Curriculum, designed to expose undergraduate seniors to developing areas of research in biochemistry. Each year the course will cover 3 to 4 topics of high current research activity, each presented by one faculty member. Readings will be based on the primary lecture. 3 undergraduate hours. No graduate credit. Prerequisite: Senior standing in the Biochemistry Specialized Curriculum; MCB 354 and MCB 406 or consent of instructor.

BIOC 446 Physical Biochemistry credit: 3 Hours.

Physical properties of biological macromolecules, with the emphasis on spectroscopic methods, including UV, visible and FTIR spectroscopies, magnetic resonance techniques as well as X-ray diffraction methods. Same as CHEM 472 and MCB 446. 3 undergraduate hours. 3 graduate hours. Prerequisite: It is strongly recommended to take CHEM 440 (section B) prior to this course. MCB 354 or MCB 450 or equivalent background in biochemistry is also recommended.

BIOC 455 Technqs Biochem & Biotech credit: 4 Hours.

Introduction to modern methods of experimentation with biochemical experimentation. Lectures and labs on the theory and practices underlying various methods and instrumentation. Includes protein purification and quantitative analyses, immunoassays, enzymology, peptide sequencing, lipid analysis, carbohydrate analysis, and bioinformatics. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 232 or CHEM 236, or equivalent; credit in MCB 251 or equivalent, and MCB 354 or MCB 450 or equivalent, or consent of instructor.

BIOC 460 Biochemistry Senior Seminar credit: 3 Hours.

Writing intensive course dealing with the technical literature, current issues, and current advances in Biochemistry. 3 undergraduate hours. 3 graduate hours. Graduate students may register, but priority will be given to undergraduate students. Prerequisite: Completion of the Campus Composition I general education requirement; MCB 354 and BIOC 455, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

BIOC 492 Senior Thesis credit: 1 to 6 Hours.

Limited in general to seniors in biochemistry. BIOC 492 is recommended for all those who plan to do research and graduate study, and it is a prerequisite for graduation with distinction in biochemistry. Each student who desires to do thesis research must receive written permission from a member of the biochemistry faculty. Accordingly, prospective students are encouraged to contact the biochemistry staff in the term prior to registration in this course. Students must present a thesis to receive credit in this course. 1 to 6 undergraduate hours. No graduate credit. May be repeated; enrollment is limited to three semesters. Prerequisite: MCB 354 and BIOC 455, or consent of instructor.

BIOC 555 Anlys Biochemical Literature credit: 2 Hours.

Same as MCB 555. See MCB 555.

BIOC 590 Individual Topics credit: 1 to 16 Hours.

Designed for students in biochemistry who wish to undertake individual studies of a non-Ph.D. thesis nature under the direction of a faculty member of the department. Approved for S/U grading only. May be repeated. (Summer Session, 1 to 8 hours). Prerequisite: Consent of head of department.

BIOC 595 Biochemistry Seminar credit: 0 to 1 Hours.

Students, faculty, and invited speakers present seminars and discussions on current research topics. Required of all Biochemistry Ph.D. students. Approved for S/U grading only. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in Biochemistry.

BIOC 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Bioengineering (BIOE)

BIOE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOE>)

Courses

BIOE 100 Bioengineering Freshman Seminar credit: 0 Hours.

Seminar surveying a broad range of Bioengineering topics. Approved for S/U grading only. Prerequisite: Bioengineering Freshmen Only.

BIOE 120 Introduction to Bioengineering credit: 1 Hour.

Lectures and discussions of recent trends in bioengineering; topics typically include biological interaction with ultrasound and microwave radiation, modeling, instrumentation, biomaterials, biomechanics, biological heat and mass transfer, and medical imaging techniques.

BIOE 198 Special Topics credit: 1 to 3 Hours.

Subject offerings related to Bioengineering intended to augment the Bioengineering curriculum. Offerings will be at the freshman level. See class schedule or course information websites for topics and prerequisites. May be repeated if topics vary. Prerequisite: Majors only.

BIOE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

BIOE 200 Bioengineering Career Immersion credit: 1 Hour.

This course provides exposure to Bioengineering careers through experiences in medicine, industry, and research. Students will observe professional practices to facilitate problem-based discoveries and technology design. Prerequisite: BIOE 120. Majors only.

BIOE 201 Conservation Principles Bioeng credit: 3 Hours.

Material, energy, charge, and momentum balances in biological problems. Steady-state and transient conservation equations for mass, energy, charge, and momentum will be derived and applied to mathematically analyze physiological systems using basic mathematical principles, physical laws, stoichiometry, and thermodynamic properties. Prerequisite: CHEM 104, MCB 150, and PHYS 211.

BIOE 202 Cell & Tissue Engineering Lab credit: 2 Hours.

Principles of cell biology inherent in tissue engineering design. Lab experience in safely and skillfully manipulating cells of the four tissue types and performing various quantitative analyses on products produced by cells that have differentiated. Prerequisite: MCB 150, and credit or concurrent enrollment in BIOE 206.

BIOE 205 Signals & Systems in Bioengng credit: 3 Hours.

Introduction to signals and linear systems with examples from biology and medicine. Linear systems and mathematical models of systems, including differential equations, convolution, Laplace transforms, Fourier series and transforms, and discrete representations. Class examples and coursework apply general techniques to problems in biological signal analysis, including circuits, enzyme kinematics, and physiological system analysis. Use of Matlab and Simulink software to understand more complex systems. Prerequisite: CS 101, MATH 285, and PHYS 212.

BIOE 206 Cellular Bioengineering credit: 3 Hours.

Molecular and cellular biology focusing on instrumentation and measurement techniques: gene expression, translation, and regulation; cellular energetics and enzyme kinetics; membrane transport and cell signaling; cytoskeleton and the cell cycle; cell biology fundamentals emphasizing modern imaging and measurement systems to quantify cellular function. Credit is not given for both BIOE 206 and MCB 252. Prerequisite: MCB 150.

BIOE 220 Bioenergetics credit: 4 Hours.

An integrative view of functional organization and energy transfer in biological systems. Emphasis on dynamics and kinetics of quantum, sub-molecular, and molecular interactions for metabolism. Topics include biomolecules of life, laws of thermodynamics, enzyme kinetics, protein-ligand binding, DNA binding, and modeling of molecular systems. Credit is not given for both BIOE 220 and ME 300, PHYS 214, or CHBE 321. Prerequisites: BIOE 201 and BIOE 206.

BIOE 297 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 298 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 8 hours.

BIOE 301 Introductory Biomechanics credit: 3 Hours.

Structure and mechanics of biological systems. Statics, dynamics, stress-strain analysis, Newtonian mechanics, and continuum mechanics. Applications to bone, soft tissue, and cells. Prerequisite: PHYS 211.

BIOE 302 Modeling Human Physiology credit: 3 Hours.

Description, quantification, and modeling of human physiological systems, based on systems fundamentals. Components, relationships, and homeostatic controls of neural, musculoskeletal, respiratory, cardiovascular, endocrine, digestion, and renal-filtration systems. Application of mathematical modeling and MATLAB simulation to further understanding of the systems and relate physiological consequences to changes in environment or component function. Prerequisite: CS 101, BIOE 205, MATH 285, and MCB 252 or BIOE 206.

BIOE 303 Quantitative Physiology Lab credit: 2 Hours.

Experiments involving the modeling and measurement of animal and human physiology systems. Use of computer simulations to provide mathematical descriptions of physiology behavior. Calibration and validation of models through hands-on experiments. Focus on quantitative measurement of neural, cardiovascular, respiratory, muscular, and endocrine system functions. Prerequisite: BIOE 302.

BIOE 306 Biofabrication Lab credit: 3 Hours.

Experiments involving design of bioreactors and microfluidic systems, advanced cell culture, and quantitative analysis techniques such as polymerase chain reaction and atomic force microscopy. Laboratory techniques relating to current literature and state of the art in the field of bioengineering. Prerequisite: BIOE 202. Departmental approval required for non-majors.

BIOE 310 Comp Tools Bio Data credit: 3 Hours.

Fundamental and applied statistics, including probability distributions, parameter estimation, descriptive statistics, hypothesis testing, and linear regression. Statistical methods in genomics including sequence analysis, gene expression data analysis, human genomic variation, regulatory genomics, and cancer genomics. Credit is not given for both BIOE 310 and IE 300. Prerequisites: BIOE 205 and BIOE 206.

BIOE 360 Transport & Flow in Bioengr credit: 3 Hours.

Fundamentals of fluid dynamics and mass transport applied to analysis of biological systems. Quantitative understanding of microscopic to macroscopic phenomena in biological systems related to their sensing by imaging techniques. Molecular phenomena in both healthy tissue and disease using examples from cardiovascular problems and cancer using ultrasound, optical and MRI techniques. Credit is not given for both BIOE 360 and any of CHBE 421, CHBE 451, or TAM 335. Prerequisites: BIOE 201 and BIOE 301.

BIOE 380 Biomedical Imaging credit: 3 Hours.

Same as ECE 380. See ECE 380.

BIOE 397 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. May be repeated up to 8 hours in a term to a maximum of 12 total hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 8 hours.

BIOE 410 Computational Cancer Biology credit: 3 Hours.

Mathematical modeling of the process of carcinogenesis as somatic cell evolution. Focus on current research topics in cancer biology using data from next-generation sequencing technologies. Overview of database resources and algorithmic and modeling methods relating to biological problems. 3 undergraduate hours. No graduate credit. Prerequisite: BIOE 206, CS 101, MATH 285.

BIOE 414 Biomedical Instrumentation credit: 3 Hours.

Engineering aspects of the detection, acquisition, processing, and display of signals from living systems; biomedical sensors for measurements of biopotentials, ions and gases in aqueous solution, force, displacement, blood pressure, blood flow, heart sounds, respiration, and temperature; therapeutic and prosthetic devices; medical imaging instrumentation. Same as ECE 414. 3 undergraduate hours. 3 graduate hours. Prerequisite: BIOE 205, ECE 205 or ECE 210.

BIOE 415 Biomedical Instrumentation Lab credit: 2 Hours.

Laboratory to accompany BIOE 414. use of sensors and medical instrumentation for static and dynamic biological inputs. Measurement of biomedical signals. 2 undergraduate hours. 2 graduate hours. Same as ECE 415. Prerequisite: Credit or concurrent registration in BIOE 414.

BIOE 416 Biosensors credit: 3 Hours.

Same as ECE 416. See ECE 416.

BIOE 420 Intro Bio Control Systems credit: 3 Hours.

Systems engineering approach to modeling physiological systems to examine natural biological control systems, homeostasis, and control through external medical devices. Introduces open loop and closed loop feedback control; Laplace and Fourier analysis of system behavior; impulse and steady state responses; physiological modeling and system identification; and stability. Includes biological systems for endocrine function, muscle position, neuronal circuits, and cardiovascular function. Mathematical modeling, Matlab and Simulink simulation, and physiological measurements to relate control systems to maintenance of internal environment. 3 undergraduate hours. No graduate credit. Credit is not given for BIOE 420 if credit for AE 353, ECE 486, GE 320, or ME 340 has been earned. Prerequisites: BIOE 205, BIOE 302, BIOE 303, BIOE 414, BIOE 415.

BIOE 430 Intro Synthetic Biology credit: 3 or 4 Hours.

Introduction to the field of synthetic biology. Engineering applications of biomolecular systems and cellular capabilities for a variety of application biological background of gene regulation, experimental methods for circuit engineering, and mathematical basis for circuit modeling. Examples in biofuels, biomedicine, and other areas will be discussed. 3 undergraduate hours. 4 graduate hours. Prerequisite: BIOE 206 or MCB 252; and MATH 285.

BIOE 435 Senior Design I credit: 2 Hours.

Capstone bioengineering design activity to develop solutions to projects provided by academia, industry, or clinical settings, utilizing principles of design, engineering analysis, and functional operation of engineering systems. Concept-design, safety, human-factors, quality, and Six-Sigma considerations. Initial solution proposals meeting professional technical-writing and communication standards. Concluded in BIOE 436. 2 undergraduate hours. No graduate credit. Prerequisite: BIOE 301, BIOE 414, and BIOE 415.

BIOE 436 Senior Design II credit: 2 Hours.

Continuation of BIOE 435. Design teams finalize concepts, evaluate alternatives, model and analyze solutions, build and test a final product, and present the results professionally to project sponsors. 2 undergraduate hours. No graduate credit. Prerequisite: BIOE 435.

BIOE 461 Cellular Biomechanics credit: 4 Hours.

Same as TAM 461. See TAM 461.

BIOE 467 Biophotonics credit: 3 Hours.

Same as ECE 467. See ECE 467.

BIOE 473 Biomaterials Laboratory credit: 3 Hours.

Same as MSE 472. See MSE 472.

BIOE 474 Metabolic Engineering credit: 3 or 4 Hours.

Same as CHBE 474. See CHBE 474.

BIOE 476 Tissue Engineering credit: 3 Hours.

Tissue engineering therapies for cell-based, material-based, and therapeutic-based solutions. Stem cells, immunology, and clinical applications. 3 undergraduate hours. 3 graduate hours. Prerequisite: BIOE 301.

BIOE 479 Cancer Nanotechnology credit: 3 Hours.

Applications in Cancer and Mechanobiology will provide an introduction to basic concepts in applications of nanotechnology in mechanobiology and in cancer. This is a highly interdisciplinary field of research where knowledge from various disciplines need to be presented and integrated. The course will be a team taught course by faculty from Engineering and LAS. There will be 4 main sections of the course; (i) biological concepts and cancer biology, (ii) introduction to bottom nanotechnology and nanomedicine, (iii) Microfluidics, Lab on Chip, and Top Down Nanotechnology, and (iv) applications in cellular mechanics, i.e. mechanobiology and nanotechnology. The course will be targeted for first year graduate students and senior undergraduate students. 3 undergraduate hours. 3 graduate hours. Approved for letter and S/U grading. Prerequisite: BIOE 206, CHEM 232.

BIOE 480 Magnetic Resonance Imaging credit: 3 or 4 Hours.

Same as ECE 480. See ECE 480.

BIOE 481 Whole-Body Musculoskel Biomech credit: 3 or 4 Hours.

Same as ME 481. See ME 481.

BIOE 482 Musculoskel Tissue Mechanics credit: 3 or 4 Hours.

Same as ME 482. See ME 482.

BIOE 497 Individual Study credit: 1 to 4 Hours.

Special project or reading activity. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours in a term to a maximum of 12 total hours. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours, but no more than 8 in any one term.

BIOE 499 Senior Thesis credit: 1 to 5 Hours.

Limited in general to seniors in the curriculum in bioengineering. Any others must have the consent of the head of the department. Each student taking the course must register in a minimum of 5 hours either in one term or divided over two terms. A maximum registration of 10 hours in two terms is permitted. 1 to 5 undergraduate hours. No graduate credit. May be repeated, if topics vary. Prerequisite: Majors only, senior standing.

BIOE 500 Graduate Seminar credit: 0 or 1 Hours.

Lecture surveying a broad range of Bioengineering topics. 0 or 1 graduate hours. No professional credit. Approved for S/U grading only. May be repeated to a maximum of 2 hours.

BIOE 501 Seminar Discussion credit: 1 Hour.

Familiarization with reading and discussing academic journals in Bioengineering. Approved for S/U grading only.

BIOE 502 Bioengineering Professionalism credit: 2 Hours.

Ethical questions and conduct, procedures, and professional standards in the practice of bioengineering. Authorship and mentoring, use of animal and human subjects, conflict of interest, ethical behavior in scientific research, intellectual property, and approval processes for drugs and biomedical devices. 2 graduate hours. No professional credit.

BIOE 504 Analytical Methods in Bioeng credit: 4 Hours.

Mathematical concept relating to modeling of physiological and biomolecular processes and the instrumentation used to measure those processes. Review of matrix methods, probability, linear systems, and integral transforms. Singular value decomposition, Bayesian decision making, and linear system solutions to ordinary differential equations. Application of concepts to biosensor design and evaluation, tracer kinetic modeling, and filtering and curve-fitting approaches to forward modeling problems. Prerequisite: MATH 285.

BIOE 505 Computational Bioengineering credit: 4 Hours.

Mathematical and statistical models plus accompanying computational techniques central to many aspects of systems biology and bioengineering research. Theory of supervised and unsupervised learning; linear models; dimension reduction; Monte Carlo computation; analysis of gene expression data and genome sequence data; modeling of gene transcription network signaling pathways. Same as CSE 505. 4 graduate hours. No professional credit. Prerequisite: STAT 400.

BIOE 506 Molecular Biotechniques credit: 4 Hours.

Introduction to modern biotechnologies for studies on the Central Dogma of Biology (DNA, RNA, and Protein) as well as cellular organelles and cell imaging. In-depth review of traditional established methods and emerging ones, emphasizing high precision, high spatial/temporal resolution, high-throughput, molecular accuracy, sensitivity and real-time imaging. Techniques include single molecule sequencing, super resolution cell imaging, and gene therapeutic methods. Example applications of technology are included through relevant journal articles. 4 graduate hours. No professional credit. Prerequisite: MCB 250.

BIOE 507 Advanced Bioinstrumentation credit: 4 Hours.

Instrumentation and underlying theory employed in bioengineering. Concepts in the design and operation of sensors, fundamentals of optics, basic control theory and systems, digital components, and fundamental principles of medical imaging techniques. Specific knowledge of one biomedical instrument or system will be emphasized including detailed mathematical analysis. Prerequisite: BIOE 504.

BIOE 510 Computational Cancer Biology credit: 4 Hours.

Mathematical modeling of the process of carcinogenesis as somatic cell evolution. Focus on current research topics in cancer biology using data from next-generation sequencing technologies. Overview of database resources and algorithmic and modeling methods relating to biological problems. 4 graduate hours. No professional credit. Prerequisite: BIOE 206, CS 101, MATH 285.

BIOE 540 Algorithmic Genomic Biology credit: 4 Hours.

The purpose of the course is to give each student enough background and training in the area of algorithmic genomic biology so that each will be able to do research in this area, and publish papers. The main focus of the course is phylogeny (evolutionary tree) estimation, multiple sequence alignment, and genome-scale phylogenetics, which are problems that present very interesting challenges from a computational and statistical standpoint. Time permitting, we will also discuss computational problems in microbiome analysis, protein function and structure prediction, genome assembly, and even historical linguistics. Students will learn the mathematical and computational foundations in these areas, read the current literature, and do a team research project. The course is designed for doctoral students in computer science, computer engineering, bioengineering, mathematics, and statistics, and does not depend on any prior background in biology. The technical material will depend on discrete algorithms, graph theory, simulations, and probabilistic analysis of algorithms. Same as CS 581. 4 graduate hours. No professional credit. Prerequisite: CS 374 and CS 361/STAT 361, or consent of instructor.

BIOE 570 Seminar Series credit: 1 Hour.

Guest topics will vary, but will typically cover topics of current interest relevant to the bioengineering field. Lecture and discussion on topics relevant to the development, regulatory approval, marketing, and application of systems used in the fields of biomedical imaging, life science research, and pharmaceutical discovery. Emphasis upon case studies on topics that will include regulatory approval, intellectual property, strategy, and technology innovation. 1 graduate hour. No professional credit. Approved for S/U grading only. May be repeated up to 2 hours in separate terms. Prerequisite: For students enrolled in the M.Eng. in Bioengineering degree program.

BIOE 571 Biological Measurement I credit: 4 Hours.

With special focus on medical imaging, this course will introduce fundamental concepts related to the detection and analysis of biological analytes, biomedical images, and physiological parameters. Topics include signal-to-noise analysis, noise characterization, data aliasing, analog-to-digital conversion, common strategies for noise reduction, exogenous contrast agents and fundamentals of molecular imaging. The fundamental phenomena behind biological measurements such as DNA sequencing, fluorescence microscopy. MRI imaging, OCT imaging, and ultrasound imaging will be discussed along with the factors that influence noise and contrast from the standpoint of fundamental physics, instrumentation/hardware, and post-measurement data/signal processing. 4 graduate hours. No professional credit. Prerequisite: For students enrolled in the M.Eng in Bioengineering degree program.

BIOE 572 Biological Measurement II credit: 4 Hours.

With special focus on medical imaging, learn about advanced techniques relating to state-of-the-art bioinstrumentation technologies. Topics will broadly include fluorescence, genomic and proteomic diagnostics, biosensors, ultrasound imaging, microscopy and their uses relevant to physiological changes related to major human diseases. 4 graduate hours. No professional credit. Prerequisite: BIOE 571. For students enrolled in the M.Eng in Bioengineering degree program.

BIOE 573 Managing Business Operations credit: 4 Hours.

Introduction to fundamental principles of design, management, and improvement of business operations and product innovations. Strategies and techniques for managing processes, projects, process improvement and new product development. 4 graduate hours. No professional credit. Prerequisite: For students enrolled in the M.Eng in Bioengineering degree program.

BIOE 574 Innovation and Introduction to Financial Decision Making credit: 4 Hours.

Tools, concepts, and analytical frameworks that enhance the ability to define and analyze strategic problems stemming from innovation and technological change, and to identify sources of competitive advantage from both an industry and firm-level perspective. Introduction to financial decision making, including topics in valuation, project analysis and risk-return relationships. 4 graduate hours. No professional credit. Prerequisite: For students enrolled in the M.Eng. in Bioengineering degree program only.

BIOE 575 Capstone Project credit: 6 Hours.

Students in the Master of Engineering (M.Eng.) in Bioengineering program will demonstrate their proficiency through a capstone project, where students will work on a translational project to develop solutions for real world problems utilizing principles of design, engineering analysis, and functional operation of engineering systems. Depending on the student's flexibility and availability, capstone projects may include collaboration with other online M.Eng. students on a team-based project, analysis of case studies, or even a self-directed project that directly relates to a specific area of interest or on behalf of their employer. Project presentations and demonstrations may be required at the end of the program. 6 graduate hours. No professional credit. Prerequisite: Proficiency in MATLAB and completion of or concurrent enrollment in core classes required for the Master of Engineering (M.Eng.) in Bioengineering program. Class only available to students in the M.Eng. in Bioengineering degree program.

BIOE 581 MRI Pulse Sequence Design credit: 3 Hours.

Modular approach to pulse sequence programming in magnetic resonance imaging; descriptions of current pulse sequences; RF pulse design; data sampling considerations; k-space acquisition trajectories. Pulse sequence development simulator usage to program, simulate, and reconstruct images from student-designed acquisitions. Prerequisite: ECE 480.

BIOE 582 Stats & Algo in Genomic Bio credit: 4 Hours.

This course will provide students with the practical knowledge of statistical analysis and computational modeling techniques relevant for applications in genomics and systems biology. The focus will be on the fundamental concepts and algorithms for gene finding, genome annotation, sequence alignment, phylogenetic reconstruction, gene expression and network analysis, Genome-Wide Association Studies (GWAS), etc. 4 graduate hours. No professional credit. Prerequisite: STAT 100, MCB 250, MATH 220, CS 101, or equivalent. Restricted to MEng Students only.

BIOE 583 HT Genomic Data Analysis credit: 4 Hours.

The course will provide students with important practical skills for handling genomic big data and analyzing the results of various types of high-throughput sequencing experiments. The focus will be on achieving proficiency in data management and processing based on popular file formats in genomic biology. 4 graduate hours. No professional credit. Prerequisite: STAT 100, MCB 250, CS 101, or equivalent. For students enrolled in the M.Eng in Bioengineering program or with consent of the M.Eng. program.

BIOE 597 Individual Study credit: 1 to 8 Hours.

Special project or reading activity. May be repeated. Prerequisite: Approved written application to department as specified by department or instructor.

BIOE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in bioengineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours, but no more than 8 in any one term.

BIOE 599 Thesis Research credit: 0 to 16 Hours.

Bioengineering graduate thesis research. Approved for S/U grading only. May be repeated.

Biology (BIOL)

BIOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOL>)

Courses

BIOL 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Biophysics (BIOP)

BIOP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BIOP>)

Courses

BIOP 401 Introduction to Biophysics credit: 3 or 4 Hours.

Same as PHYS 475. See PHYS 475.

BIOP 419 Brain, Behavior & Info Process credit: 3 Hours.

Same as MCB 419 and NEUR 419. See MCB 419.

BIOP 432 Photosynthesis credit: 3 Hours.

Same as CPSC 489 and IB 421. See IB 421.

BIOP 550 Biomolecular Physics credit: 4 Hours.

Same as MCB 550 and PHYS 550. See PHYS 550.

BIOP 576 Computational Chemical Biology credit: 4 Hours.

Same as CHEM 576 and CSE 576. See CHEM 576.

BIOP 581 Lab Rotation I credit: 2 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in research in Biophysics and Quantitative Biology. Required of all first-year students majoring in Biophysics and Quantitative Biology. First five weeks of fall term. 2 graduate hours. No professional credit. Prerequisite: First-year graduate status and consent of department; concurrent registration in BIOP 582 and BIOP 583.

BIOP 582 Lab Rotation II credit: 2 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in research in Biophysics and Quantitative Biology. Required of all first-year students majoring in Biophysics and Quantitative Biology. Second five weeks of fall term. 2 graduate hours. No professional credit. Prerequisite: First-year graduate status and consent of department; concurrent registration in BIOP 581 and BIOP 583.

BIOP 583 Lab Rotation III credit: 2 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in research in Biophysics and Quantitative Biology. Required of all first-year students majoring in Biophysics and Quantitative Biology. Meets last five weeks of the fall term. 2 graduate hours. No professional credit. Prerequisite: First-year graduate status and consent of department; concurrent registration in BIOP 581 and BIOP 582.

BIOP 586 Special Topics in Biophysics credit: 1 to 4 Hours.

Advanced course/tutorials on topics of interest in biophysics, such as electrophysiology, radiation biology, bioenergetics, protein structure, or the physics of muscular contraction. May be repeated. Prerequisite: Consent of instructor.

BIOP 590 Individual Topics credit: 2 to 10 Hours.

For graduate students wishing to study individual problems or topics not assigned in other courses. May be repeated. Prerequisite: Consent of department.

BIOP 595 Biophysics Seminars credit: 1 to 2 Hours.

Survey of literature in one area of biophysics, with special emphasis on student reports. 1 to 2 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. Prerequisite: Graduate standing in Biophysics and Quantitative Biology.

BIOP 599 Thesis Research credit: 0 to 16 Hours.

Research may be conducted in any area under investigation in a faculty laboratory, subject to the approval of the faculty member concerned and the department in which the research is to be done. Approved for S/U grading only. May be repeated.

Bosnian-Croatian-Serbian (BCS)

BCS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BCS>)

Courses

BCS 101 First Year Bosnian-Croatian-Serbian I credit: 4 Hours.

Oral and written work on pronunciation, grammar, and vocabulary. For students with no previous study of Bosnian, Croatian or Serbian.

BCS 102 First Year Bosnian-Croatian-Serbian II credit: 4 Hours.

Continuation of BCS 101. Prerequisite: BCS 101 or equivalent proficiency.

BCS 115 South Slavic Cultures credit: 3 Hours.

Exploration of South Slavic cultures in the historically rich and complex region sometimes referred to as "the Balkans," focusing particularly on those groups found within the successor states of the former Yugoslavia. Critical look at the traditional view of the region as the crossroads or the bridge between East and West, and at the term Balkanization which has become a pejorative term used to characterize fragmented, and self-defeating social systems.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

BCS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

BCS 201 Second Year Bosnian-Croatian-Serbian I credit: 4 Hours.

Completion of grammar; written and oral exercises aimed at active command of the language. Prerequisite: BCS 102 or equivalent proficiency.

BCS 202 Second Year Bosnian-Croatian-Serbian II credit: 4 Hours.

Selected readings in Bosnian, Croatian, or Serbian literature and culture. Prerequisite: BCS 201 or equivalent proficiency.

BCS 215 Yugoslavia and After credit: 3 Hours.

Exploration of the effect of traumatic events, shifting cultural narratives, and social transformations on the construction of collective identities in Bosnia, Croatia and Serbia in the 20th and 21st centuries. Students will read historical and sociological works as well as fiction and poetry.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

BCS 301 Third Year Bosnian-Croatian-Serbian I credit: 3 Hours.

Analysis of the sound system and grammar of the contemporary Bosnian, Croatian, Serbian languages. Prerequisite: Knowledge of another Slavic language or consent of instructor.

BCS 302 Third Year Bosnian-Croatian-Serbian II credit: 3 Hours.

Reading and analysis of selected texts. Prerequisite: BCS 301 or consent of instructor.

Bulgarian (BULG)

BULG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BULG>)

Courses

BULG 481 Structure of Modern Bulgarian credit: 3 Hours.

Analysis of the sound system and grammar of the contemporary Bulgarian language. 3 undergraduate hours. 3 graduate hours.

Prerequisite: RUSS 302 or equivalent.

BULG 482 Readings in Bulgarian Lit credit: 3 or 4 Hours.

Reading, analysis, and discussion of selected excerpts from Bulgarian literature, scientific prose, and the press. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary. Prerequisite: BULG 481 or consent of instructor.

Business (BUS)

BUS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BUS>)

Courses

BUS 101 Professional Responsibility and Business credit: 3 Hours.

Introduces business students to professional responsibility. Develops the concept of professional responsibility within a personal and interpersonal context. Continues by expanding the concept to encompass the firm and explore the global corporate context. Introduces business majors and career paths and provides an understanding of ethical decision-making. Encourages the development of a professional identity and skills, preparing students to represent the College and the University with integrity and confidence in their careers. Prerequisite: First Semester Freshman, Intercollegiate and Off-Campus Transfer Students.

BUS 120 Business Honors Seminar credit: 2 Hours.

Introduction to business and an overview of the role of the College of Business and the University of Illinois in providing opportunities for undergraduates to prepare to become business leaders. Introduction to the College of Business Honors Program, a leadership program for approximately 40 incoming freshmen in the College of Business. Students will begin to work as a team to use leadership in service to all undergraduates in the College of Business. Approved for both letter and S/U grading. Prerequisite: Membership in freshman class of College of Business Honors Program.

BUS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

BUS 299 BUS Internship credit: 0 Hours.

Accommodates students who must be registered for a course at the University while completing an internship, either because the internship is unpaid and the company requires registration, or because of visa requirements. Only internships in the College of Business will be considered. Approved for S/U grading only.

BUS 302 Principles Prof Responsibility credit: 3 Hours.

Examines in depth a number of the multi-dimensional attributes required to advance understanding of professional responsibility in the context of an ever-changing business environment, focusing on principles for addressing dilemmas that regularly arise in professional life in the work of business. Explores connections between academic integrity while in school and professional responsibility in later work life. Builds on BUS 101 and provides a breadth and depth of that body of knowledge that will enable highly successful students in BUS 302 to be considered for the role of section leaders in BUS 101. Aspiring section leaders in BUS 101 must have excelled in BUS to be considered for the position. Prerequisite: BUS 101; by application and interview.

BUS 399 Business Study Abroad credit: 0 to 18 Hours.

Upon prior written approval of the College of Business' Office of Undergraduate Affairs, a student may earn up to 18 credit hours per term undertaking a study and/or research project in international business at accredited foreign institutions or approved overseas programs. Final determination of appropriate credit will be made upon completion of the work done abroad. While absent from the Urbana-Champaign campus, the student must continue to pay all fees required by the University of Illinois to retain continuity of enrollment and to allow the time spent away from this campus to count toward residency. Approved for both letter and S/U grading. Maximum of 18 hours per term and 36 hours total. Prerequisite: One academic year (or one semester in the case of transfer students) in residence at UIUC, good academic standing, completion of at least thirty semester hours toward the bachelor's degree, and prior approval of course work by the College of Business' Office of Undergraduate Affairs. Some programs have additional requirements.

Business Administration (BADM)

BADM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BADM>)

Courses

BADM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

BADM 205 Business Location Decisions credit: 3 Hours.

Same as GEOG 205. See GEOG 205.

BADM 261 Technology & Mgmt Seminar credit: 1 Hour.

Current topics in technology and management presented by senior executives from a wide range of industries. Executives discuss challenges they confront and approaches taken in execution of their respective businesses. Format encourages dialogue and discussions between executives and students. Same as ENG 261. Credit is not given toward technical electives in the College of Engineering nor business electives in the College of Business, nor toward the T&M Minor.

BADM 300 The Legal Environment of Bus credit: 3 Hours.

Introduction to law and the legal system, litigation, contracts, business organizations, intellectual property, employment law and governmental regulation of business.

BADM 301 Summary of Business Law credit: 3 Hours.

Basic principles of the private law of business including the law of contracts, agency, and business organizations; a brief introduction to the law of sales, negotiable instruments, security devices, and property. Credit is not given for both BADM 301 and BADM 403. Course is not open to students in the College of Business.

BADM 303 Principles of Public Policy credit: 3 Hours.

Same as ACCY 321, ACE 321, and PS 321. See PS 321.

BADM 310 Mgmt and Organizational Beh credit: 3 Hours.

General analysis of management and organizational behavior from a systems point of view, including classical organizational theory and management, organizational behavior, and management science; environmental forces; planning, organizing, and control processes; motivation, incentives, leadership, communication, and interpersonal relations; and discussion of production and decision-making and mathematical models.

BADM 311 Individual Behavior in Orgs credit: 3 Hours.

Understanding the behavior of employees in work organizations; particular attention to the motivation of individuals to join and perform in organizations and to employee satisfaction with elements of the work environment; and emphasis on various management strategies to modify employee motivation and satisfaction. Prerequisite: BADM 310.

BADM 312 Org Design and Environment credit: 3 Hours.

Understanding of complex organizations; particular attention to ways of dividing work, achieving coordination, and issues connected with change and adaptation. Prerequisite: BADM 310.

BADM 313 Human Resource Management credit: 3 Hours.

Studies concepts and methods used by the staff personnel unit in building and maintaining an effective work force in an industrial organization; development of ability to design the personnel subsystem within the firm and to deal effectively with problems encountered in such areas as recruitment, selection, training, and wage and salary administration; and considerable emphasis on case analysis, role playing, and research. Credit is not given for both BADM 313 and PSYC 245. Prerequisite: BADM 310.

BADM 314 Leading Negotiations credit: 3 Hours.

Aims to advance students' ability to negotiate formal and informal business agreements and resolve conflicts effectively. Because leaders depend on others to accomplish goals, leaders need to be skilled negotiators to generate solution that are acceptable, valuable, and able to be implemented. Students will engage in a series of negotiations that provide practice and impart a framework for planning for, conducting, and analyzing negotiations. Restricted to College of Business students and Business Minor students. Restricted to students with Junior or Senior class standing.

BADM 320 Principles of Marketing credit: 3 Hours.

Emphasizes the concepts of planning, organization, control, and decision making as they are applied in the management of the marketing function. Provides an overview of aspects of the marketing discipline.

BADM 321 Principles of Retailing credit: 3 Hours.

Gives a general analysis of the structure of retailing emphasizing the retailing environment and operating efficiencies; includes patronage behavior, merchandise control, pricing, promotion, location, and vendor relations; and gives special attention to emerging trends in retailing. Prerequisite: BADM 320.

BADM 322 Marketing Research credit: 3 Hours.

Focuses on the techniques and methods of marketing research; emphasizes primarily survey research and experimental design; and offers students the opportunity to apply techniques to real-world situations. Prerequisite: BADM 320 and ECON 202.

BADM 323 Marketing Communications credit: 3 Hours.

Introduces the student to the topic of marketing communications and promotion management. Topics covered include: advertising, sales promotion, point-of-purchase communications, interactive marketing, and event sponsorships. Prerequisite: BADM 320.

BADM 324 Purchasing and Supply Mgmt credit: 3 Hours.

Examines the analysis, planning, and forms of organization that are associated with the buying functions in business. Major focus on the principal issues involved in the procurement of raw materials, components, equipment, operating supplies, and services. Also treats the unique aspects of institutional and government purchasing. Case problems constitute a major vehicle of instruction. Prerequisite: Credit or concurrent enrollment in BADM 320.

BADM 325 Consumer Behavior credit: 3 Hours.

Studies the factors affecting customer behavior in household and organizational markets and their relevance for marketing management planning and analysis; provides an overview of explanations of consumption differences anchored in socioeconomic, demographic, cultural, and psychological processes; and surveys buyer decision-making processes and their implications for marketing strategy. Prerequisite: BADM 320.

BADM 326 Pricing Policies credit: 3 Hours.

The role of pricing in contemporary marketing and major pricing decisions facing the firm; theoretical, economic, and practical methods and models for setting prices; pricing new products, initiating price changes, and responding to competitive pricing; the relationship of pricing objectives and strategies to the goals of the firm; and sealed bidding for contracts. Prerequisite: BADM 320.

BADM 327 Marketing to Business and Govt credit: 3 Hours.

Introduces the general area of industrial marketing; examines the nature of industrial markets especially as they compare to consumer markets and emphasizes such factors as the demand for industrial goods, marketing intelligence systems for industrial firms, marketing strategy in industrial markets, and analyses and control of industrial marketing programs; integrates important concepts from sales management and business logistics throughout the course; uses case studies. Prerequisite: BADM 320.

BADM 328 Business-to-Business Selling credit: 3 Hours.

Introduces the use of persuasive personal communication in attracting and retaining customers. Uses experiential learning exercises to address principles and techniques of personal selling and the administration of the selling function as it relates to the development of marketing strategy and the achievement of corporate objectives. Prerequisite: Junior standing.

BADM 329 New Product Development credit: 3 Hours.

Exposes student to business and marketing decisions in the context of new product development and marketing. Helps students learn how to use state-of-the-art management techniques to identify markets, develop new product ideas, measure customer benefits, and design profitable new products. Prerequisite: BADM 320.

BADM 332 Sustainable Product Design & Marketing Plans I: Bottom-Up Immersion in Subsistence Marketplaces credit: 4 Hours.

Focuses on sustainable product design and enterprise plan development; uses extreme resource constrained contexts, i.e., subsistence marketplaces, to learn about bottom-up immersion and design for any context; virtual immersion in subsistence contexts; emersion of principles for business, design, and engineering; idea generation and evaluation by groups of business, engineering, design and other students; optional international field trips. Prerequisite: Application process. Junior or senior class standing.

BADM 333 Sustainable Product Design & Marketing Plans II: Bottom-Up Enterprise & Marketing Innovation credit: 4 Hours.

Focuses on sustainable product design and marketing plan development; uses extreme resource constrained contexts, subsistence marketplaces, to learn about bottom-up enterprise and innovation for any context; project based course focusing on systematic approach for designing sustainable products and developing enterprise plans; covers concept generation and evaluation, detailed design, cost modeling, market-testing & prototyping, product innovation, and sustainable enterprise plan development for subsistence marketplaces or upward innovation for advanced economies. Prerequisite: BADM 332 or instructor approval. Junior or senior class standing.

BADM 334 Sustainable Marketing Enterprises credit: 3 Hours.

Understanding of the relationship between sustainable marketing/business practices, societal welfare and ecological systems; topics covered including sustainability in the areas of consumption and consumer behavior, product design, marketing research, value chains and communications; project to apply marketing and business concepts toward a business plan for organizations that captures economic, environmental and social sustainability. Prerequisite: Junior or Senior Class Standing.

BADM 335 Supply Chain Management Basics credit: 3 Hours.

Course broadly exposes students to the basics of supply chain management. It concentrates on the basic concepts, terminology, techniques and tools in supply chain management. Introduces the main functions of supply chain management and its interface with marketing, finance, and information management. Studies the interactions among the logistics of manufacturing, inventory, and transportation. Students are introduced to mathematical modeling and computer simulations to optimize the performance of supply chains.

BADM 336 Modeling the Supply Chain credit: 3 Hours.

Course introduces students to supply chain modeling. It covers optimization and simulation modeling, value stream mapping, and the SCOR model for representation of supply chains. Models for strategic and tactical decision-making in supply chain design and operations will be considered. Presents examples of supply chain modeling in practice and integration of supply chain models with other business functions. Prerequisite: BADM 335.

BADM 337 Practicum in Supply Chain Mgt credit: 3 Hours.

This is the capstone course for the Supply Chain Management major. Students are required to work in teams to solve real-world supply chain management problems using the tools and techniques learned from their other classes. Students are required to present their progress and final reports to both the faculty and company sponsors. Also covers some basic elements of project management and a large case study.

BADM 340 Ethical Dilemmas of Business credit: 3 Hours.

Examines business decision making and the role ethics plays in that process. Analysis of how managers behave and whether ethical choices are knowingly made or only realized thereafter. The object is to increase awareness of the moral dimension of business activity.

BADM 350 IT for Networked Organizations credit: 3 Hours.

Examines the information technology and its impact on modern organizations. Topics include: (1) IT, Internet Technologies, E-Commerce and business models, (2) organizing and modeling enterprise data, (3) Network protocol and architecture, (4) development of IT systems, and (5) IT management and organization design.

BADM 351 E-Business Management credit: 3 Hours.

Designed to provide current perspective about enterprise IT-applications and the management issues that such applications entail. Emphasis is on current developments that will be explored with lectures, case studies, and hands-on applications. The course builds on BADM 350. May be repeated in subsequent terms. Prerequisite: BADM 350.

BADM 352 Database Design and Management credit: 3 Hours.

Introduce the modern concepts, techniques and management practices when dealing with data and use of data in organizations. Topics include data modeling, database logical and physical designs, implementation, database administration and web-based database environment. Students will be involved in constructing a database and researching an advanced topic to solidify the learning. Same as ACCY 352.

BADM 353 Info Sys Analysis and Design credit: 3 Hours.

Methodologies and techniques used and deliverables created in developing large-scale information systems, including preliminary planning, feasibility analysis, design implementation, and post-implementation review of the system; a term-long project which familiarizes students with methodology and techniques is required. Same as ACCY 353. Prerequisite: BADM 350.

BADM 354 Mgmt of Data Communications credit: 3 Hours.

Course stresses a top-down, business oriented approach to evaluating and selecting data communications technology. Students who successfully complete this course gain practical knowledge of network telecommunications technology including hardware and software. They learn enough to allow them to help design systems that include network components. Prerequisite: BADM 350.

BADM 355 Enterprise Software Management credit: 3 Hours.

Almost every professional who works in a field related to Information Technology requires an understanding of how enterprise projects and IT projects, in general, should be managed. Provides fundamental managerial skills for students who will work on IT projects. Covers different kinds of enterprise software applications - Enterprise Resource Planning Systems, Customer Relationship management systems and supply chain management IT systems. Students will get hands-on understanding through a term project and project-management software. Discusses approaches to estimate and manage costs, schedules and resources. Students get an understanding of real-world challenges through case studies throughout the course. May be repeated in subsequent terms. Prerequisite: BADM 350.

BADM 365 New Product Marketing credit: 3 Hours.

Exposes engineering students to the discipline of marketing and to business decision-making in the unique context of new product marketing decisions. Credit is not given for both BADM 365 and BADM 320.

BADM 366 Product Design and Development credit: 3 Hours.

Presents an overview of the product development process from concept generation to design manufacturing and project management. There is an emphasis on product definition, early concept development, visual reasoning and engineering graphics. Students work in cross disciplinary teams working through product development projects. Same as TMGT 366. Prerequisite: Admission to the Technology and Management Program.

BADM 367 Mgmt of Innov and Technology credit: 3 Hours.

Course is the first jointly taken course for the engineering and business college undergraduates in the Technology and Management program. It focuses on the strategic management of technology and innovation in organizations. It builds primarily on broad models of technological evolution and organizational change. Same as TMGT 367. Prerequisite: Admission to the Technology and Management program.

BADM 374 Management Decision Models credit: 3 Hours.

Introduction to methods of operations research from an executive or managerial viewpoint, emphasizing formulation of business problems in quantitative terms; industrial applications of linear programming, dynamic programming, game theory, probability theory, queuing theory, and inventory theory. Prerequisite: ECON 203.

BADM 375 Business Process Management credit: 3 Hours.

Explores methods of design and management of manufacturing and service business processes; central concepts include managing process-speed, -capacity, -inventory, and -uncertainty; additional topics include simultaneous product and process design, and an introduction to quality management, process improvement and lean thinking.

BADM 376 Enterprise Proc Integr & Dynm credit: 3 Hours.

Enterprise-level study of a business that focuses on the integration and management of many interrelated processes. The focus is on linkages between these business processes and the management of these linkages in a dynamic business environment. Prerequisite: BADM 375.

BADM 377 Project Management credit: 3 Hours.

In-depth treatment of management concepts, tools, and techniques that apply to the organization, planning, and control of projects; particular emphasis on analyzing needs, defining work, scheduling tasks, allocating resources; assessing costs, managing risks; tracking and evaluating performance; and building and leading teams.

BADM 378 Logistics Management credit: 3 Hours.

Treats the total flow of materials from their acquisition as basic or unprocessed supplies to delivery of the finished product, as well as the related counter-flows of information that both record and control material movement. Major topics include forecasting material requirements; transportation planning; order processing system; raw material, in-process and finished goods inventory management; packaging; in plant and field warehousing; location theory (space, time, and cost trade-offs); communications; and control.

BADM 379 Business Process Improvement credit: 3 Hours.

The survival and growth of any organization requires the continuous improvement of its processes. This course focuses on philosophies and tools for enhancing customer-defined value created through processes. Contemporary process improvement programs are emphasized along with conventional ideas - topics include Statistical Quality Control, Value Stream Mapping, Total Quality Management, and Six Sigma.

BADM 380 International Business credit: 3 Hours.

Introduces the field of international business and management. Examines the economic, political, and legal environments of international business. Analyzes differences in financial management, marketing, and management practices for firms doing business abroad.

BADM 381 Multinational Management credit: 3 Hours.

Examines critical issues facing managers who work in multinational firms. Designed to develop students' skills for working in a global business environment. Topics include foreign market entry strategies, global management of the functional areas of business, and management and control of multinational firms in the global marketplace.

BADM 382 International Marketing credit: 3 Hours.

Analyzes marketing strategy across national boundaries, the problems of marketing within foreign countries, and the coordination of global marketing programs. Includes problems faced by the exporter, licensor, joint venture, and multinational firm. The full range of market activities are discussed from a global perspective. Prerequisite: BADM 320.

BADM 394 Senior Research I credit: 2 to 4 Hours.

Research and readings course for students majoring in business administration. May be taken by students in the college honors program in partial fulfillment of the honors requirements. May be repeated in the same or separate terms for unlimited undergraduate hours. Not applicable to graduate or professional hours.

BADM 395 Senior Research II credit: 1 to 4 Hours.

Research and readings course for students majoring in business administration. May be taken by students in the college honors program in partial fulfillment of the honors requirements. Additional fees may apply. See Class Schedule. May be repeated in the same or separate term for unlimited undergraduate hours. Not applicable to graduate or professional hours.

BADM 403 Corporate & Commercial Law credit: 4 Hours.

Advanced discussion of corporate and commercial law, including topics tested on the CPA exam: agency, contracts, debtor-creditor relationships, governmental regulation of business and business organizations. 4 undergraduate hours. 4 graduate hours.

BADM 420 Advanced Marketing Management credit: 3 Hours.

Integrative study of methods and models for marketing decision-making; emphasizes the application of analytical tools and behavioral and quantitative models to marketing decision-making. Uses lectures, case studies and simulation exercises. 3 undergraduate hours. No graduate credit. Prerequisite: BADM 320.

BADM 436 Intl Business Immersion credit: 4 Hours.

Same as ACE 436. See ACE 436.

BADM 438 Agri-food Strategic Management credit: 3 Hours.

Same as ACE 431. See ACE 431.

BADM 440 Business Applications of GIS credit: 3 or 4 Hours.

Same as GEOG 440. See GEOG 440.

BADM 445 Small Business Consulting credit: 4 Hours.

Through guided experience, students identify and offer advice to local small business firms; exposes students, serving as consultants, to the wide variety of problems facing the smaller firm as well as enables them to apply current business methods to real problems. Students work in teams. 4 undergraduate hours. 4 graduate hours.

BADM 446 Entrepreneurship Sm Bus Form credit: 4 Hours.

Studies entrepreneurship for those with a serious interest in owning their own business within five years of graduation; students prepare a comprehensive business plan for starting or acquiring such a business; also studies the problems of an existing small business. 4 undergraduate hours. 4 graduate hours.

BADM 447 Legal Strat for Entrep Firm credit: 4 Hours.

Addresses the legal and managerial strategies important to the emerging firm, with particular focus on defensive legal strategies in the context of entrepreneurship. From the entrepreneur's perspective, examines the law of partnerships, sole proprietorships, corporations, joint ventures, agency, and defensive strategies to thwart takeovers. 4 undergraduate hours. 4 graduate hours.

BADM 449 Business Policy and Strategy credit: 3 Hours.

Analysis of policy formulation and implementation from a company-wide standpoint; emphasis on integration of knowledge and approaches across functional areas; both endogenous and exogenous factors which affect company policies; and the role of the firm in society. 3 undergraduate hours. No graduate credit.

BADM 451 E-com Apps & Web-based Systems credit: 3 or 4 Hours.

Provides students with technical skills for building web-based e-commerce applications using the Microsoft.NET framework as well as knowledge of web services. Topics include: ActiveServerPages.NET (ASP.NET), VisualBasic.NET (VB.NET), XML, web services, the Microsoft.NET framework. 3 undergraduate hours. 4 graduate hours. Prerequisite: BADM 350.

BADM 453 Decision Support Systems credit: 3 Hours.

This advanced course examines recent developments in information technology for managerial decision support with an emphasis on Internet-based and mobile information technologies. Real-world cases will be used to discuss the application of these technologies to management information systems. 3 undergraduate hours. No graduate credit.

BADM 454 Enterprise Computing Mgmt credit: 3 Hours.

Aims to prepare students with programming skills for building and managing enterprise applications. Java is used as the language for implementation. C and C++ are also introduced briefly. General principles of computing are emphasized over specific languages. 3 undergraduate hours. No graduate hours. Prerequisite: BADM 350.

BADM 458 IT Governance credit: 3 or 4 Hours.

Provides students with a core body of knowledge concerning the state of development, research and business practice of IT governance on topics such as: managerial issues for the prevention of business frauds and threats; the key technology for IT governance for users and businesses; issues concerning integrity control, privacy, ethics, risk management, and reliability; best practices concerning regulatory compliance requirements; and enterprise information management issues, policies and practices. 3 undergraduate hours. 4 graduate hours. Prerequisite: BADM 350.

BADM 460 Business Process Modeling credit: 3 Hours.

Introduces the identification and analysis of various aspects of business processes. The course defines business processes and provides tools for designing and analyzing them. Same as TMGT 460. 3 undergraduate hours. No graduate credit. Prerequisite: BADM 367.

BADM 461 Tech, Eng, & Mgt Final Project credit: 2 Hours.

Course is the capstone interdisciplinary new product development project course for the Technology & Management Program. Students work in cross-functional teams (joint business and engineering teams) to solve new product development project problems provided by client firms. Because the client firms differ each year, so do the problems. Same as TMGT 461. 2 undergraduate hours. No graduate credit. May be repeated up to 4 hours. Prerequisite: BADM 366, BADM 367, BADM 460.

BADM 501 Introduction to Business credit: 4 Hours.

This course is designed to give students a broad-based introduction into managing businesses as a gateway to the rest of the specialized master's degree curriculum. 4 graduate hours. No professional credit.

BADM 503 Classics in Business Admin credit: 2 Hours.

Graduate seminar. Presents foundational literature to introduce the theoretical origins of the different areas of Business Administration and explores the linkages among these areas. Outlines the impact of the foundational works on subsequent research. Approved for S/U grading only. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 504 Phil of Science and Bus Admin credit: 2 Hours.

Introduction to philosophy of science that focuses on the nature of discovering and justifying knowledge in the business disciplines. Specific issues of interest are the nature of scientific truth, validation of theories, prediction and explanation. Discusses applications to research in various business disciplines. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 505 Stat Analysis w/Business App credit: 4 Hours.

This topics course introduces the student to the theory and applications of probability (deduction), statistics (inference) and data analysis (linear models) that are relevant for the conduct of research in Business Administration. May be repeated to a maximum of 8 hours. Students may take each section (A and B) once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 507 Emp. Res. Methods in Bus. Adm. credit: 4 Hours.

Research methodology for the study of administrative, industrial, and consumer behavior and organizations; Foundations of measurement - Construct definition, Domain delineation, Reliability, Dimensionality, and Validity, Reliability analysis, Exploratory and Confirmatory factor analysis; Alternative methods of data collection - laboratory experimentation, survey research design, and qualitative research. A completed individual research project involving the development of an entire method is formally presented in class and submitted as a paper. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 508 Leadership and Teams credit: 2 or 4 Hours.

Develops and integrates fundamental behavioral concepts and theory having administrative applications; initially focuses on the individual decision maker and ultimately includes interpersonal, organizational, and social structures and influences; and develops strategies and methods of research on behavioral applications in business.

BADM 509 Managing Organizations credit: 2 or 4 Hours.

Examines and analyzes the organization as a social system and the impact of its various components on work attitudes and behavior; topics include the development of organizational structures, organizational effectiveness, decision making and policy formulation, leadership, and change.

BADM 510 Founds of Organizational Behav credit: 4 Hours.

Introduction to the principal theories and important empirical research in various disciplines that study organizations; in addition to examination of the subject matter content of various disciplines, students critically examine the capacities and limitations of the various fields to make contributions to the study of organizations. Same as PS 514, PSYC 553, and SOC 575. Prerequisite: Enrollment as a major in organizational sciences in a cooperating program or consent of instructor.

BADM 511 Topics in Personnel Mgmt credit: 4 Hours.

Examines the organization and administration of the personnel function in management; the relations of personnel administration to operating departments and the scope of business and industrial personnel services; analytical appraisal of policies and practices in selected areas of personnel administration, such as selection and training, carried out through case studies and direct industrial contracts; and specific consideration given to problems up to and including placing the person on a job. Same as LER 548. Prerequisite: Consent of instructor.

BADM 512 HR Management and Strategy credit: 4 Hours.

Same as LER 565. See LER 565.

BADM 513 Communication Strategy in Bus credit: 2 Hours.

Offers an introduction to communication, business presentation, and essential interpersonal skills, including message clarity, attentive listening, and constructive feedback for more effective cooperation, conflict management, teamwork and productivity. Covers communication concepts and skills that help heighten emotional intelligence and offer strategies for communicating effectively across cultural, generational and gender lines. 2 graduate hours. No professional credit. Prerequisite: For MSM majors only.

BADM 514 Managing Innovation credit: 2 Hours.

Provides a solid grounding to students interested in managing various aspects of the innovation process that facilitate the creation, synthesis, and organization of knowledge for the development of economically valued products, processes, and services within organizations. Covers both the analytic frameworks for understanding the innovation process as well as the strategic and organizational challenges involved in managing technological innovation. Specifically focuses on managerial actions that create the organizational environment in which new opportunities are identified and new business models are developed to create value. Prerequisite: BADM 508 or consent of the instructor.

BADM 515 Oral Comm for Business credit: 4 Hours.

This class builds communication skills for the English language business environment for international students. It includes work on pronunciation deficits, but also units on broader communication topics, including social interaction skills, appropriate business language, interviewing, and presentations. The class incorporates workshops on specific scenarios such as making a sales pitch, delivering an annual report, handling the press, presenting a case study, communicating during a crisis, and communicating in specific contexts such as within technology, entrepreneur or venture capital fairs. 4 graduate hours. No professional credit. Prerequisite: MSTM students.

BADM 518 Adv Topics in Org Behavior credit: 2 Hours.

Review and analysis of major organization theory topics stressing the sociological, economic and managerial foundations or macro organizational behavior. Topics include: the role of the social and economic environment on the functions, evolution and transformation of individual organizations; and inter-organizational relations, the ecology of organizations and institutional factors that shape organization action. May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 519 Adv Topics in Org Theory credit: 4 Hours.

Seminar in topics of organizational behavior and organizational theory. Topics include: Seminar in Organizational Behavior (explores the most recent research in the field of Organizational Behavior); and Seminar in Organizational Theory (explores the most recent research in the field of Organizational Theory). May be repeated in the same or separate terms to a maximum of 8 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 520 Marketing Management credit: 2 or 4 Hours.

Introduces concepts useful in understanding marketing systems and buyer behavior in addition to developing skills in making marketing decisions; the orientation is primarily managerial and uses examples from both business and non-business contexts.

BADM 521 Marketing Strategy credit: 4 Hours.

Formal analysis of strategy drawing on concepts from the theory of games, decision theory, value theory, and information theory; topics cover elements of game models, classes of decision problems, games against nature, modern utility theory, information theory, group decision making, statistical decision theory, and linear and nonlinear optimization.

BADM 522 Marketing Models credit: 4 Hours.

Concepts, methods, and applications of decision modeling to marketing issues including segmentation, targeting and positioning, new product design and development, advertising, sales force and promotion planning, and sales forecasting. Assists students to build "smart" spreadsheets to improve marketing decisions.

BADM 523 Consumer Behavior credit: 4 Hours.

Studies alternative models of buyer behavior; focuses attention on psychological, sociological, and economic factors including motivation, learning, attitudes, personality, reference groups, social stratification, demographics, life-styles, and cross-cultural differences and their impact on purchasing, consumption, and choice decisions.

BADM 524 Pricing Strategy and Tactics credit: 4 Hours.

Develops concepts and techniques for formulating and administering prices in a variety of business situations. Focuses on understanding the internal and external environment through relevant information acquisition and analysis for developing appropriate pricing strategies and tactics.

BADM 525 New Product Development credit: 2 or 4 Hours.

The decisions on the firm's total market offer, including such topics as use of market analysis in making decisions on assortment, product development, pricing, packaging, branding, and sales forecasting; coordination of these decisions and actions with market communications, physical movement, production, finance, and the overall goals and policies of the firm; and emphasizes the use of analytic and research methods in making assortment and product decisions.

BADM 526 Marketing to Organizations credit: 4 Hours.

Case and discussion-based course that focuses on how firms that are engaged in marketing to organizations. Examines how to identify competitive marketing advantages, assess market needs, and leverage or sustain these advantages.

BADM 527 Sales Force Management credit: 4 Hours.

Examines primary elements and problems in the area of sales force management; studies such topics as the dyadic interaction between the buyer and seller, the sales presentation, important salesperson characteristics, the selection, training, assignment, motivation, and compensation of salespeople, supervision and evaluation of the sales force, and coordination of the sales force with other elements in a firm's marketing program. Uses case studies.

BADM 528 Promotional Strategy credit: 4 Hours.

Management orientation to promotional strategy for the medium and large size organization: includes analyses of the primary elements of the promotional function from both qualitative and quantitative perspectives emphasizing such factors as (1) selection among alternative promotional tools, (2) the promotional budgeting and allocation process, and (3) determination of appropriate messages and media schedules for given product/market situations. Explores widely used models in depth for strategic usefulness; emphasizes case analysis and contemporary situations.

BADM 529 Marketing Research credit: 4 Hours.

Examines the collection and analysis of information applied to marketing decisions; stresses quantitative methods including samplings, scalings, experimental design, forecasting, and multivariate procedures through the use of class projects on actual market research problems.

BADM 531 Survey Methods in Mkt Res credit: 4 Hours.

Analysis of survey methods in marketing with emphasis on sample design, data collection, and data processing; an advanced course in the methods required to design, implement, and evaluate a research project. Same as SOC 576.

BADM 532 Sustainable Product Design & Enterprise Plan Development - I: Bottom-Up Immersion & Design credit: 4 Hours.

Focuses on sustainable product design and enterprise plan development; uses extreme resource constrained contexts to learn about bottom-up immersion and design for any context; virtual immersion in subsistence contexts; emersion of principles for business, design, and engineering; idea generation and evaluation by groups of business, engineering, design and other students; optional international field trips. 4 graduate hours. No professional credit. Prerequisite: Application process.

BADM 533 Sustainable Product Design & Enterprise Plan Development - II: Bottom-Up Enterprise & Innovation credit: 4 Hours.

Focuses on sustainable product design and enterprise plan development; uses extreme resource constrained contexts to learn about bottom-up enterprise and innovation for any context; project based course focusing on systematic approach for designing sustainable products and developing enterprise plans; covers concept generation and evaluation, detailed design, cost modeling, market-testing & prototyping, product innovation, and sustainable enterprise plan development for subsistence marketplaces or upward innovation for advanced economies. 4 graduate hours. No professional credit. Prerequisite: BADM 532 or instructor approval.

BADM 534 Marketing Theory and Systems credit: 2 Hours.

Detailed review of approaches to marketing theory. Specific emphasis on understanding the development of marketing theory and current trends in marketing thought. By a comprehensive review of selected literature, the student will be prepared to interpret and conduct research in marketing. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 535 Global Business credit: 2 Hours.

This course provides students with a clear conceptual understanding of the opportunities and challenges involved with international business transactions. Young managers face a diverse set of circumstances when they engage in cross-border business (trade and foreign direct investment) as opposed to purely domestic business: e.g., enhanced globalization forces, cross-national heterogeneity in institutions and cultures, increased competition from emerging economies, and - particularly germane for this course - altered strategic economic incentives. Accordingly, we will attempt to analyze these issues, make sense of the fundamental forces behind these dynamics, and understand their managerial implications. The class will focus then on the roots of International Business, and complement this focus with important practical implications and 'real-world' examples and cases - the ambition will always be to wed good theory with practice. 2 graduate hours. No professional credit. Prerequisite: MSM student or consent of instructor.

BADM 537 Advanced Topics in Marketing credit: 4 Hours.

Seminar on topics associated with the development of marketing theory. Topics may vary from year to year, and include classics in marketing exchange, development, and thought as well as current research frontiers involving product usage, market definition, data base modeling, and pricing. May be repeated to a maximum of 8 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 538 Res Sem in Consumer Behavior credit: 4 Hours.

Advanced doctoral level seminar which critically examines the relevance of behavioral and social constructs for generating consumer behavior theories. It specifically discusses the need for, and procedures with which to modify behavioral/social processes. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 539 Math Models in Marketing credit: 4 Hours.

Seminar in model building as a tool for research in marketing. Application of the mathematics of optimization, dynamics, linear algebra and games to marketing topics including consumer choice, retailing, price promotions, advertising, personal selling, positioning, new product diffusion. Research project using marketing models required. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 540 Frontiers in Technology credit: 0 or 1 Hours.

This course provides the opportunity to listen to, discuss, and present on ideas and technologies which are expected to affect our lives in the near future. Activities include seminars and professional development activities, corporate visits, and presentations by researchers who work on the cutting edge of technology. 0 or 1 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 2 credit hours. Prerequisite: MSTM students.

BADM 542 Competitive Analysis credit: 4 Hours.

Develops concepts and techniques critical for formulating competitive strategy in a variety of business environments. Focuses on analyzing the structure of industries, the evolution of this structure, the pattern of interaction among competitors, and the competitive position and advantage of firms in the industry.

BADM 543 Technology Strategy credit: 2 or 4 Hours.

Technological change is a fundamental challenge and opportunity for business leaders in the modern economy. This course deals with concepts and analytical frameworks for strategizing and managing in an environment of technological upheaval and constant innovation. Broadly, students are exposed to ideas about how firms create value through new technologies, and how they in turn capture some of that value to make profits. Specific topics include sources and patterns of innovation, business models, first mover advantages, barriers to imitation, technology commercialization modes, network effects and standards competition, creative destruction and technological disruption, alliances and collaboration, and strategic renewal. The course aims to impart the strategic toolkits and skills required to manage dynamic technology-intensive businesses. 2 or 4 graduate hours. No professional credit.

BADM 544 Strategic Management credit: 2 or 4 Hours.

Policy construction and planning of policy implementation at the executive level; case studies of company-wide situations from the management point of view; and integration and application of material from previous courses. Credit is not given for both BADM 544 and BADM 339. Prerequisite: BADM 509, BADM 520, and BADM 567, FIN 520, or equivalent.

BADM 545 Found of Strategy Research credit: 2 Hours.

Seminars on topics in the development of strategic management theory. Topics include: Classics in Strategic Management (explores the historical development of the foundational literature of strategic management); and Theory Development and Assessment in Strategic Management (focuses on the process of conducting and critiquing research in the field). May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 546 Strategy Content Research credit: 2 Hours.

Seminar covering the foundations of strategy content and formulation research. Topics include: Economic Theories in Strategic Management (including strategic management applications of industrial organization economics); and Economic Approaches to Strategic Management Research (including transaction costs, resource-based and property rights research). May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 547 Strategy Process Research credit: 2 Hours.

Seminar on research into strategy formulation and implementation processes. Topics include: Behavioral Theories in Strategic Management (theoretical and empirical research on complex organizations and their environments); and Behavioral Approaches to Strategic Management Research (behavioral research into strategy formulation and implementation processes). May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 548 Corp & Comp Strategy Research credit: 2 Hours.

Research seminars on topics in firm-level and business-level strategy. Topics include: Corporate Strategy (explores issues associated with the scope of the firm, corporate governance and value creation), and Competitive Strategy (focuses on strategic positioning, timing, competitive advantage and sustainability). May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 549 Current Strategy Research credit: 2 Hours.

Seminar on current theoretical and empirical research relating to emerging areas of knowledge in the strategic management field. Reflecting the emphasis of current research on strategic and organizational phenomena, topics vary from year to year. May be repeated in the same or separate terms to a maximum of 4 hours. Students may take multiple topics under the course designation, but can only take each topic once for credit towards degree requirements. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 550 Technology Practicum credit: 0 to 4 Hours.

This class provides a unique opportunity to apply student's classroom knowledge, their skills and experiences in a real world setting. Each student should expect the experience to be as close to working in a business environment as the academic environment allows. Each team of students will work in a collaborative relationship with real businesses and organizations to solve real problems by developing implementable solutions. The instructor's expectation is that each student will provide professional quality work. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 4 credit hours. Prerequisite: MSTM students.

BADM 551 Managing Intellectual Property credit: 2 Hours.

Knowledge assets - technologies, knowhow, creative works, reputations, talent, and customer relationships - are critical drivers of business today. Intellectual property (IP) of various types (patents, copyrights, trade secrets, trademarks, etc.) can confer valuable rights over these knowledge assets, which makes intellectual property strategy a vital skill in the modern manager's professional toolkit. This course provides an introduction to different IP types and an in-depth exploration of the strategic issues entailed in using (obtained, licensing and enforcing) IP rights in business. It examines how IP strategies can be used to support the company's overall strategy, and how the two can be better aligned. The end goal is to develop the business manager's vocabulary, understanding, and strategic thinking in dealing with intellectual property as tools for competitive business success. 2 graduate hours. No professional credit.

BADM 552 Legal Aspects of Mgt Decisions credit: 4 Hours.

The legal environment in which business decisions are made, including the legal system and the role of courts, government taxation and regulation of business, administrative law, antitrust law, labor law, and trends in the law affecting business policy.

BADM 553 Ethical Dilemmas in Business credit: 4 Hours.

Examines business decision making and the role ethics plays in that process. Analysis of how managers behave and whether ethical choices are knowingly made or only realized thereafter.

BADM 554 Enterprise Database Management credit: 4 Hours.

Databases are important because they play a critical role in today's business environment. Almost all modern organizations use database technologies to store and manage data in every functional area of business including its operations, finance, accounting, and marketing. By understanding data modeling and being able to query databases, you possess one of the most marketable skills to help a business better manage their data and discover new opportunities through better analytics. At the end of this course you will be able to (a) Understand and help articulate the data needs of the company (requirement analysis), (b) Conceptually model the relationship of the data (data modeling), (c) Query databases to meet business requirements, (d) Understand the principles of design of data warehouses, (e) Understand the alternatives to relational databases (no SQL) with reference to storing Big Data, and (f) Explain the benefits of distributed databases 4 graduate hours. No professional credit. Credit is not given for both BADM 554 and BADM 352.

BADM 555 Info Sys Development and Mgt credit: 4 Hours.

Addresses issues relevant to the development of large-scale information systems including systems concepts and thinking, systems development life cycle, objectives, methodology and deliverables in each phase, behavioral implications of systems development and integration information systems with business processes. Credit is not given for both BADM 555 and BADM 353.

BADM 556 Electronic Commerce credit: 4 Hours.

Graduate seminar in Electronic Commerce (EC), focusing on the integration of IT and business models. Topics include: (1) business-to-consumer EC; (2) business-to-business EC; (3) enterprise information management; (4) infrastructure development; (5) knowledge management; and (6) EC strategy.

BADM 557 Dec Support and Knowledge Mgt credit: 4 Hours.

This graduate level course examines emerging information technologies, in particular based on the Internet and mobile applications, to support management decisions. This course combines the technical, business and managerial aspects of developing advanced electronic business systems. Credit is not given for both BADM 557 and BADM 453.

BADM 558 Software Prog Dev and Mgmt credit: 4 Hours.

Graduate level course. Covers software development principles and implementations. Course topics include: Object-oriented programming, Java, C, C++, C#, with Java as the main language of implementation.

BADM 559 Enterprise IT Governance credit: 4 Hours.

Addresses enterprise IT governance, with a focus on (1) IT governance strategy, including strategic mapping, IT portfolio management, and IT risks assessment; (2) IT control frameworks for organizing IT processes and defining management control objectives, and (9) Trustworthy information management.

BADM 560 IT Consulting Management credit: 4 Hours.

This course enables students to comprehend, explore and manage issues confronting management consultants. The course aims to reach a balance between consulting principles and information technology (IT) management. The course is structured around five objectives of understanding the management consulting life-cycle, consulting tools and techniques, IT valuation methods, IT governance, and emerging IT trends and their impact. Students will prepare the most prevalent types of consulting engagements, conduct case-orientated research and analysis, understand the consulting engagement life-cycle, innovation management, while exploring and debating materials from industry thought-leaders. 4 graduate hours. No professional credit. Prerequisite: MBA, MSTM and IT Minors/Concentrations.

BADM 561 Found of IS/IT Research credit: 4 Hours.

Doctoral seminar aimed at preparing students for conducting research in the IS/IT area. Topics covered include: IS/IT research methods, approaches, and applications. Different research perspectives are surveyed. Emphasizes the scholarly process and the development of IS/IT research programs for an academic career. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 562 Social Media Strategy credit: 4 Hours.

Managers in firms today must be equipped to deal with the new reality of a socially connected society. In this course, students will improve their analytical capabilities and understanding of the opportunities and challenges that social media, global collaboration and new ways of engaging customers pose for the firm. An emphasis will be placed on managerial decision making in the context of the social media phenomenon. 4 graduate hours. No professional credit. Prerequisite: Enrollment in the MBA, MSTM, or PMBA program or in the IT Graduate Minor/Concentration.

BADM 563 Operations Strategy credit: 4 Hours.

The main objective of this course is to examine how manufacturing and operations can be used as sources of competitive advantage. Some firms compete based on innovation and high-performing products. Others may rely on rapid delivery, flexibility to accommodate specific customer needs, or cost leadership. The capabilities that allow the pursuit of these strategies are usually the result of well formulated and executed operations strategies. This course illuminates the fundamental drivers that make the pursuit of these and other strategies possible 4 graduate hours. No professional credit. Prerequisite: Enrollment in the MBA or MSTM program, or the Supply Chain Management Concentration.

BADM 564 Business Process Improvement credit: 4 Hours.

The main objective of this course is to learn tools and techniques for process improvement that are commonly used today under organizational initiatives such as Lean Management and Six Sigma. Classes will consist of lecture-discussions and problem solving exercises, and demonstrations and practice of the use of software for statistical analyses. 4 graduate hours. No professional credit. Prerequisite: BADM 567, MBA 502 MSP, or consent of instructor.

BADM 565 Design & Mgt of Service Sys credit: 4 Hours.

Focuses on unique challenges arising in services because customers cannot be separated from service creation and delivery processes; emphasizes integration of operations, marketing, and human resources management; and includes topics such as design/delivery of services, service quality/productivity, and strategic role of information technology in services.

BADM 566 Supply Chain Management credit: 2 or 4 Hours.

Focuses on how to manage flows of products and services from raw material sources to final customers and associate flows of information. Helps students to develop a system view of measuring channel performance, integrating cross-functional activities, and coordinating processes across organizations.

BADM 567 Process Management credit: 2 or 4 Hours.

Introductory course in decision-making problems in production; includes the theoretical foundations for production management as well as the applications of decision-making techniques to production problems in the firm; and considers production processes, plant layout, maintenance, scheduling, quality control, and production control in particular.

BADM 568 Planning and Control Systems credit: 4 Hours.

In-depth treatment of concepts involved in designing and implementing planning and control systems within the context of a dynamic environment; particular emphasis on the systematic use of information to maintain the efficient flow of materials, utilization of people and technology, coordination with suppliers, and communication with customers.

BADM 569 Res Topics in Operations Mgt credit: 4 Hours.

Current and classical literature in the area of Operations Management. The topics covered may vary from year to year and may include performance measures, inventory management, planning, scheduling, location, layout, product design, process design, and forecasting. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Ph.D. standing in BADM or consent of instructor.

BADM 570 Power & Leadership in Orgs credit: 4 Hours.

Organizations are political systems, so leadership is a political task that raises practical, ethical, and personal challenges. This course aims to help students better understand power in organizations and to become more effective political actors in their professional careers. The course will address normative questions about power's legitimate purposes and the ethical constraints which should govern its use. We will also consider how the pursuit and attainment of power can affect people. In addition, the course will explore the nature of leadership and its relationship to power. Leadership, as we shall come to see in the course of the class, is an inherently ethical and personal concept. The course considers both realism and idealism, both "getting things done" and "doing the right thing." The course involves reading a large number of cases and attempting to learn from the experiences of successful and failed organizational politicians/leaders. We will also draw upon a large body of popular management literature and social scientific research which has directly addressed the phenomena of power and leadership in and around organizations. The course will be highly interactive and discussion-based. 4 graduate hours. No professional credit. Prerequisite: Enrollment in the MBA, PMBA, or MSTM program.

BADM 571 Digital Business & IT Strategy credit: 2 Hours.

This course is to discuss digital business management and IT strategy based on emerging digital technology developments. 2 graduate hours. No professional credit. Prerequisite: Restricted to students in MAS and MSTM programs.

BADM 572 Stat for Mgt Decision Making credit: 2 or 4 Hours.

The application of classical and modern statistics for business decision making. The level of the course assumes some prior knowledge of basic statistics as well as facility with elementary calculus.

BADM 573 Decision Analytics credit: 2 or 4 Hours.

Introduction to analytical approaches to decision making using statistical, probabilistic, and quantitative methods based on data and judgment. This course focuses on understanding of the decision analytic framework and applying practical hands-on skills and tools to business decisions under uncertainty. 2 or 4 graduate hours. No professional credit.

BADM 574 Simulation and Risk Analysis credit: 2 Hours.

This course provides quantitative tools for solution of management problems involving risk, competing objectives, and complex constraints. The course will provide hands-on experience with techniques for solving these problems, with a particular emphasis on models and methods that enable managers to proactively manage and mitigate risk, obtain insight, and support decision making. Models are illustrated with applications to operations management, finance, and marketing, with a particular emphasis on issues associated with project portfolio management. Hands-on modeling skills are developed using spreadsheet-based software tools. We will consider challenges that executives and organizations encounter when implementing these approaches, and demonstrate how mathematical models can improve on "seat of the pants" methods.

BADM 575 Systems Modeling & Simulation credit: 4 Hours.

Elements of computer simulations, including modeling deterministic and stochastic systems, generation of random numbers and variables, and probability and statistics related to modeling, validating, running, and of interpreting computer simulations. Same as CS 545. Prerequisite: CS 105 or CS 125 and STAT 400, or equivalent background in computer and statistical principles, or consent of the instructor.

BADM 578 Stochastic Models in Mgmt Sci credit: 4 Hours.

Application of Markov processes to describe, analyze, and design systems of interest in management science, including queues, inventory, production, brand loyalty, stock market, and other applications. Prerequisite: MATH 461 or STAT 400, or equivalent.

BADM 579 Math Prog for Mgmt Science credit: 4 Hours.

Mathematical programming models (linear, integer, quadratic, nonlinear, dynamic, and combinatorial) used to describe, analyze, and design systems such as production, transportation, scheduling, and planning. Prerequisite: MATH 415 or equivalent.

BADM 582 Multinational Management credit: 4 Hours.

Examines critical issues facing managers who work in multinational firms. Designed to develop students' skills for working in a global business environment. Topics include foreign market entry strategies, global management of the functional areas of business, and management and control of multinational firms in the global marketplace.

BADM 583 Current Topics in Intl Bus credit: 4 Hours.

Continuation of BADM 582. Examines topics related to management and integration of multinational firms not covered in BADM 582. Possible topics include foreign investment decisionmaking, global manufacturing and supply chain management, international joint ventures and strategic alliances, cross-border mergers, global R&D, and global strategic human resource management. May be repeated.

BADM 584 Global Marketing credit: 4 Hours.

Analyzes marketing strategy across national boundaries, the problems of marketing within foreign countries, and the coordination of global marketing programs. Includes problems faced by the exporter, licensor, joint venture, and multinational firm. The full range of market activities are discussed from a global perspective.

BADM 586 Intl Comparative Management credit: 4 Hours.

Compares and contrasts different regional/national business systems and organizational practices including those from both developed and developing countries. Designed to advance students' global management knowledge and cross-cultural skills for functioning effectively in a transnational economy. Includes an optional overseas study trip to visit local companies and subsidiaries of multinational firms.

BADM 588 Business Practice Immersion credit: 0 to 4 Hours.

This course is designed to gain problem solving skills by working on a real project in a company. The project must have measurable goals. The course helps students gain valuable first hand experience in dealing with an organization, interacting with people, learning how different functions in an organization work, and refining time management and communication skills. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated up to 4 hours in separate semesters. Prerequisite: Enrollment in MS Program in Business.

BADM 589 Project Management credit: 2 Hours.

The objective of this course is to master the principles of efficient project planning and control - needs analysis, work breakdown, scheduling, resource allocation, risk management, and performance tracking and evaluation - within the timeframe and cost projections stated in the overview section. Concepts and techniques will be developed by navigating through a recent textbook in project management and through a popular project management software package. In addition, task teams of five members each will have the opportunity to hone skills through homework problem sets and a comprehensive project plan.

BADM 590 Seminar in Business Admin credit: 0 to 4 Hours.

Special topics in the general area of business. Topics are selected by the instructor at the beginning of each term. Approved for letter and S/U grading. May be repeated if topics vary; unlimited credit hours for graduate and professional students.

BADM 591 Proseminar in Business Admin credit: 0 to 4 Hours.

Lectures in topics of current interest not covered by regular course offerings. Subjects are announced in the Class Schedule. Approved for letter and S/U grading. May be repeated in the same term and/or separate terms as topics vary; unlimited credit hours for graduate and professional students.

BADM 593 Research in Special Fields credit: 1 to 8 Hours.

Approved for both letter and S/U grading.

BADM 594 Independent Study and Research credit: 2 or 4 Hours.

Directed reading and research. Approved for both letter and S/U grading. May be repeated in the same term and/or separate terms as topics vary; unlimited credit hours for graduate and professional students.

BADM 595 Business Fundamentals credit: 2 Hours.

Designed to provide a cohesive understanding of marketing from a managerial perspective. Students will learn how to develop a coherent and comprehensive marketing strategy for a product or service. Specifically, it provides the conceptual frameworks and tools necessary to create superior customer value, capture the value through appropriate pricing mechanisms, persuasively communicate and profitably deliver that value, and sustain both the value and the performance in the face of ever-changing customer needs and competitive offerings. Students examine companies by matching their internal strengths and weaknesses with opportunities and threats posed by their environments. Students learn to spot and evaluate opportunities for new ventures and examine the totality of a business proposal.

BADM 596 Entrship for Prof Scientists credit: 1 Hour.

Focuses on how to start and grow a business. The first part of the course concentrates on opportunity evaluation and business plan development. The second part explores the strategic challenges of managing growth and realizing value.

BADM 597 Global Strategy credit: 1 Hour.

Provides an overview of competition in the global environment. Introduces several key frameworks for understanding how firms create value by matching their internal strengths and weaknesses with the opportunities and threats posed by their environments. Examines how value creation differs as firms compete in a global setting. The course builds on innovative managerial theory, and applies key learning using cases and managerial exercises.

BADM 598 Managing Tech & Innovation credit: 1 Hour.

Innovation and technology management deals with understanding how innovation affects the competitive dynamics of markets and how firms can strategically manage innovation. Introduces and employs various tools, concepts, and analytical frameworks that enhance our ability to define and analyze strategic problems that stem from innovation and technological change, and to identify sources of competitive advantage from both an industry and firm-level perspective.

BADM 599 Dissertation Research credit: 0 to 16 Hours.

Required of all students writing doctoral dissertations in business administration; guidance in writing theses and seminar discussions of interim progress reports. Approved for S/U grading only. May be repeated in the same term and/or separate terms as topics vary; unlimited credit hours for graduate and professional students.

Business and Technical Writing (BTW)

BTW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/BTW>)

Courses

BTW 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

BTW 220 Desktop Publishing and Design credit: 2 Hours.

Design and preparation of documents using desktop publishing technology. Students will learn and apply principles governing page design, style sheets, document layout, effective graphics, managing the design process, and usability testing. Students will create a portfolio of design projects.

BTW 250 Principles Bus Comm credit: 3 Hours.

Teaches students to apply the principles of successful professional communication to workplace writing tasks. Students will also practice editing and supervising the writing of others. Assignments replicate typical business cases and situations, including a report that requires students to compile and interpret research. Credit is not given for both BTW 250 and either BTW 261 or BTW 263. Prerequisite: Junior standing and completion of campus Composition I requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

BTW 261 Principles Tech Comm credit: 3 Hours.

Teaches students to apply the principles of successful professional writing to a range of realistic cases in technical communication.

Emphasizes flexible problem-solving skills and a clear style for communicating technical information to a range of readers. Assignments will include correspondence, instructions, proposals, and a technical report or similar project. Credit is not given for both BTW 261 and BTW 250 or BTW 263. Prerequisite: Junior standing and completion of campus Composition I requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

BTW 263 Writing in the Disciplines credit: 3 Hours.

Teaches students to apply principles of professional communication to the writing tasks typical of specific disciplines or professions. Assignments will vary, depending on the focus of the course, but will include a substantial report or project. Credit is not given for both BTW 263 and either BTW 250 or BTW 261. Prerequisite: Junior standing and completion of campus Composition I requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

BTW 271 Persuasive Writing credit: 3 Hours.

Students will study principles of persuasion as applied to writing and designing written communications for business and the professions. Included are ads, direct-mail campaigns, argumentative essays, proposals, and other types of writing designed to move readers to action. Prerequisite: Sophomore standing and completion of Composition I requirement.

BTW 272 Report Writing credit: 3 Hours.

Personal direction in a report writing project which can be integrated with research in another course; study of report-writing principles and practices. Classes meet for the first month after which the student and the instructor arrange a conference schedule. Small group meetings are arranged for presentation of proposals, progress reports, and summary reports. Prerequisite: Completion of campus rhetoric requirement and sophomore standing.

BTW 290 Individual Study credit: 0 to 3 Hours.

Independent research with a chosen tutor leading to the writing of a formal report or preparation of some other type of major presentation of information. Enroll in BTW office, 294 English Building. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

BTW 402 Descriptive English Grammar credit: 3 or 4 Hours.

Same as ENGL 402. See ENGL 402.

BTW 490 Special Topics Prof Writing credit: 3 or 4 Hours.

Study of the forms, situations, and social practices that define writing in particular disciplines or professions. Each class will focus on a specific topic such as science writing, writing in the environmental movement, legal writing, writing in the social sciences, public policy in the popular media, and so on. Assignments will vary with the topic. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Junior standing.

Campus Honors Program (CHP)

CHP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHP>)

Courses

CHP 199 Special Topics credit: 1 to 6 Hours.

Special topics each term. Additional fees may apply. See Class Schedule. May be repeated up to 6 hours, if topics vary. At least one (1) semester of enrollment is required for residents of the Honors Living-Learning Community. Prerequisite: For Campus Honors Program and/or James Scholar students.

CHP 395 Interdisciplinary Seminar credit: 3 Hours.

Seminar on interdisciplinary topics in the natural sciences, social sciences, humanities, and arts. Open to Chancellor's Scholars and other honors students. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Junior standing in the Campus Honors Program.

CHP 396 Interdisciplinary Seminar ACP credit: 3 Hours.

Course is identical to CHP 395 except for the additional writing component. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing in or permission of the Campus Honors Program. Completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for: Advanced Composition

Catalan (CATL)

CATL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CATL>)

Courses

CATL 401 Intensive Catalan Language credit: 3 Hours.

Intensive introduction to the Catalan language, appropriate for students familiar with another Romance language; emphasizes acquisition of the four basic skills, listening, speaking, writing, and reading, in order to achieve competence in the language. 3 undergraduate hours. 3 graduate hours. Prerequisite: Basic reading knowledge of another Romance language is helpful but not absolutely necessary.

CATL 402 Studies in Catalan Literature credit: 3 Hours.

Studies selected aspects of Catalan literature; taught in Catalan. Topics will be selected from among the major chronological periods and genres of Catalan literature; such as 20th century novel, Ramon Llull and Ausias March. The intention is to offer the student an in-depth view instead of an introductory overview. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: CATL 401 or equivalent.

Cell and Developmental Biology (CDB)

CDB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CDB>)

Courses

CDB 590 Individual Topics credit: 1 to 16 Hours.

Individual topics in research and/or reading for graduate students, to be conducted under the supervision of faculty members in cell and structural biology; designed to allow students to become more familiar with specialized fields of study prior to committing themselves to a specific area for their graduate degree. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

CDB 595 Graduate Sem Cell Devel Biol credit: 1 Hour.

Invited speakers, faculty, and student presentations and discussions on current research topics. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours. Prerequisite: MCB 400; or consent of instructor.

CDB 599 Thesis Research credit: 0 to 16 Hours.

Research on the thesis and preparation of the thesis. Course Information: Approved for S/U grading only. May be repeated to a maximum of 16 hours. Summer: 0 to 8 hours. (Summer session may be repeated to a maximum of 8 hours.)

Center for Advanced Study (CAS)

CAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CAS>)

Courses

CAS 587 Advanced Study: Special Topics credit: 4 Hours.

Course is an upper-level graduate course in multi-disciplinary studies with topic material that will vary term to term. 4 graduate hours. No professional credit.

Chemical and Biomolecular Engr (CHBE)

CHBE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHBE>)

Courses

CHBE 101 Hidden World of Engineering credit: 3 Hours.

Tells the stories of everyday objects: bathtubs, pop cans and screws. These simple objects shape our lives, yet are engineering masterpieces. To unveil this hidden world the course uses a humanistic approach. Designed to appeal to all majors, it uses human stories - filled with failures and triumphs - to reveal the methods of engineers. The course enchants with tales of ancient steel making, today's pop cans, huge stone monuments, and salt. The course will change how a student looks at his or her world. Several sessions focus on women engineers and the environment.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHBE 121 CHBE Profession credit: 1 Hour.

Lectures and problems on the history and scope of chemical engineering endeavors; decisions and criteria for process development and plant design. Approved for S/U grading only. Prerequisite: CHEM 102 or CHEM 202.

CHBE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

CHBE 202 Cooperative Education Practice credit: 0 Hours.

Same as CHEM 293. See CHEM 293.

CHBE 210 CHBE Internship credit: 0 Hours.

Full-time practice of chemical science in an off-campus industrial setting or research laboratory environment. Summary report required. Approved for S/U grading. May be repeated. Prerequisite: Completion of freshman year or equivalent, or consent of Director of Cooperative Education in Chemical and Biomolecular Engineering.

CHBE 221 Principles of CHE credit: 3 Hours.

Lectures and problems on material and energy balances. Prerequisite: CHEM 104 or CHEM 204; credit or concurrent registration in CS 101.

CHBE 297 Individual Study Sophomores credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. May be repeated to a maximum of 6 hours. Prerequisite: Sophomore standing and consent of instructor.

CHBE 321 Thermodynamics credit: 4 Hours.

Fundamental concepts and the laws of thermodynamics; the first and second law applications to phase equilibrium and chemical equilibrium and other applications in the Chemical and Biomolecular Engineering profession. Prerequisite: CHBE 221.

CHBE 397 Individual Study for Juniors credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing and consent of instructor.

CHBE 421 Momentum and Heat Transfer credit: 4 Hours.

Introduction to fluid statics and dynamics; dimensional analysis; design of flow systems; introduction to heat transfer; conduction, convection, and radiation. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CHBE 421 AND ABE 341. Prerequisite: CHBE 221.

CHBE 422 Mass Transfer Operations credit: 4 Hours.

Introduction to mass transfer processes and design methods for separation equipment. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 421.

CHBE 424 Chemical Reaction Engineering credit: 3 Hours.

Chemical kinetics; chemical reactor design; the interrelationship between transport, thermodynamics, and chemical reaction in open and closed systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or registration in CHBE 422.

CHBE 430 Unit Operations Laboratory credit: 4 Hours.

Experiments and computation in fluid mechanics, heat transfer, mass transfer, and chemical reaction engineering. Exercises in effective Chemical and Biomolecular Engineering communications. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 422; credit or concurrent registration in CHBE 424; senior standing in Chemical and Biomolecular Engineering.

This course satisfies the General Education Criteria for:
Advanced Composition

CHBE 431 Process Design credit: 4 Hours.

Capstone design course where students apply principles from previous courses to the design of complete chemical process systems.

Topics include: techniques used in the synthesis and analysis of chemical processes, process simulation and optimization, effective communication in a chemical process engineering environment. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHBE 422; credit or concurrent registration in CHBE 424.

This course satisfies the General Education Criteria for:
Advanced Composition

CHBE 440 Process Control and Dynamics credit: 3 Hours.

Techniques used in the analysis of process dynamics and in the design of process control systems. Laplace transforms, stability analysis, and frequency response methods. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 421 and senior standing in Chemical and Biomolecular Engineering; MATH 285; CS 101.

CHBE 451 Transport Phenomena credit: 3 Hours.

Unifying treatment of physical rate processes with particular emphasis on the formulation and solution of typical boundary value problems associated with heat, mass, and momentum transport. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHBE 421; MATH 285.

CHBE 452 Chemical Kinetics & Catalysis credit: 3 Hours.

Problems in chemical kinetics; techniques for the prediction and measurement of rates of reactions; homogeneous and heterogeneous catalysis chain reactions. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 442 or CHBE 321.

CHBE 453 Electrochemical Engineering credit: 2 or 3 Hours.

Fundamentals of analysis, design, and optimization of electrochemical systems. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: Senior standing in physical science or engineering.

CHBE 454 CHBE Projects credit: 2 Hours.

Laboratory; development of an individual project. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior standing in Chemical and Biomolecular Engineering.

CHBE 455 Polymers Synthesis and Industrial Applications credit: 3 Hours.

Explores the fundamentals of polymer production by providing a broad overview of several topics within the field. Students will gain an appreciation of the relationships between polymer composition, synthesis, and processing, all of which ultimately determine bulk polymer properties. 3 undergraduate hours. No graduate credit. Credit is not given for both CHBE 455 and MSE 457.

CHBE 456 Polymer Science & Engineering credit: 3 Hours.

Fundamentals of polymer science and engineering: polymerization mechanisms, kinetics, and processes; physical chemistry and characterization of polymers; polymer rheology, mechanical properties, and processing. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CHBE 456 and MSE 450. Prerequisite: CHBE 321; credit or concurrent registration in CHBE 421; CHEM 444.

CHBE 457 Microelectronics Processing credit: 3 Hours.

Introductory survey of chemical processing principles applied to microelectronic fabrication. Key concepts originate from chemical kinetics; thermodynamics; mass and energy balances; transport of mass, momentum and heat; and process synthesis and integration. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior or senior standing in Chemical and Biomolecular Engineering, Electrical and Computer Engineering, or Materials Science and Computer Engineering.

CHBE 471 Biochemical Engineering credit: 3 or 4 Hours.

Applications of chemical engineering principles to biological processes. Topics include enzyme mechanisms and kinetics, bioreactor design, cellular growth and metabolism, fermentation, and bioseparations. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing, or consent of instructor.

CHBE 472 Techniques in Biomolecular Eng credit: 3 or 4 Hours.

Engineering principles that underlie many of the powerful tools in biotechnology and how scientific discoveries and engineering approaches are used in current industrial applications. Physical principles that govern self-organization and repair in biological systems; tools developed to characterize, manipulate, and quantify biomolecules; use of analytical tools and genetic manipulation in modern bioengineering and biotechnology applications. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 202, CHEM 203, CHEM 204 or equivalent; MATH 220 or MATH 221; PHYS 211, PHYS 214 or equivalent; MCB 450.

CHBE 473 Biomolecular Engineering credit: 3 or 4 Hours.

Fundamental principles of biomolecular engineering and its applications in pharmaceutical, agriculture, chemical and food industries. Topics include gene discovery, rational design, directed evolution, pathway engineering, and functional genomics and proteomics. 3 undergraduate hours. 4 graduate hours.

CHBE 474 Metabolic Engineering credit: 3 or 4 Hours.

Introduction to the principles and methodology of metabolic engineering. Experimental and mathematical techniques for the quantitative description, modeling, control, and design of metabolic pathways. Same as BIOE 474. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 225 and MATH 285.

CHBE 475 Tissue Engineering credit: 3 Hours.

Principles and practices of Chemical Engineering will be applied to the topic of tissue engineering. Topics include: methods for employing selected cells, biomaterial scaffolds, soluble regulators or their genes, and mechanical loading and culture conditions for regenerative repair of tissues and organs in vitro and in vivo; understanding intrinsic wound healing processes; quantifying cell behaviors/phenotypes; regulatory compliance and clinical translation. 3 undergraduate hours. 3 graduate hours. Prerequisites: CHBE 421 and CHBE 422, or consent of instructor.

CHBE 476 Biotransport credit: 3 Hours.

Investigates the critical roles the transports of mass, energy and momentum play in the function of living systems at varied levels (e.g., cells, tissues, and organs) and time scales. Transport phenomena are also central to the design and operation of devices for biological research, imaging, biochemical processes, and therapeutic interventions including drug delivery, gene therapy and tissue engineering. Students will explore conservation laws of mass, energy, and momentum to mathematically describe cell and molecular biology, immunology, physiology and biomedical engineering systems. 3 undergraduate hours. No graduate credit. Prerequisites: CHBE 421 and CHBE 422 or consent of instructor.

CHBE 478 Bioenergy Technology credit: 3 Hours.

Introduction to emerging bioenergy technologies including: world energy consumption and greenhouse gas concerns; fundamental biochemistry of biomass conversion; structural chemistry of lignocelluloses; pretreatment of biomass; enzymatic deconstruction; bioethanol production and fermentation; metabolic engineering for improved biofuels production; feedstock development; industrial fermentation and fermentor design; economics of bioethanol; alternative biofuels, including biodiesel, syngas, Fischer-Tropsch diesel, butanol, ABE fermentation and biohydrogen; anaerobic microbiology; and the biorefinery concept. 3 undergraduate hours. No graduate credit. Prerequisites: CHBE 321; MCB 450.

CHBE 494 Special Topics credit: 1 to 3 Hours.

Study of topics in chemical engineering; content varies from term to term. Typical topics include optimization, chemical kinetics, phase equilibrium, biochemical engineering, kinetic theory, and transport properties. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated. Prerequisite: Senior standing in Chemical and Biomolecular Engineering or consent of instructor.

CHBE 496 Undergraduate Research Abroad credit: 1 to 3 Hours.

Study assist in research under faculty supervision at a location outside of the United States. Topic and type of assistance vary. 1 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Research credit hours in the course are included under department limits for maximum hours of research/independent study credit allowed toward degree requirements. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of the department. Not available to freshman.

CHBE 497 Individual Study for Seniors credit: 1 to 3 Hours.

Individual study of problems related to Chemical and Biomolecular Engineering. 1 to 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing and consent of instructor.

CHBE 499 Senior Thesis credit: 1 to 6 Hours.

Limited in general to seniors in the curriculum in chemical and biomolecular engineering. Any others must have the consent of the head of the department. Each student taking the course must register in a minimum of 5 hours either in one term or divided over two terms. A maximum registration of 10 hours in two terms is permitted. 1 to 6 undergraduate hours. No graduate credit. In order to receive credit, a thesis must be presented by each student registered in CHBE 499.

CHBE 510 Graduate CHBE Internship credit: 0 Hours.

Full-time practice of chemical engineering in an off-campus industrial setting or research laboratory environment. Summary report required. Students must have received internship offer prior to enrolling in this course. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated if student is selected for additional work terms. Prerequisite: Graduate standing only.

CHBE 521 Applied Mathematics in CHBE credit: 3 or 4 Hours.

Development of mathematical models and a survey of modern mathematical methods currently used in the solution of chemical and biomolecular engineering problems; topics include the application of vectors and matrices, partial differential equations, numerical analysis, and methods of optimization in Chemical and Biomolecular Engineering. Prerequisite: Consent of instructor.

CHBE 522 Fluid Dynamics credit: 4 Hours.

Basic concepts in fluid dynamics with special emphasis on topics of interest to chemical and biomolecular engineers. Derivation of the Navier-Stokes equations; solutions for creeping flow, perfect fluids, and boundary layers; non-Newtonian fluids; turbulence. Prerequisite: Consent of instructor.

CHBE 523 Heat and Mass Transfer credit: 3 or 4 Hours.

Principles of transfer operations developed in terms of physical rate processes; boundary layer heat and mass transfer, phase changes, and separation processes. Prerequisite: Consent of instructor.

CHBE 525 Statistical Thermodynamics for Chemical Engineers credit: 3 Hours.

Fundamentals and applications of both macroscopic thermodynamics and statistical mechanics. The formalism of statistical mechanics is introduced, in particular the development and calculation of partition functions, as well as its connections to thermodynamic equations of state and material properties. These concepts will be applied to problems relevant to chemical engineering, such as solution theory, electrolytes, adsorption, non-equilibrium thermodynamics, chemical reactions, molecular simulation, and dispersive interactions. 3 graduate hours. No professional credit. Prerequisite: CHBE 321. Graduate standing required.

CHBE 551 Chemical Kinetics & Catalysis credit: 4 Hours.

Rates and mechanisms of chemical reactions, treatment of data, steady state and unsteady behavior predictions of mechanisms, prediction of rate constants and activation barriers. Introduction to catalysis. Catalysis by solvents, metals, organometallics, acids, enzymes, semiconductors. Same as CHEM 582. Prerequisite: An undergraduate course in chemical kinetics.

CHBE 553 Surface Chemistry credit: 4 Hours.

Introduction to the behavior of molecules adsorbed on solid surfaces; the structure of surfaces and adsorbate layers. The bonding of molecules to surfaces; adsorbate phase transitions; trapping and sticking of molecules on surfaces. An introduction to surface reactions; kinetics of surface reactions. A review of principles of chemical reactivity; reactivity trends on surfaces; prediction of rates and mechanisms of reactions on metals, semiconductors, and insulators. Same as CHEM 586. Prerequisite: CHEM 444.

CHBE 565 CHBE Seminar credit: 1 Hour.

Required of all graduate students whose major is Chemical and Biomolecular Engineering. Approved for letter and S/U grading. Prerequisite: CHBE 422.

CHBE 571 Bioinformatics credit: 4 Hours.

Same as ANSC 543, MCB 571, and STAT 530. Prerequisite: MATH 225; MATH 241 and MATH 461.

CHBE 572 Metabolic Systems Engineering credit: 4 Hours.

Prerequisite: MATH 225; MATH 241, and 285; or consent of instructor.

CHBE 580 Lab Techs in Bioinformatics credit: 2 Hours.

Prerequisite: MCB 150 and MCB 151; or consent of instructor.

CHBE 593 Individual Study credit: 0 to 4 Hours.

Study under the supervision of a staff member in areas not covered in established course offerings. Approved for both letter and S/U grading. Prerequisite: Consent of the staff member under whom the study is to be made.

CHBE 594 Special Topics credit: 1 to 4 Hours.

Various advanced topics; generally taken during the second year of graduate study. Typical topics include turbulence, hydrodynamic instability, process dynamics, interfacial phenomena, reactor design, cellular bioengineering, properties of matter at high pressure, and phase transitions. May be repeated. Prerequisite: Consent of instructor.

CHBE 597 Special Problems credit: 2 to 16 Hours.

Individual work on problem-oriented projects not included in theses. This could be research, engineering design, or professional work in chemical and biomolecular engineering which has educational values. The work must be done under the supervision of a staff member with the approval of the department head.

CHBE 598 Research Seminar credit: 0 to 4 Hours.

Discussion of recent developments of importance to different areas of chemical and biomolecular engineering research. The course is divided into a number of sections, and subject matter differs from section to section and from time to time. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

CHBE 599 Thesis Research credit: 0 to 16 Hours.

Candidates for the master's degree who elect research are required to write a thesis. A thesis is always required for the Doctor of Philosophy. Not all candidates for thesis work necessarily are accepted. Any student whose major is in another department must receive permission from the head of the Department of Chemical and Biomolecular Engineering to register in this course. Approved for S/U grading only.

Chemistry (CHEM)

CHEM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHEM>)

Courses

CHEM 101 Introductory Chemistry credit: 3 Hours.

Introduction to the basic concepts and language of chemistry; lectures, discussions, and lab. Preparatory chemistry course for students who require additional background before enrolling in CHEM 102. This course has been approved for graduation credit for all students in the College of LAS. Students in other colleges should check with their college office. Additional fees may apply. See Class Schedule. Prerequisite: 2.5 years of high school mathematics, or credit or concurrent registration in MATH 112.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 102 General Chemistry I credit: 3 Hours.

For students who have some prior knowledge of chemistry. Principles governing atomic structure, bonding, states of matter, stoichiometry, and chemical equilibrium. Credit is not given for both CHEM 102 and CHEM 202. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit. Prerequisite: Credit in or exemption from MATH 112; one year of high school chemistry or equivalent. All students enrolled in CHEM 102 should also enroll in CHEM 103.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 103 General Chemistry Lab I credit: 1 Hour.

Laboratory studies to accompany CHEM 102. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 103 and CHEM 203. CHEM 102 and CHEM 103 are approved for General Education credit only as a sequence. Both courses must be completed to receive Natural Science and Technology credit. Prerequisite: Credit or concurrent registration in CHEM 102 is required.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 104 General Chemistry II credit: 3 Hours.

Lecture and discussions. Chemistry of materials, including organic and biological substances, chemical energetics and equilibrium, chemical kinetics, and electrochemistry. Credit is not given for both CHEM 104 and CHEM 204. Prerequisite: CHEM 102 or CHEM 202 or advanced placement credit for one semester of college-level chemistry.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 105 General Chemistry Lab II credit: 1 Hour.

Laboratory studies to accompany CHEM 104. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 105 and CHEM 205. Prerequisite: CHEM 102 and CHEM 103; credit or concurrent registration in CHEM 104 is required.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 108 Chemistry, Everyday Phenomena credit: 3 Hours.

Laboratory-based work in which students will evaluate products (such as antacids), synthesize materials (such as soap), and gain a better understanding of forensic chemistry. Additional fees may apply. See Class Schedule. Credit in CHEM 108 does not count toward Chemistry requirements for students in the Specialized Curriculum in Chemistry, the Science and Letters Chemistry major, the Chemistry Teaching Option, or the Chemistry minor; however the course may be taken by students in any of these groups for general education hours. Prerequisite: Credit or concurrent registration in MATH 112.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 123 Teaching Elementary & Middle School Chemistry credit: 3 Hours.

Inquiry-based, hands-on study of chemistry for prospective elementary and middle school teachers. Next Generation Science Standards are emphasized. Credit is not given toward the hours of chemistry required for chemistry and related majors. Prerequisite: Preference given to students in Elementary Education.

CHEM 197 Individual Study Freshman credit: 1 to 2 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms to a maximum of 4 hours. A maximum of 2 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

CHEM 202 Accelerated Chemistry I credit: 3 Hours.

Lectures and discussions. Beginning chemistry course for students in the chemical sciences and others with strong high school chemistry and mathematics preparation. Chemical calculations, structure, bonding and equilibrium. Credit is not given for both CHEM 202 and CHEM 102. Prerequisite: Credit or concurrent registration in MATH 220 or MATH 221; concurrent registration in CHEM 203.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 203 Accelerated Chemistry Lab I credit: 2 Hours.

Companion laboratory course to CHEM 202. Comprehensive skills-oriented approach to learning laboratory technique and safety. Additional fees may apply. See Class Schedule. Students may receive no more than two credit hours for both this course and CHEM 103. Prerequisite: Concurrent registration or credit in CHEM 202 or consent of instructor.

CHEM 204 Accelerated Chemistry II credit: 3 Hours.

Continuation of CHEM 202. Lectures and discussions. Emphasizes chemical thermodynamics, equilibrium, chemical kinetics, and coordination chemistry. Prerequisite: CHEM 202 and/or CHEM 203 and concurrent registration in CHEM 205, or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

CHEM 205 Accelerated Chemistry Lab II credit: 2 Hours.

Laboratory and discussion. Includes experiments in qualitative analysis, inorganic synthesis, and kinetics as well as an individual project. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 205 and CHEM 223. Prerequisite: Concurrent registration in CHEM 204 or consent of department.

CHEM 222 Quantitative Analysis Lecture credit: 2 Hours.

Fundamentals of quantitative analysis, chemical equilibrium and kinetics. This lecture course is intended to accompany CHEM 223. Students with credit in CHEM 222 can receive credit for CHEM 203. Prerequisite: CHEM 104 and CHEM 105 or equivalent.

CHEM 223 Quantitative Analysis Lab credit: 2 Hours.

Laboratory course covers the fundamentals of quantitative analysis, equilibrium and kinetics. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 223 and CHEM 205. Prerequisite: Credit or concurrent registration in CHEM 222.

CHEM 232 Elementary Organic Chemistry I credit: 3 or 4 Hours.

Presents structural and mechanistic chemistry with emphasis on applications of this material to closely related areas. For students in agricultural, nutritional and biological sciences, as well as premedical, pre dental, and preveterinary programs. One-term survey course; may be followed by CHEM 332. Credit is not given for both CHEM 232 and CHEM 236. 3 hours of credit is an option for those not registered in a discussion-recitation section. 4 hours of credit requires registration in a discussion-recitation section and a live lecture or an online section. Prerequisite: CHEM 104 and CHEM 105, or CHEM 204.

CHEM 233 Elementary Organic Chem Lab I credit: 2 Hours.

Basic laboratory techniques in organic chemistry are presented with emphasis on the separation, isolation, and purification of organic compounds. For students in agricultural science, dairy technology, food technology, nutrition, dietetics, premedical, pre dental, and preveterinary programs. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 233 and CHEM 237. Prerequisite: Credit or concurrent registration in CHEM 232.

CHEM 236 Fundamental Organic Chem I credit: 4 Hours.

Fundamental structural, synthetic, and mechanistic organic chemistry is presented. For students whose major is chemistry or for those in the specialized curricula in chemistry or chemical engineering. The first term of a two-term integrated sequence (to be followed by CHEM 436). This lecture course is intended to accompany CHEM 237. Credit is not given for both CHEM 236 and CHEM 232. Prerequisite: CHEM 204 or CHEM 222 through CHEM 223.

CHEM 237 Structure and Synthesis credit: 2 Hours.

Laboratory course introduces synthesis and the basic techniques for the separation, isolation and purification of organic and inorganic compounds. Additional fees may apply. See Class Schedule. Credit is not given for both CHEM 237 and CHEM 233. Prerequisite: Credit or concurrent registration in CHEM 236.

CHEM 293 Cooperative Education Practice credit: 0 Hours.

Off-campus cooperative practice of chemistry or chemical engineering in industrial or governmental facilities. Each chemistry or chemical engineering student participating in cooperative education must register for CHEM 293 for each off-campus term. Same as CHBE 202. Approved for S/U grading only. Prerequisite: Acceptance into the School of Chemical Sciences Cooperative Education Program.

CHEM 295 Chemistry Internship credit: 0 Hours.

Full-time practice of chemical science in an off-campus industrial setting or research laboratory environment. Summary report required. Approved for S/U grading only. May be repeated. Prerequisite: Completion of freshman year or equivalent, or consent of Director of Cooperative Education in Chemistry.

CHEM 297 Individual Study Sophomore credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 312 Inorganic Chemistry credit: 3 Hours.

Basic chemical bonding in molecules, introduction to symmetry, chemistry of the main group elements, coordination chemistry of the transition elements, organometallic chemistry, solid state chemistry, bioinorganic chemistry, chemistry of the lanthanide and actinide elements. Prerequisite: CHEM 232 or CHEM 236.

CHEM 315 Instrumental Chem Systems Lab credit: 2 Hours.

Laboratory course emphasizes the application of modern instrumental techniques for characterizing the kinetic behavior and equilibrium properties of chemical systems. Prerequisite: Either CHEM 237 or both CHEM 223 and CHEM 233.

CHEM 317 Inorganic Chemistry Lab credit: 3 Hours.

Emphasizes modern techniques for the synthesis, purification, and characterization of inorganic and organometallic compounds. There are three components to the course: lectures on laboratory methodology and reporting, laboratory experiments, and report writing. The final third of the course is dedicated to special individualized projects. Additional fees may apply. See Class Schedule. Prerequisite: CHEM 312; completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for:
Advanced Composition

CHEM 332 Elementary Organic Chem II credit: 4 Hours.

Continuation of CHEM 232 focuses on organic chemistry and its applications to biochemistry, enzyme mechanisms and the life sciences. Credit is not given for both CHEM 332 and CHEM 436. This course should not be taken by students who have completed CHEM 236. Prerequisite: CHEM 232 and CHEM 233.

CHEM 360 Chemistry of the Environment credit: 3 Hours.

Study of the chemistry of the atmosphere, the chemistry of soil and minerals in the Earth's crust, chemistry of natural waters, agricultural chemicals and organic pollutants, and topics related to energy use. Prerequisite: One year of general chemistry (CHEM 102-105 or CHEM 202-205) and one semester of organic chemistry (CHEM 232 or CHEM 236). The organic chemistry class may be taken concurrently with CHEM 360.

CHEM 397 Individual Study Junior credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 420 Instrumental Characterization credit: 2 Hours.

Lecture course covers the fundamentals of instrumental characterization including: nuclear magnetic resonance spectroscopy, potentiometry, voltammetry, atomic and molecular spectroscopy, mass spectrometry, and gas and liquid chromatography. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 440; or credit or concurrent registration in CHEM 442; or consent of the instructor.

CHEM 436 Fundamental Organic Chem II credit: 3 Hours.

Course is the second term of a two-term integrated sequence and should be taken the term following enrollment in CHEM 236. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CHEM 436 and CHEM 332. Prerequisite: CHEM 236 and CHEM 237; or CHEM 232 and CHEM 233 with consent of instructor.

CHEM 437 Organic Chemistry Lab credit: 3 Hours.

Laboratory experiments in organic chemistry with emphasis on synthesis, purification and spectroscopic identification of organic compounds. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 233 or CHEM 237 and credit or concurrent registration in CHEM 332 or CHEM 436. This course satisfies the General Education Criteria for: Advanced Composition

CHEM 438 Advanced Organic Chemistry credit: 3 Hours.

Advanced topics in structure, synthesis and reactions of organic chemistry. Lecture only course. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 332 or CHEM 436.

CHEM 440 Physical Chemistry Principles credit: 4 Hours.

One-term course in physical chemistry emphasizing topics most important to students in the biological and agricultural sciences. Not open to students in the specialized curricula in chemistry and chemical engineering. Laboratory experience in this area provided by CHEM 315 to be taken preferably after CHEM 440. Same as BIOC 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 222 and CHEM 232, or equivalent; PHYS 102; and MATH 241 or equivalent calculus including partial derivatives.

CHEM 442 Physical Chemistry I credit: 4 Hours.

Lectures and problems focusing on microscopic properties. CHEM 442 and CHEM 444 constitute a year-long study of chemical principles. CHEM 442 focuses on quantum chemistry, atomic and molecular structure, spectroscopy and dynamics. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CHEM 442 and PHYS 485. Prerequisite: CHEM 204 or CHEM 222; MATH 225 or MATH 415, and a minimal knowledge of differential equations, or equivalent; and PHYS 211, PHYS 212, and PHYS 214 or equivalent.

CHEM 444 Physical Chemistry II credit: 4 Hours.

Continuation of CHEM 442, focusing on thermodynamics, statistical mechanics and kinetics from single molecules to the bulk, in gases and in the condensed phase. 4 undergraduate hours. 4 graduate hours. Credit is not given for CHEM 444 and MSE 401 or PHYS 427. Prerequisite: CHEM 442.

CHEM 445 Physical Principles Lab I credit: 2 Hours.

Laboratory course features experiments concerning the fundamental physical nature of chemical phenomena. Experiments include infrared spectroscopy, protein folding, x-ray diffraction and laser induced fluorescence. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 315, and credit or concurrent registration in CHEM 444; or consent of instructor.

CHEM 447 Physical Principles Lab II credit: 2 Hours.

Laboratory course features advanced experiments concerning the fundamental physical nature of chemical phenomena. This course is a continuation of CHEM 445. Experiments include low-energy electron diffraction from surfaces, raman spectroscopy and ion cyclotron resonance mass spectroscopy. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 445 or consent of instructor.

CHEM 450 Astrochemistry credit: 4 Hours.

Covers the foundations of astrochemistry, a young field at the intersection between chemistry and astronomy. Topics to be discussed include the interstellar medium, atomic and molecular physics, interstellar chemistry, molecular astronomy, and unresolved enigmas in the field. Same as ASTR 450. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 442 and CHEM 444, or PHYS 427 and PHYS 486, or equivalent experience in quantum mechanics, thermodynamics, and statistical mechanics.

CHEM 451 Astrochemistry Laboratory credit: 3 or 4 Hours.

An active, hands-on introduction to observational astrochemistry, laboratory astrochemistry and theoretical astrochemistry. Activities will include astronomical observations of interstellar molecules at the Observatory, spectroscopy of molecules in the laboratory, quantum chemical calculations and simulations of molecular spectra, and modeling of interstellar chemistry. Same as ASTR 451. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CHEM 450.

CHEM 460 Green Chemistry credit: 3 or 4 Hours.

This course seeks to reduce the environmental consequences of the chemical industry. It includes modifying engineering practices, the development of new catalytic processes, modification of existing chemical processes, and bioremediation. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 312, CHEM 332, CHEM 360, or consent of instructor.

CHEM 472 Physical Biochemistry credit: 3 Hours.

Same as MCB 446 and BIOC 446. See BIOC 446.

CHEM 474 Drug Discovery & Development credit: 3 Hours.

Lecture course on fundamentals of drug discovery and development. Topics include case studies of top-selling, mechanistically diverse drugs, chemistry of drug contraindications, structural biology of drug targets, mechanisms of drug resistance, and drug metabolism and toxicity. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 332 or CHEM 436; and MCB 354 or MCB 450, or consent of instructor.

CHEM 480 Polymer Chemistry credit: 3 or 4 Hours.

Same as MSE 457. See MSE 457.

CHEM 482 Polymer Physics credit: 3 or 4 Hours.

Same as MSE 458. See MSE 458.

CHEM 483 Solid State Structural Analysis credit: 4 Hours.

Lectures and laboratory on various aspects of X-ray diffraction studies of solids; topics include the properties of crystals, symmetry, diffraction techniques, data collection methods, and the determination and refinement of crystal structures. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 442 or consent of instructor.

CHEM 488 Surfaces and Colloids credit: 3 or 4 Hours.

Same as MSE 480. See MSE 480.

CHEM 492 Special Topics in Chemistry credit: 1 to 3 Hours.

Open to advanced undergraduates and graduate students. Deals with subjects not ordinarily covered by regularly scheduled courses. 1 to 3 undergraduate hours. 1 to 3 graduate hours. Approved for letter and S/U grading. Prerequisite: Credit or concurrent registration in any 400-level course in chemistry.

CHEM 494 Lab Safety Fundamentals credit: 1 Hour.

Same as MSE 492. See MSE 492.

CHEM 495 Teaching Secondary Chemistry credit: 4 Hours.

Intended for undergraduates working toward certification to teach high school chemistry and graduate students working towards a Master's degree in the Teaching of Chemistry. Course aims to provide future teachers with hands-on experience in conducting laboratory experiments, demonstrations, and teaching strategies. 4 undergraduate hours. 4 graduate hours. Course does not count toward the eleven advanced hours in chemistry required in the specialized curriculum, nor does it apply to coursework required for the Ph.D. in Chemistry. Prerequisite: Undergraduate background in general chemistry and credit or concurrent enrollment in CI 403.

CHEM 496 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of the department. Not available to freshman.

CHEM 497 Individual Study Senior credit: 1 to 3 Hours.

Individual study of problems related to chemistry or research not necessarily leading to a senior thesis. Course Information: 1 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms. A maximum of 6 hours may be used toward the major. A maximum of 18 hours of CHEM 197, CHEM 297, CHEM 397, CHEM 497 and/or CHEM 499 may be used toward the degree. Prerequisite: Chemistry faculty approval required to register.

CHEM 499 Senior Thesis credit: 2 to 6 Hours.

Research with thesis, under the direction of a senior staff member in chemistry. Normally the student takes two terms of CHEM 499 in the senior year. 2 to 6 undergraduate hours. No graduate credit. May be repeated up to 10 hours in separate terms. CHEM 499 is recommended for all those who plan to do research and graduate study and it is a prerequisite for graduation with distinction in chemistry. In the term preceding their initial enrollment, those interested in taking the course should consult with their advisers and with the graduate adviser for the area of interest in which they plan to work. A maximum of 10 hours may be counted toward graduation and a thesis must be presented for credit to be received.

CHEM 512 Advanced Inorganic Chemistry credit: 4 Hours.

Descriptive chemistry of the main group and transition elements, reactions and reaction mechanisms of inorganic systems, and electronic structure of inorganic molecules and solids. Prerequisite: CHEM 312 or approval of instructor.

CHEM 515 Inorganic Chemistry Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is inorganic chemistry. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 516 Physical Inorganic Chemistry credit: 4 Hours.

Includes group theory and use of physical methods to provide information about the geometry, electronic structures, and reactivity of inorganic compounds in solution; emphasizes NMR and ESR. Prerequisite: CHEM 444.

CHEM 517 Advanced Inorganic Chem Lab credit: 1 to 3 Hours.

Specialized laboratory techniques; more difficult inorganic syntheses. Prerequisite: Credit or concurrent registration in one of the lecture courses in inorganic chemistry in the 500 series.

CHEM 518 Topics in Inorganic Chemistry credit: 2 to 4 Hours.

Advanced course dealing with a subject not ordinarily covered by regularly scheduled courses, such as organometallic chemistry, advanced ligand field theory and molecular orbital theory of inorganic compounds, kinetics and mechanisms of inorganic reactions, etc. May be repeated. Prerequisite: CHEM 516 or consent of instructor.

CHEM 520 Advanced Analytical Chemistry credit: 4 Hours.

Treatment of the basic issues of importance in modern analytical chemistry. Topics include basic chemical and measurement concepts, measurement instrumentation and techniques, and principles, tools, and applications in spectroscopy, electrochemistry, separations, sensors, mass spectroscopy and surface characterization. Prerequisite: CHEM 315, CHEM 420, and CHEM 444.

CHEM 522 Experimental Spectroscopy credit: 4 Hours.

Principles and applications of spectroscopic measurements and instrumentation. Atomic and molecular absorption, emission, fluorescence, and scattering, emphasizing physical interpretation of experimental data. Prerequisite: General physics and chemistry equivalent to a major in physical sciences for a bachelor's degree.

CHEM 524 Electrochemical Methods credit: 4 Hours.

Structure of the metal solution interface. Electrochemical and physical methods for probing metal/solution interface. Electroanalysis. Principles of electrochemical instrumentation for electroanalysis. Electrode materials. Electrochemical surface science and electrocatalysis. Prerequisite: General physics and chemistry equivalent to a major for a bachelor's degree.

CHEM 525 Analytical Chemistry Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is analytical chemistry. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 526 Topics in Analytical Chemistry credit: 2 Hours.

Recent advances in measurement science and the application of analytical chemistry to other sciences; designed to acquaint students with techniques and applications not covered in other courses. May be repeated. Prerequisite: Consent of instructor.

CHEM 530 Structure and Spectroscopy credit: 4 Hours.

Advanced survey of structure determination in organic chemistry with emphasis on NMR, IR, UV and mass spectroscopy. Prerequisite: CHEM 332 or CHEM 436.

CHEM 532 Physical Organic Chemistry credit: 4 Hours.

Advanced survey of physical organic chemistry. The emphasis is on structure and bonding in organic compounds; scope of reaction mechanisms, including reactive intermediates and how these mechanisms and intermediates are studied; and writing reasonable organic reaction mechanisms. Prerequisite: CHEM 332 or CHEM 436 and one year of physical chemistry.

CHEM 534 Advanced Organic Synthesis credit: 4 Hours.

Advanced survey of organic chemistry with emphasis on synthesis of organic compounds. Course content includes survey of important synthetic reactions, construction of fundamental subunits and illustrations of strategy and synthetic analysis. Prerequisite: CHEM 332 or CHEM 436.

CHEM 535 Organic Chemistry Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is organic chemistry. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 536 Organic Chemistry Research credit: 1 Hour.

Lecture course on research techniques in organic chemistry. Approved for letter and S/U grading. Prerequisite: Consent of instructor.

CHEM 538 Topics in Organic Chemistry credit: 2 to 4 Hours.

Advanced course dealing with subject matter not ordinarily covered by regularly scheduled courses, such as natural product synthesis and biosynthesis, organic photochemistry, chemistry of special families of organic compounds, etc. May be repeated. Prerequisite: CHEM 532 and CHEM 534, both of which may be taken concurrently.

CHEM 540 Quantum Mechanics credit: 4 Hours.

The sequence, CHEM 540 and CHEM 542, is designed to give seniors and graduate students a unified treatment of quantum mechanics and spectroscopy on an advanced level. CHEM 540 covers the principles of formalism of quantum mechanics, as well as the solution of the Schrodinger equation for models and simple chemical systems. Prerequisite: CHEM 442 or equivalent.

CHEM 542 Quantum Mech and Spectroscopy credit: 4 Hours.

Continuation of CHEM 540. Focusing on molecular spectroscopy, nonlinear spectroscopy, kinetics and application of quantum mechanics to dissipative systems. Prerequisite: CHEM 540.

CHEM 544 Statistical Thermodynamics credit: 4 Hours.

Fundamentals of thermodynamics and statistical mechanics, covering equilibria, thermodynamic transforms, phase transitions, ensembles and non-equilibrium statistical mechanics, from single molecules to complex biological systems. Prerequisite: CHEM 442 and CHEM 444, or equivalent.

CHEM 545 Physical Chemistry Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is physical chemistry. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 546 Advanced Statistical Mechanics credit: 4 Hours.

Fundamentals of equilibrium statistical mechanics with selected applications to interacting classical fluids: dense gases, solutions, liquids, plasmas, and ionic solutions; introduction to nonequilibrium statistical mechanics and linear response theory. Prerequisite: CHEM 540 and CHEM 544, or equivalent, or consent of instructor.

CHEM 548 Molecular Electronic Structure credit: 4 Hours.

Theoretical basis of the electronic structure of atoms and molecules; molecular orbital concepts and self-consistent field theory; angular momentum and the full rotation group; electron correlation effects; and applications to electronic spectroscopy of organic molecules, detailed descriptions of chemical reactions, and molecular properties. Prerequisite: CHEM 540.

CHEM 550 Advanced Quantum Dynamics credit: 4 Hours.

The quantum mechanical and semi-classical description of time-dependent processes, including discussions of the time-dependent Schrodinger equation, approximations, interaction of matter with radiation, wave packets, elastic and inelastic scattering, and relaxation phenomena. Prerequisite: Concurrent registration in CHEM 540 or consent of instructor.

CHEM 554 Topics in Physical Chemistry credit: 2 or 4 Hours.

Advanced course dealing with a subject not ordinarily covered by regularly scheduled courses, such as molecular spectroscopy, statistical mechanics, radiation and hot-atom chemistry, molecular quantum mechanics, radio-frequency spectroscopy, advanced experimental methods, kinetics of irreversible processes and cooperative phenomena, etc. May be repeated. Prerequisite: Consent of instructor.

CHEM 570 Concepts in Chemical Biology credit: 4 Hours.

An overview of the concepts and methods utilized in research at the interface of chemistry and biology, and their application to contemporary problems in biological chemistry. Specific topics covered include, but are not limited to, chemical genetics, bioconjugation reactions, combinatorial chemistry, high-throughput screening, identifying biological targets of small-molecule compounds, combinatorial biosynthesis, sequence-specific DNA-binding compounds, activity-based protein profiling, anti-cancer agents, targeted therapeutics, phage display, and yeast-hybrid systems. Prerequisite: One year (two semesters) of undergraduate organic chemistry is required. One semester of undergraduate biochemistry or molecular biology is preferred.

CHEM 571 Chemical Biology Laboratory credit: 4 Hours.

Laboratory course in advanced state-of-the-art experimental techniques used to investigate problems at the interface of chemistry and biology. Specific topics include, but are not limited to, solid-phase peptide synthesis, native chemical ligation and expressed protein ligation, protein expression and analysis, enzyme kinetics and inhibition, high-throughput screening, various methods for examining biomolecular interactions, radiolabeling, mammalian cell biology, fluorescence microscopy, and flow cytometry. Prerequisite: One year (two semesters) of undergraduate organic chemistry is required. One semester of undergraduate biochemistry or molecular biology is preferred.

CHEM 572 Enzyme Reaction Mechanisms credit: 3 or 4 Hours.

Introduction to the catalytic strategies used by enzymes for accelerating chemical reactions using a combination of kinetics, enzymology, and structural information. Application of gene databases to infer evolutionary relationships among catalytic mechanisms. Same as MCB 553. Prerequisite: Two semesters of undergraduate organic chemistry (CHEM 232 or CHEM 236 and CHEM 332 or CHEM 436) or consent of instructor.

CHEM 575 Chemical Biology Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is chemical biology. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 576 Computational Chemical Biology credit: 4 Hours.

Hands-on introduction to the simulation of biological molecules and bioinformatics. Topics included the principles of molecular modeling, molecular dynamics and monte carlo simulations, structure prediction in the context of structural and functional genomics, and the assembly of integrated biological systems. Course counts towards the CSE option. Same as BIOP 576 and CSE 576. 4 graduate hours. No professional credit. Prerequisite: One semester of undergraduate biochemistry and statistical thermodynamics or consent of instructor. Recommended: proficiency in Matlab and CS 101 or equivalent.

CHEM 578 Combinatorial Chemistry credit: 4 Hours.

All aspects of combinatorial chemistry, the synthesis of multiple compounds in a rapid fashion, will be covered. Examples of combinatorial biology will also be discussed. Prerequisite: Chemistry graduate students or two semesters of undergraduate organic chemistry.

CHEM 582 Chemical Kinetics & Catalysis credit: 4 Hours.

Same as CHBE 551. See CHBE 551.

CHEM 584 Introduction to Materials Chem credit: 4 Hours.

Processing of ceramics, metals, polymers, and semiconductors, both traditional and advanced, and their mechanical, electrical, magnetic, optical and thermal properties.

CHEM 585 Materials Chemistry Seminar credit: 1 Hour.

Required of all Chemistry graduate students whose area is materials chemistry. Prerequisite: Enrollment is allowed only by second-year graduate students who are presenting their Ph.D. literature seminar during that semester. Undergraduate students are not eligible to enroll in this course.

CHEM 586 Surface Chemistry credit: 4 Hours.

Same as CHBE 553. See CHBE 553.

CHEM 588 Physical Methods Mat Chem credit: 4 Hours.

Includes physical techniques for characterization in materials chemistry, including thermal analysis, electron microscopy, microprobe analysis and electron spectroscopies, adsorption and surface area measurements, and X-ray powder diffraction.

CHEM 590 Special Topics in Chemistry credit: 1 to 4 Hours.

Designed for students majoring or minoring in chemistry who wish to undertake individual studies of a non-research nature under the direction of a faculty member of the department. Approved for both letter and S/U grading. Prerequisite: Consent of instructor and written approval of department head. Staff for the course is the same as for CHEM 599.

CHEM 592 Preparing Graduate Fellowships credit: 1 Hour.

This course assists first- and second-year graduate students as well as a selected few senior undergraduate students in their efforts to obtain external grants and fellowships. Using the National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP) as an example, the course provides the students with general information and guidance about preparing grant applications. Each student will prepare a complete application package, which can be submitted to the NSF GRFP at the end of the course, although such submission is optional. Approved for S/U grading only. Prerequisite: For first- and second-year graduate students in Chemistry. Some senior undergraduate students who have high GPA and research experience in faculty laboratories may enroll with the instructor's approval.

CHEM 599 Thesis Research credit: 0 to 16 Hours.

Candidates for the master's degree who elect research are required to present a thesis. A thesis is always required of students working toward the degree of Doctor of Philosophy. Not all candidates for thesis work necessarily are accepted. Any student whose major is in a department other than chemistry or chemical engineering must receive permission from the head of the Department of Chemistry to register in this course. Approved for S/U grading only. May be repeated in separate terms. During Summer terms, this course can only be taken for 0 to 8 hours.

Chinese (CHIN)

CHIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHIN>)

Courses

CHIN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CHIN 201 Elementary Chinese I credit: 5 Hours.

Introduction to Mandarin Chinese, including basic skills in speaking, reading, and writing. Not open to students with a background in Chinese language.

CHIN 202 Elementary Chinese II credit: 5 Hours.

Continuation of CHIN 201. Prerequisite: CHIN 201.

CHIN 203 Intermediate Chinese I credit: 5 Hours.

First term of second year of the Chinese language, including drill for more advanced conversational fluency; introduction to a greater variety of styles and levels of discourse and usage; and increasing study of the written language and more formal grammar. Prerequisite: CHIN 202 or equivalent.

CHIN 204 Intermediate Chinese II credit: 5 Hours.

Continuation of CHIN 203. Concentration on ability to engage in fluent discourse, on comprehensive grammatical knowledge, and on ability to read ordinary simple text in Chinese. Prerequisite: CHIN 203 or equivalent.

CHIN 221 Elementary Spoken Mandarin I credit: 4 Hours.

For non-majors who want to develop a basic competence in spoken Mandarin Chinese. Emphasizes the development of pronunciation, vocabulary and grammar skills with a concurrent emphasis on mastery of Pinyin phonetic orthography. Credit is not given for both this course and CHIN 201 or CHIN 202.

CHIN 222 Elementary Spoken Mandarin II credit: 4 Hours.

Continuation of CHIN 221. Emphasizes development of pronunciation, vocabulary and grammar skills, with a concurrent emphasis on mastery of Pinyin phonetic orthography. Credit is not given for both this course and CHIN 201 or CHIN 202. Prerequisite: CHIN 221.

CHIN 241 Chinese Reading and Writing credit: 4 Hours.

Students with a basic background in spoken Mandarin will help develop their ability to read and write Chinese characters. This course fulfills the language requirement for those programs with a two-term sequence. Successful completion of CHIN 241 and CHIN 242 fulfills the Liberal Arts and Science foreign language requirement. Credit is not given for both this course and CHIN 201 or CHIN 202. Prerequisite: CHIN 222, or speaking proficiency as determined by placement test.

CHIN 242 Chinese Reading and Writing credit: 4 Hours.

Continuation of CHIN 241. This course fulfills the foreign language requirement for those programs with a three- or four-term requirement. Credit is not given for both this course and CHIN 203 or CHIN 204. Prerequisite: CHIN 241, or proficiency as determined by placement test.

CHIN 305 Advanced Chinese I credit: 5 Hours.

An advanced-level course that emphasizes rapid reading, vocabulary acquisition, and newspaper reading. Prerequisite: CHIN 204 or CHIN 242.

CHIN 306 Advanced Chinese II credit: 5 Hours.

Continuation of CHIN 305. This course fulfills the language requirement for the undergraduate major in Chinese. Prerequisite: CHIN 305.

CHIN 407 Intro to Classical Chinese credit: 3 or 4 Hours.

Introduction to the classical literary language, style, and structural patterns as reflected in the Confucian classics and other literary, philosophical, and historical texts. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 202 or equivalent.

CHIN 408 Readings in Literary Chinese credit: 3 or 4 Hours.

Readings in texts selected from the Confucian classics and other literary, philosophical, and historical texts. Attention is given to linguistic patterns and philosophical concepts and to problems of translation. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 407 or equivalent.

CHIN 409 Social Science Rdgs Chinese credit: 3 or 4 Hours.

Reading and translation of selected Chinese texts in the social sciences with emphasis on specialized terminology and prose style. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours, or 12 graduate hours. Prerequisite: Three years of modern Chinese.

CHIN 440 Fourth-Year Chinese I credit: 3 or 4 Hours.

The focus of this course is on reading and discussing modern and pre-modern Chinese literary selections in Chinese. Students continue to develop dictionary, literary and writing skills begun at the advanced (305-306) levels. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 306 or equivalent.

CHIN 441 Fourth-Year Chinese II credit: 3 or 4 Hours.

Continuation of CHIN 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: CHIN 440 or equivalent.

CHIN 477 Chin Orth & Grm for Lng Tchg credit: 3 Hours.

Chinese orthography and grammar for language teaching. Teaching Mandarin Chinese in an English speaking environment. Covers the Chinese writing and sound systems, vocabulary, grammar, dialects and review available teaching materials. Course meets for the first six weeks of the semester only. 3 undergraduate hours. No graduate credit. Prerequisite: CHIN 441 or equivalent.

CHIN 490 Readings in Chinese Lit credit: 3 or 4 Hours.

Guided readings in Chinese literature in the vernacular with regular individual conferences and a paper. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Reading knowledge of Chinese and consent of instructor.

CHIN 499 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in Chinese language, literature, and civilization and in other academic areas appropriate to the student's course of study. 0 to 18 undergraduate hours. 0 graduate hours. May be repeated to a maximum of 32 hours per academic year. Prerequisite: Junior standing and a GPA of 2.5.

Civil and Environ Engineering (CEE)

CEE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CEE>)

Courses

CEE 195 About Civil Engineering credit: 1 Hour.

Civil engineering orientation including historical developments, education requirements, relation to science, professional practice, and specialties within the profession.

CEE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CEE 201 Systems Engrg & Economics credit: 3 Hours.

Introduction to the formulation and solution of civil engineering problems. Major topics: engineering economy, mathematical modeling, and optimization. Application of techniques, including classical optimization, linear and nonlinear programming, network theory, critical path methods, simulation, decision theory, and dynamic programming to a variety of civil engineering problems. Credit is not given for both CEE 201 and IE 310. Prerequisite: MATH 231; credit or concurrent registration in MATH 225.

CEE 202 Engineering Risk & Uncertainty credit: 3 Hours.

Identification and modeling of non-deterministic problems in civil engineering design and decision making. Development of stochastic concepts and simulation models, and their relevance to real design and decision problems in various areas of civil engineering. Credit is not given for both CEE 202 and IE 300. Prerequisite: Recommended: Credit or concurrent registration in MATH 241.

CEE 300 Behavior of Materials credit: 4 Hours.

Macroscopic mechanical behavior in terms of phenomena at the nanometer and micrometer levels for the three types of engineering materials (metals, ceramics, and polymers) with emphasis on specific materials used in civil engineering – steel, rocks, clay, portland cement concrete, asphaltic concrete, and wood. Same as TAM 324. Credit is not given for both CEE 300 and either ME 330 or MSE 280. Prerequisite: Completion of Composition I general education requirement; CHEM 104; TAM 251.

CEE 310 Transportation Engineering credit: 3 Hours.

Design, planning, operation, management, and maintenance of transportation systems; integrated multi-modal transportation systems (highways, air, rail, etc.); layout of highways, airports, and railroads with traffic flow models, capacity analysis, and safety. Design of facilities and systems with life cycle costing procedures and criteria for optimization. Prerequisite: TAM 251; credit or concurrent registration in CEE 202.

CEE 320 Construction Engineering credit: 3 Hours.

Construction engineering processes: contracting and bonding, planning and scheduling, estimating and project control, productivity models, and construction econometrics. Prerequisite: CEE 201; credit or concurrent registration in CS 101 and CEE 202.

CEE 330 Environmental Engineering credit: 3 Hours.

Sources, characteristics, transport, and effects of air and water contaminants; biological, chemical, and physical processes in water; atmospheric structure and composition; unit operations for air and water quality control; solid waste management; environmental quality standards. Prerequisite: CHEM 104.

CEE 340 Energy and Global Environment credit: 3 Hours.

Introduction to evaluating multiple impacts of engineering decisions. Topics include mass and chemical balances; effects of engineered systems on local and global environment, health, and risk; economic, consumer, and social considerations; provision of conventional and renewable energy; and future projections. Design projects emphasize making appropriate decisions by quantifying total impact and evaluating social environment. Approved for both letter and S/U grading. Prerequisite: PHYS 211; PHSY 213; CEE 201 or IE 310; CEE 202, IE 300, or STAT 200; or permission of instructor. CEE students only.

CEE 350 Water Resources Engineering credit: 3 Hours.

Quantitative aspects of water in the earth's environment and its engineering implications, including design and analysis of systems directly concerned with use and control of water; quantitative introduction to hydrology, hydraulic engineering, and water resources planning. Prerequisite: CEE 202; credit or concurrent registration in CEE 201.

CEE 360 Structural Engineering credit: 3 Hours.

Analysis, behavior, and design of trusses and framed structures under static loads; member forces in trusses, shear and moment diagrams, deflections, simple applications of the force method and slope-deflection; computer applications. Prerequisite: TAM 251.

CEE 380 Geotechnical Engineering credit: 3 Hours.

Classification of soils, compaction in the laboratory and in the field, soil exploration, boring and sampling, permeability of soils, one-dimensional settlement analyses, strength of soil, and foundations. Prerequisite: TAM 251.

CEE 398 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in civil and environmental engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. Approved for letter and S/U grading. May be repeated in the same or separate terms if topics vary.

CEE 401 Concrete Materials credit: 4 Hours.

Examination of the influence of constituent materials (cements, water, aggregates and admixtures) on the properties of fresh and hardened concrete, concrete mix design, handling and placement of concrete, and behavior of concrete under various types of loading and environment. Laboratory exercises utilize standard concrete test methods. Field trips are held during some scheduled laboratory sessions. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 300.

CEE 405 Asphalt Materials I credit: 3 or 4 Hours.

Properties and control testing of bituminous materials, aggregates for bituminous mixtures, and analysis and design of asphalt concrete and liquid asphalt cold mixtures; structural properties of bituminous mixes; surface treatment design; recycling of mixtures. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 406 Pavement Design I credit: 3 or 4 Hours.

Analysis, behavior, performance, and structural design of highway flexible and rigid pavements; climate factors, drainage, traffic loading analysis, and life cycle cost analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 407 Airport Design credit: 3 or 4 Hours.

Basic principles of airport facilities design to include aircraft operational characteristics, noise, site selection, land use compatibility, operational area, ground access and egress, terminals, ground service areas, airport capacity, and special types of airports. 3 undergraduate hours. 3 or 4 graduate hours.

CEE 408 Railroad Transportation Engrg credit: 3 or 4 Hours.

Principles and analysis of railroad transportation efficiency, economics, energy, and engineering; effect on production and markets. Railroad infrastructure; locomotive and rolling stock design, function, and operation. Computation of train speed, power, and acceleration requirements; railway traffic control and signaling. Quantitative analytical tools for rail-transportation decision-making and optimization. Field trip to observe railroad infrastructure, equipment and operations. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 409 Railroad Track Engineering credit: 3 or 4 Hours.

Railroad track engineering concepts including track component and system design, construction, evaluation, maintenance, load distribution, and wheel-rail interaction. Design and analysis tools for railroad track engineering and maintenance. Field trip to observe railroad track system and components. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 410 Railway Signaling & Control credit: 3 or 4 Hours.

Railway traffic control and signaling systems; train performance and scheduling tools; analysis of temporal and spatial separation of trains for safety and efficiency; train movement authority and operating rules, track circuit and wireless train position monitoring technology; interlocking design; railroad capacity modeling tools; economic analysis of traffic control system design, optimization, and selection. Field trip to observe signal system infrastructure and railway traffic operations control center. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 411 RR Project Design & Constr credit: 3 or 4 Hours.

Critical elements in the development and planning of railroad construction projects; project economic justification; route alternative analysis procedures; cost estimation; site civil design; computer-aided track design; surveying; construction management; construction procedures for typical railroad projects. Design project covering a typical railroad capital construction projects. Field trip to observe the construction of a railroad capital project. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 412 High-Speed Rail Engineering credit: 3 or 4 Hours.

Development, engineering, design and construction of high-speed rail (HSR) passenger transport systems with particular emphasis on the unique engineering elements of HSR technology. Key elements of HSR systems and subsystems including: core systems (trains, power, signal, communication and control), track system and civil infrastructure (earthwork, bridges, viaducts and tunnels). Also covered are basic design and construction of HSR stations and rolling stock maintenance facilities. 3 undergraduate hours. 4 graduate hours.

CEE 415 Geometric Design of Roads credit: 4 Hours.

Highway classification; analysis of factors in developing a transportation facility; highway geometrics design and safety standards; roadway design element; human factors in roadway design; roadway location principles; intersection, interchange, and ramp design; drainage factors. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 310.

CEE 416 Traffic Capacity Analysis credit: 3 or 4 Hours.

Fundamentals of traffic engineering; analysis of traffic stream characteristics; capacity of urban and rural highways; design and analysis of traffic signals and intersections; traffic control; traffic impact studies; traffic accidents. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 310.

CEE 417 Urban Transportation Planning credit: 4 Hours.

Same as UP 430. See UP 430.

CEE 418 Public Transportation Systems credit: 3 or 4 Hours.

Transit systems basics, demand issues, design standards, economic and sustainability implications. Transit service planning for shuttle, corridor, and network systems, hybrid hierarchical systems, paratransit and demand-responsive services. Management of transit systems, fleet operations, and crew scheduling. Operational issues, vehicle movement, headway and schedule control. 3 undergraduate hours. 4 graduate hours. Prerequisite: CEE 310 or equivalent.

CEE 420 Construction Productivity credit: 3 or 4 Hours.

Application of scientific principles to the measurement and forecasting of productivity in construction engineering. Conceptual and mathematical formulation of labor, equipment, and material factors affecting productivity. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 421 Construction Planning credit: 3 or 4 Hours.

Project definition; scheduling and control models; material, labor, and equipment allocation; optimal schedules; project organization; documentation and reporting systems; management and control. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 422 Construction Cost Analysis credit: 3 or 4 Hours.

Application of scientific principles to costs and estimates of costs in construction engineering; concepts and statistical measurements of the factors involved in direct costs, general overhead costs, cost markups, and profits; the fundamentals of cost recording for construction cost accounts and cost controls. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 320.

CEE 424 Sustainable Const Methods credit: 4 Hours.

Identification of cutting edge sustainable construction materials, technologies, and project management strategies for use in the construction industry and evaluation of their potential to reduce the negative environmental impacts of construction activity. Examination of the current LEED for New Construction rating system, and case study analysis of highly successful recent "green construction projects" through student team assignments and presentations. Preparation for the LEED Green Associate professional licensing exam. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 320; two of CEE 420, CEE 421, or CEE 422.

CEE 430 Ecological Quality Engineering credit: 2 Hours.

Characteristics of rivers and lakes which affect the management of domestic and industrial wastewaters; chemical hazards assessment, surveillance and biomonitoring, and review of regulations governing effluents. 2 undergraduate hours. 2 graduate hours. Prerequisite: CEE 330.

CEE 432 Stream Ecology credit: 3 or 4 Hours.

Description of physical, chemical, and biological characteristics in streams and rivers including an integrated treatment of the environmental factors affecting the composition and distribution of biota; emphasizes the application of ecological principles in aquatic ecosystem protection and management. Same as IB 450. 3 undergraduate hours. 3 or 4 graduate hours.

CEE 433 Water Technology and Policy credit: 3 or 4 Hours.

This course will cover technical and social concepts of water and wastewater treatment; water resources; water law, policy, and economics; and water in integrated systems. Emphasis will be on the intersection between engineering and policy. Communication is an important element of this course: engineers will learn to "speak" policy via writing assignments, multimedia presentation, and briefings. Course activities include lecture, discussion, presentations, and field trips. 3 undergraduate hours. 4 graduate hours. Prerequisite: CEE 340 or CEE 350.

CEE 434 Environmental Systems I credit: 3 Hours.

Introduction to the concepts and applications of environmental systems analysis. Application of mathematical programming and modeling to the design, planning, and management of engineered environmental systems, regional environmental systems, and environmental policy. Economic analysis, including benefit-cost analysis and management strategies. Concepts of tradeoff, non-inferior sets, single- and multi-objective optimization. Practical application to case studies to convey an understanding of the complexity and data collection challenges of actual design practice. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 201 and CEE 330.

CEE 437 Water Quality Engineering credit: 3 Hours.

Fundamental theory underlying the unit processes utilized in the treatment of water for domestic and industrial usage, and in the treatment of domestic and industrial wastewaters. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 330; credit or concurrent registration in TAM 335.

CEE 438 Science & Environmental Policy credit: 3 Hours.

Environmental treaties, the role of science and scientists in managing the national and global environment, effective science communication, scientific assessments, and the use of quantitative tools to inform policy decisions. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 202 or IE 300, STAT 400, or equivalent introductory probability and statistics course. Senior and Graduate students.

CEE 440 Fate Cleanup Environ Pollutant credit: 4 Hours.

Investigation of the regulatory and technical issues affecting solid and hazardous waste management, with an emphasis on the principles governing the transport, fate, and remediation of solid and hazardous waste in the subsurface, including advection, dispersion, sorption, interphase mass transfer, and transformation reactions. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330.

CEE 442 Environmental Engineering Principles, Physical credit: 4 Hours.

Analysis of the physical principles which form the basis of many water and air quality-control operations; sedimentation, filtration, inertial separations, flocculation, mixing, and principles of reactor design; energy flows, thermal pollution, earth's energy balance. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 437.

CEE 443 Env Eng Principles, Chemical credit: 4 Hours.

Application of principles of chemical equilibrium and chemical kinetics to air and water quality. Thermodynamics, kinetics, acid-base chemistry, complexation, precipitation, dissolution, and oxidation-reduction. Applications. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 437.

CEE 444 Env Eng Principles, Biological credit: 4 Hours.

Application of principles of biochemistry and microbiology to air and water quality, wastes, and their engineering management; biological mediated changes in water and in domestic and industrial wastewater. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 443.

CEE 445 Air Quality Modeling credit: 4 Hours.

Practical and advanced approaches to pollutant transport and fate in the environment with emphasis on air pollution modeling, including aspects of pollutant dispersion, chemical transformation, and loss. Gaussian plume, chemical mass balance, chemical reaction, grid and trajectory models. Evaluation of models and the development of efficient air quality management strategies. Applications with use of regulatory USEPA air quality models. Same as ATMS 425. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330 and credit or concurrent registration in TAM 335; or ATMS 302.

CEE 446 Air Quality Engineering credit: 4 Hours.

Description and application of chemical and physical principles related to air pollutants, aerosol mechanics, attenuation of light in the atmosphere, air quality regulation, generation of air pollutants, methods to remove gaseous and particulate pollutants from gas streams, and atmospheric dispersion. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 330; credit or concurrent registration in TAM 335.

CEE 447 Atmospheric Chemistry credit: 4 Hours.

Same as ATMS 420. See ATMS 420.

CEE 449 Environmental Engineering Lab credit: 3 Hours.

Traditional analysis tools and techniques in analysis, control, and design of natural and engineered environmental systems including air, water, wastewater, solid and hazardous waste, and ecological systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 437 or CEE 446.

CEE 450 Surface Hydrology credit: 3 Hours.

Descriptive and quantitative hydrology dealing with the distribution, circulation, and storage of water on the earth's surface; principles of hydrologic processes; methods of analysis and their applications to engineering and environmental problems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 350.

CEE 451 Environmental Fluid Mechanics credit: 3 Hours.

Incompressible fluid mechanics with particular emphasis on topics in analysis and applications in civil engineering areas; principles of continuity, momentum and energy, kinematics of flow and stream functions, potential flow, laminar motion, turbulence, and boundary-layer theory. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335.

CEE 452 Hydraulic Analysis and Design credit: 3 Hours.

Hydraulic analysis and design of engineering systems: closed conduits and pipe networks; hydraulic structures, including spillways, stilling basins, and embankment seepage; selection and installation of hydraulic machinery. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 335.

CEE 453 Urban Hydrology and Hydraulics credit: 4 Hours.

Hydraulic analysis and design of urban, highway, airport, and small rural watershed drainage problems; discussion of overland and drainage channel flows; hydraulics of storm-drain systems and culverts; determination of design flow; runoff for highways, airports, and urban areas; design of drainage gutters, channels, sewer networks, and culverts. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 350.

CEE 457 Groundwater credit: 3 Hours.

Physical properties of groundwater and aquifers, principles and fundamental equations of porous media flow and mass transport, well hydraulics and pumping test analysis, role of groundwater in the hydrologic cycle, groundwater quality and contamination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 350 and TAM 335.

CEE 458 Water Resources Field Methods credit: 4 Hours.

Scientific principles of measurement technologies and protocols used for water-resources measurements and experimental design of field-scale water-resources and environmental studies. Planning field studies; instruments and protocols for surface-water, and water-quality sampling; description of data quality. One-half-day laboratory field trips to streamflow monitoring stations and groundwater monitoring wells nearby. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 350.

CEE 460 Steel Structures I credit: 3 Hours.

Introduction to the design of metal structures; behavior of members and their connections; theoretical, experimental, and practical bases for proportioning members and their connections. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 360.

CEE 461 Reinforced Concrete I credit: 3 Hours.

Strength, behavior, and design of reinforced concrete members subjected to moments, shear, and axial forces; emphasis on the influence of the material properties on behavior. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 360.

CEE 462 Steel Structures II credit: 3 or 4 Hours.

Metal members under combined loads; connections, welded and bolted; moment-resistant connections; plate girders, conventional behavior, and tension field action. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 460.

CEE 463 Reinforced Concrete II credit: 3 or 4 Hours.

Strength, behavior, and design of indeterminate reinforced concrete structures, with primary emphasis on slab systems; emphasis on the strength of slabs and on the available methods of design of slabs spanning in two directions, with or without supporting beams. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 465 Design of Structural Systems credit: 3 Hours.

Examination of the whole structural design process including definition of functional requirements, selection of structural scheme, formulation of design criteria, preliminary and computer-aided proportioning, and analysis of response, cost, and value. 3 undergraduate hours. No graduate credit. Prerequisite: Credit in either CEE 460 or CEE 461 with concurrent registration in the other.

CEE 467 Masonry Structures credit: 3 or 4 Hours.

Analysis, design, and construction of masonry structures. Mechanical properties of clay and concrete masonry units, mortar, and grout. Compressive, tensile, flexural, and shear behavior of masonry structural components. Strength and behavior of unreinforced bearing walls. Detailed design of reinforced masonry beams, columns, structural walls with and without openings, and complete lateral-force resisting building systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 468 Prestressed Concrete credit: 3 or 4 Hours.

Strength, behavior, and design of prestressed reinforced concrete members and structures, with primary emphasis on pretensioned, precast construction; emphasis on the necessary coordination between design and construction techniques in prestressing. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 461.

CEE 469 Wood Structures credit: 3 or 4 Hours.

Mechanical properties of wood, stress grades, and working stresses; effects of strength-reducing characteristics, moisture content, and duration of loading and causes of wood deterioration; glued-laminated timber and plywood; behavior and design of connections, beams, and beam-columns; design of buildings and bridges; other structural applications: trusses, rigid frames, arches, and pole-type buildings; prismatic plates and hyperbolic paraboloids. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 460 or CEE 461.

CEE 470 Structural Analysis credit: 4 Hours.

Direct stiffness method of structural analysis; fundamentals and algorithms; numerical analysis of plane trusses, grids and frames; virtual work and energy principles; finite element method for plane stress and plane strain. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CEE 470 and ME 471. Prerequisite: CEE 360.

CEE 471 Structural Mechanics credit: 3 or 4 Hours.

Beams under lateral load and thrust; beams on elastic foundations; virtual work and energy principles; principles of solid mechanics, stress and strain in three dimensions; static stability theory; torsion; computational methods. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 and TAM 251.

CEE 472 Structural Dynamics I credit: 3 or 4 Hours.

Analysis of the dynamic response of structures and structural components to transient loads and foundation excitation; single-degree-of-freedom and multi-degree-of-freedom systems; response spectrum concepts; simple inelastic structural systems; systems with distributed mass and flexibility. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 360, MATH 285, and TAM 212.

CEE 480 Foundation Engineering credit: 3 Hours.

Analysis and design of foundations, bearing capacity and settlement of foundations; stability of excavations and slopes; ground movements due to construction; analysis and design of excavations, retaining walls, slopes, and underground structures in soil and rock. 3 undergraduate hours. No graduate credit. Prerequisite: CEE 380.

CEE 483 Soil Mechanics and Behavior credit: 4 Hours.

Composition and structure of soil; water flow and hydraulic properties; stress in soil; compressibility behavior and properties of soils; consolidation and settlement analysis; shear strength of soils; compaction and unsaturated soils; experimental measurements. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 380.

CEE 484 Applied Soil Mechanics credit: 4 Hours.

Application of soil mechanics to earth pressures and retaining walls, stability of slopes, foundations for structures, excavations; construction considerations; instrumentation. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 483.

CEE 491 Decision and Risk Analysis credit: 3 or 4 Hours.

Development of modern statistical decision theory and risk analysis, and application of these concepts in civil engineering design and decision making; Bayesian statistical decision theory, decision tree, utility concepts, and multi-objective decision problems; modeling and analysis of uncertainties, practical risk evaluation, and formulation of risk-based design criteria, risk benefit trade-offs, and optimal decisions. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 202.

CEE 493 Sustainable Design Eng Tech credit: 4 Hours.

Quantitative sustainable design (QSD) and how to navigate engineering decision-making. Economic (life cycle costing, techno-economic assessment) and environmental (life cycle assessment, LCA) sustainability assessments, and how to link these tools to design decisions under uncertainty. Design of engineered technologies individually and in teams, with special attention to water infrastructure and bioenergy production. Semester-long design project that includes components from two of the following three CEE sub-disciplines: environmental, hydraulic, geotechnical. 4 undergraduate hours. 4 graduate hours. Prerequisite: CEE 340 or Graduate Standing.

CEE 495 Professional Practice credit: 0 Hours.

Series of lectures by outstanding authorities on the practice of civil engineering and its relations to economics, sociology, and other fields of human endeavor. 0 undergraduate hours. 0 graduate hours. Approved for S/U grading only.

CEE 497 Independent Study credit: 1 to 16 Hours.

Individual investigations or studies of any phase of civil engineering selected by the student and approved by the department. 1 to 4 undergraduate hours. 1 to 16 graduate hours. May be repeated. Prerequisite: Consent of instructor.

CEE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in civil and environmental engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

CEE 501 Constr Matls Characterization credit: 4 Hours.

Laboratory methods such as thermal analysis, optical microscopy, scanning electron microscopy, and x-ray diffraction used to characterize civil engineering materials. Theoretical background, calculation methods, models, underlying assumptions, and operation of the instrument are examined for each method. Prerequisite: CEE 300; one of CEE 401, CEE 405, CEE 483.

CEE 502 Advanced Cement Chemistry credit: 4 Hours.

Advanced topics in chemistry of portland cement, chemistry and microstructure of cements, chemical reactions that lead to hardening, chemistry and microstructure of hydrated cements, effects of chemical and mineral admixtures, and chemical issues involved in the engineering behavior of the cements. Prerequisite: CEE 401.

CEE 503 Constr Matls Deterioration credit: 4 Hours.

Fundamental processes for deterioration mechanisms of infrastructure materials: corrosion of metals including thermodynamics, kinetics, passivity and rate measurements; degradation of cement-based materials including freezing and thawing, ASR, sulfate attack, fire attack and steel reinforcement corrosion; degradation of organic materials including photo-oxidation and ageing. A research literature review exercise related to material degradation. Prerequisite: CEE 401 or CEE 405.

CEE 504 Infrastructure NDE Methods credit: 4 Hours.

Fundamental bases and methodologies of non-destructive evaluation (NDE) techniques for infrastructure materials: methods for steel including ultrasound, radiography, eddy-current and magnetic-particles; methods for concrete including sounding, semi-destructive, ultrasound, seismic, impact-echo, impulse-response, ground-penetrating radar, infrared-thermography, and nuclear; planning and carrying out NDE structural investigations. Weekly laboratory sessions, a research paper, and an associated presentation related to NDE required. Prerequisite: CEE 401 or CEE 405.

CEE 506 Pavement Design II credit: 4 Hours.

Development of layered elastic and plate theory models for area analysis of pavement systems; performance prediction of flexible and rigid pavements; characterization of aircraft traffic; design of airfield pavement systems; construction material fatigue and failure criteria (strength theory and fracture mechanics); industrial floor and reinforced concrete slab design; climatic factors. Prerequisite: CEE 406.

CEE 507 Repair of Civil Infrastructure credit: 4 Hours.

Science related to material decay and testing methodology of high quality civil infrastructure including transportation systems, structures, and underground sewers and pipelines. Methods for condition assessment and approaches for selecting compatible materials to be used in repair. Specific emphasis on material interfaces which impact the quality of adhesion, structural load transfer, sealing performance and durability relative to surface preparation. Case studies illustrating the application of sound engineering practice. Includes a field trip to Allerton Park and course project based on local infrastructure problems. 4 graduate hours. No professional credit. Prerequisite: CEE 401.

CEE 508 Pavement Evaluation and Rehab credit: 4 Hours.

Concepts and procedures for condition survey assessment; pavement evaluation by nondestructive testing and data analysis (roughness, friction, structural capacity, internal flaws, and thickness measurements); destructive testing, maintenance strategies, rehabilitation techniques of pavement systems for highways and airfields, cost analysis, preservation techniques. Prerequisite: CEE 406.

CEE 509 Transportation Soils credit: 4 Hours.

Occurrence and properties of surficial soils, soil classification systems, soil variability; subgrade evaluation procedures, repeated loading behavior of soils; soil compaction and field control; soil moisture, soil temperature, and frost action; soil trafficability and subgrade stability for transportation facility engineering. Prerequisite: CEE 483.

CEE 512 Logistics Systems Analysis credit: 4 Hours.

Planning, design and operations of complex logistics systems: logistics costs; production, transportation and distribution systems; lot-sizing; traveling salesman problem (TSP) and vehicle routing problem (VRP); transshipments; facility location problem; supply chain management and inventory control; order instability; analytical methods and practical solution techniques. Prerequisite: CEE 310 and IE 310.

CEE 515 Traffic Flow Theory credit: 4 Hours.

Fundamentals of traffic flow, traffic flow characteristics, statistical distributions of traffic flow parameter, traffic stream models, car following models, continuum flow models, shock wave analysis, queuing analysis, traffic flow models for intersections, network flow models and control, traffic simulation. Prerequisite: CEE 416 and knowledge of probability and statistics.

CEE 517 Traffic Signal Systems credit: 4 Hours.

Theory and application of concepts in traffic signal systems control, signal timing design, signal cabinet components, signal controllers, traffic signal theory and control, vehicle detection technologies, communication methods, interconnected rail-highway crossing signals, signal coordination, and signal systems network. Field trips to observe or utilize equipment in the Traffic Operations Lab (TOL) in ATREL or similar facilities. Prerequisite: CEE 416.

CEE 524 Construction Law credit: 4 Hours.

Legal aspects of the construction process and the potential liability that engineers can incur through the design, and post-construction processes. Organization and operation of the American court system, contract formation, defenses, remedies, and typical areas of dispute, and design services contracts, torts, product liability, agency, business organizations, intellectual property, and risk managements. Mock trial of a recent construction-related case with the class serving as plaintiffs and defendants. Prerequisite: CEE 420, CEE 421, and CEE 422.

CEE 525 Construction Case Studies credit: 4 Hours.

Case studies of bridges, tunnels, buildings, transportation systems, heavy industrial construction, waterways, and marine structures in the context of construction engineering and management. Research, a team-oriented term project, presentations, and discussions in studio-style format. Prerequisite: Two of CEE 420, CEE 421, and CEE 422.

CEE 526 Construction Optimization credit: 4 Hours.

Optimizing construction project decisions during the planning and construction phases including the optimization of bid decisions; contractor and material supplier selection; site layout planning; tradeoffs among construction time, cost and quality; repetitive construction scheduling; resource allocation and leveling; and building sustainability. 4 graduate hours. No professional credit. Prerequisite: One of CEE 420, CEE 421 or CEE 422.

CEE 527 Constr Conflict Resolution credit: 4 Hours.

Basic theories and applications of dispute avoidance and resolution techniques in the construction industry. Mechanisms to promote collaborative environments and resolve disputes in construction projects; the different steps in the Dispute Resolution Ladder and the main features of a conflict management plan; case studies of practical applications of disputes avoidance and resolution techniques in the construction industry throughout the world. Prerequisite: One of CEE 420, CEE 421, CEE 422.

CEE 528 Construction Data Modeling credit: 4 Hours.

State-of-the-art research and literature in the construction data modeling domain. Fundamental techniques of construction data modeling; existing construction data representation approaches and specifications for the architecture, engineering, and construction domain; building information models; capabilities and limitation of data process models and representation approaches and techniques. Prerequisite: Two of CEE 420, CEE 421, CEE 422.

CEE 534 Surface Water Quality Modeling credit: 4 Hours.

Mathematical modeling of the movement and fate of pollutants and other substances in streams, lakes, and other natural water bodies. Development of one-, two-, and three-dimensional differential conservation equations, one-, two-, and three-dimensional steady-state and transient solutions. Finite difference, finite element, and finite particle methods. Lagrangian and Eulerian formulations, diffusion and dispersion tensors, numerical dispersion, and solution stability. Kinetic relationships describing important physical, chemical, and biochemical water constituent transformation phenomena. Field or laboratory experiment in model calibration and verification. Prerequisite: MATH 285, CEE 442, and CEE 451.

CEE 535 Environmental Systems II credit: 4 Hours.

Fundamental concepts of uncertainty, risk, and reliability applied to environmental and water resources decision making. Chance constraints, Markov and Monte Carlo modeling, geostatistics, unconditional and conditional simulation, genetic algorithms, neural networks, simulated annealing, and a review of relevant portions of basic probability and statistical theory. Many techniques are applied to a real-world environmental decision making problem initially developed in CEE 434. Prerequisite: CEE 202 and CEE 434.

CEE 537 Water Quality Control Proc I credit: 4 Hours.

Theory and basic design of processes used in water and wastewater treatment, including adsorption, ion exchange, chemical oxidation and reduction, disinfection, sedimentation, filtration, coagulation, flocculation, and chemical precipitation. Prerequisite: Credit or concurrent registration in CEE 442 and CEE 443.

CEE 538 Water Quality Control Proc II credit: 4 Hours.

Theory and its application for design and operation of processes used in water and wastewater treatment; emphasis is on biological treatment processes and related processes for gas transfer, sludge dewatering, sludge disposal, and solids separations. Prerequisite: CEE 442 and CEE 443; credit or concurrent registration in CEE 444.

CEE 540 Remediation Design credit: 4 Hours.

Evaluation and design of alternative treatment processes for hazardous waste sites contaminated with organic or metal wastes. Group design project due at the end of the term. Prerequisite: CEE 440.

CEE 543 Env Organic Chemistry credit: 4 Hours.

Molecular-scale processes that control the fate of organic contaminants in natural environments and engineered treatment systems, including partitioning between environmental phases (water, air, organic, and biological phases), sorption onto solids (soils, sediments, aerosol particles), and transformation reactions (chemical, photochemical, and biochemical). Emphasis on quantitative approaches for predicting contaminant fate using thermodynamic principles and molecular property descriptors. Prerequisite: CEE 443 or NRES 490.

CEE 544 Advanced Surface Science credit: 4 Hours.

The overall goal of this course is to provide an in-depth knowledge of surface science principles. The specific goals are to elaborate the classical theories, to identify their limitations from a fundamental level, and to provide the state-of-the-art extensions of classical theories, and alternative approaches based on recent literature. The course also seeks to provide students with state-of-the-art experimental approaches, and to provide a link between surface science and the student's research project or other interests, which is pursued through literature discussion in presentations and term paper. 4 graduate hours. No professional credit. Prerequisite: CEE 442.

CEE 545 Aerosol Sampling and Analysis credit: 4 Hours.

Principles of sampling for particles and gases in the field of air pollution; instrumental techniques relevant to the design of sampling systems used in process control, ambient air monitoring, and laboratory experiments; methods of sample analysis and their limitations. Same as ATMS 535. Prerequisite: CEE 446 and MATH 285.

CEE 546 Air Quality Control credit: 4 Hours.

Application of principles describing the generation, separation, and removal of air contaminants from gas streams generated by stationary sources. Typically includes local field trips to observe applications of the air quality control devices. Prerequisite: CEE 442 and CEE 446.

CEE 548 Scientific Writing in CEE credit: 3 Hours.

Advanced writing course covering topics specific to scientific writing, with emphasis on proposals, manuscripts, and peer review. Prerequisite: CEE 444, CEE 599.

CEE 550 Hydroclimatology credit: 4 Hours.

Application of deterministic and probabilistic concepts to simulate and analyze hydrologic systems; discussion of the theory and application of linear and nonlinear, lumped, and distributed systems techniques in modeling the various phases of the hydrologic cycle. Prerequisite: CEE 450.

CEE 551 Open-Channel Hydraulics credit: 4 Hours.

Advanced hydraulics of free surface flow in rivers and open channels; discussion of theory, analytical and numerical solution techniques, and their applications to gradually and rapidly varied nonuniform flows, unsteady flow, and flow in open-channel networks. Prerequisite: CEE 451.

CEE 552 River Basin Management credit: 4 Hours.

Multidisciplinary knowledge (hydrology, economics, systems engineering, etc.) and methodological skills (optimization, simulation, etc.) for river basic management. River basin characterization-natural and social features; water availability assessment based on hydrology, infrastructure, and policy; environmental flow requirements; water demand management and microeconomics theory; integrated river basic management modeling. Prerequisite: CEE 350 and CEE 434.

CEE 553 River Morphodynamics credit: 4 Hours.

River morphology and characteristics of river sediment. Response of alluvial and bedrock rivers to changes in sediment supply, hydrology, and tectonics. Numerical modeling of river morphodynamics in gravel and sand bed rivers and deltas. Same as GEOL 573. Prerequisite: TAM 335.

CEE 554 Hydrologic Variability credit: 4 Hours.

Advanced quantitative treatment of catchment hydrology, focusing on analysis of observed hydrologic and hydroclimatic variability, and their interpretation in terms of the underlying processes. Concepts of heterogeneity and variability, scale and scaling, process change and process interactions will be emphasized. Theoretical foundations of hydrologic applications, such as flood estimation, water balance analyses, hydrologic modeling and associated scale problems will be discussed in sufficient detail to prepare students to undertake advanced research and professional practice. Prerequisite: CEE 450.

CEE 555 Mixing in Environmental Flows credit: 4 Hours.

Physical processes involved in transport of pollutants by water; turbulent diffusion and longitudinal dispersion in rivers, pipes, lakes, and the ocean; diffusion in turbulent jets, buoyant jets, and plumes. Prerequisite: MATH 285 and TAM 335.

CEE 557 Groundwater Modeling credit: 4 Hours.

Theory and application of numerical methods, finite differences and finite element, for solving the equations of groundwater flow and solute transport; transport of chemically reacting solutes; model calibration and verification. Prerequisite: CEE 457 and MATH 285.

CEE 559 Sediment Transport credit: 4 Hours.

Physical processes of transportation and deposition of sediment particles in liquid bodies with particular emphasis on fluvial sediment problems; sediment in desilting basins; reservoirs and delta formation; erosion; stable channel design; river morphology. Prerequisite: CEE 551.

CEE 560 Steel Structures III credit: 4 Hours.

Theories of ultimate behavior of metal structural members with emphasis on buckling and stability of members and frames; theory of torsion applied to beam torsion, lateral-torsional buckling, curved beams with emphasis on design criteria; post-buckling strength of plates and post-buckling versus column behavior. Prerequisite: CEE 462.

CEE 561 Reinforced Concrete III credit: 4 Hours.

Behavior of reinforced concrete members, including the relationships between behavior and building code requirements. Prerequisite: CEE 463.

CEE 570 Finite Element Methods credit: 4 Hours.

Theory and application of the finite element method; stiffness matrices for triangular, quadrilateral, and isoparametric elements; two- and three-dimensional elements; algorithms necessary for the assembly and solution; direct stress and plate bending problems for static, nonlinear buckling and dynamic load conditions; displacement, hybrid, and mixed models together with their origin in variational methods. Same as CSE 551. Prerequisite: CEE 471 or TAM 551.

CEE 571 Computational Plates & Shells credit: 4 Hours.

Classical and first-order shear deformable plate and shell models: assumptions, applicability, valid boundary conditions, analytical solutions; finite element methods for plates and shells: convergence, instabilities, shear and membrane locking, mixed methods for plates and shells; implementation and verification of finite elements for plates and shells; buckling of plates and shells; boundary layer effects; introduction to high order hierarchical plates and shell models and to isogeometric analysis of shells. Same as CSE 554. 4 graduate hours. No professional credit. Prerequisite: CEE 471 or TAM 551. Credit or current registration in CEE 570 Finite Element Methods or ME 471 Finite Element Analysis.

CEE 572 Earthquake Engineering credit: 4 Hours.

Source mechanisms, stress waves, and site response of earthquake shaking; effect on the built environment; nature of earthquake actions on structures; fundamental structural response characteristics of stiffness, strength, and ductility; representation of the earthquake input in static and dynamic structural analysis; modeling of steel and concrete structures under earthquake effects; outputs for safety assessment; comprehensive source-to-design actions project. Prerequisite: CEE 472.

CEE 573 Structural Dynamics II credit: 4 Hours.

Advanced concepts in structural dynamics and fundamentals of experimental structural dynamics. Modern system theory; data acquisition and analysis; digital signal processing; experimental model analysis theory and implementation; random vibration concepts; system identification; structural health monitoring and damage detection; pseudo-dynamic testing and model-based simulation; smart structures technology (e.g., smart sensors; passive, active, and semi-active control). Prerequisite: CEE 472.

CEE 574 Probabilistic Loads and Design credit: 4 Hours.

Application of probabilistic methods in describing and defining loads on structures with emphasis on the random fluctuation in time and space. Random vibration methods and applications to dynamic response of structures under wind and earthquake loads. Computer simulation of structural loads and responses. Probability-based safety criteria and review of current methods of selection of design loads and load combinations. Prerequisite: CEE 202 and CEE 472.

CEE 575 Fracture and Fatigue credit: 4 Hours.

Fatigue and fracture behavior of metallic structures and connections; fatigue and fracture mechanics theory; generation and use of laboratory data; background and application of international testing and assessment standards. Same as AE 521. Prerequisite: One of CEE 471, TAM 451, TAM 551.

CEE 576 Nonlinear Finite Elements credit: 4 Hours.

Nonlinear formulations in solid mechanics and nonlinear equation solving strategies; finite deformation (hyperelasticity) elastostatics and elastodynamics, semi-discrete weighted residual formulations, implicit and explicit time-stepping algorithms and stability analysis; theory of mixed finite element methods, strain-projection methods, and stabilized methods; mixed methods for nonlinear coupled-field problems. Same as CSE 552. Prerequisite: CEE 471 or TAM 445; CEE 470 or ME 471.

CEE 577 Computational Inelasticity credit: 4 Hours.

Theoretical foundations of inelasticity and advanced nonlinear material modeling techniques; constitutive models for inelastic response of metals, polymers, granular materials, biomaterials. Phenomenological models of viscoelasticity, viscoplasticity, elastoplasticity, porous plasticity and cyclic plasticity. Small-strain and finite-strain numerical implementation and code development. Same as CSE 553. Prerequisite: CEE 471 or TAM 551; CEE 570 or ME 471.

CEE 580 Excavation and Support Systems credit: 4 Hours.

Classical and modern earth pressure theories and their experimental justification; pressures and bases for design of retaining walls, bracing of open cuts, anchored bulkheads, cofferdams, tunnels, and culverts. Prerequisite: Credit or concurrent registration in CEE 484.

CEE 581 Dams, Embankments, and Slopes credit: 4 Hours.

Fundamentals of static and seismic slope stability and shear strength; seepage in composite sections and anisotropic materials; methods of stability analyses; mechanism of failure of natural and man-made slopes; compaction; field observations. 4 graduate hours. No professional credit. Prerequisite: CEE 483 - Applied Soil Mechanics.

CEE 582 Consolidation of Clays credit: 4 Hours.

Elastic solutions relevant to soil mechanics; permeability; general application of Terzaghi's theory of one-dimensional consolidation; advances in consolidation theories; mechanism of volume change; delayed and secondary compressibility and creep; theory of three-dimensional consolidation and solutions; radial flow and design of sand drains; analysis and control of settlement. Prerequisite: CEE 483.

CEE 583 Shear Strength of Soils credit: 4 Hours.

Physico-chemical properties of soils; fabric and structure of soil; mechanism of shearing resistance; residual shear strength of overconsolidated clays and clay shales; long-term shear strength of overconsolidated clays; Hvorslev shear strength parameters; undrained shear strength of clays. Prerequisite: CEE 483.

CEE 585 Deep Foundations credit: 4 Hours.

Ultimate capacities and load-deflection of piles and drilled shafts subjected to compressive loads, tensile loads, and lateral loads; effects of duration of load, soil-structure interaction; two- and three-dimensional analysis of pile groups with closely-spaced piles; effects of installation; inspection of deep foundations and full-scale field tests. Prerequisite: CEE 484.

CEE 586 Rock Mechanics and Behavior credit: 4 Hours.

Rock classification, stress and strain, elastic and inelastic deformation, failure criteria, rock-fluid interaction, poroelasticity, fluid flow in rock, thermal effect on rock deformation, geo-energy applications. 4 graduate hours. No professional credit. Prerequisite: CEE 483 and TAM 451.

CEE 587 Applied Rock Mechanics credit: 4 Hours.

Application of rock mechanics to engineering problems; shear strength of rock masses; dynamic and static stability of rock slopes; deformability of rock masses; design of pressure tunnel linings and dam foundations; controlled blasting and blasting vibrations; tunnel support; machine tunneling; design and construction of large underground openings; field instrumentation. Prerequisite: CEE 586.

CEE 588 Geotechnical Earthquake Engrg credit: 4 Hours.

Seismic hazard analysis, cyclic response of soils and rock; wave propagation through soil and local site effects; liquefaction and post liquefaction behavior, seismic soil-structure of foundations and underground structures, seismic design of retaining walls, underground structures and tunnels. Construction and machine vibrations. Blasting. Prerequisite: CEE 472 and CEE 483.

CEE 589 Computational Geomechanics credit: 4 Hours.

Numerical modeling, multi-phase domain equations, constitutive modeling of soils and rock, continuum and discrete element modeling. Upper and lower bound limit analysis methods. Simulation of soil-structure interaction problems and construction activities. Prerequisite: CEE 483. Recommended: one of AE 420, CEE 470, CSE 451, or ME 471.

CEE 590 Geotechnical Field Measurement credit: 4 Hours.

Discussion of observational method in geotechnical engineering. Historical, theoretical, experimental, and empirical development of in-situ tests and instrumentation in geotechnical engineering. Practical applications and limitation of field testing devices and instruments. Interpretation of test results and measurements for geotechnical site characterization. Discussion of data acquisition systems and data management. Introduction of emerging technologies in field testing and instrumentation. Prerequisite: CEE 483 and CEE 484.

CEE 592 Sustainable Urban Systems credit: 4 Hours.

Fundamental concepts of sustainability and resilience in urban systems, including the complex interactions among human, engineered, and natural systems. Project-based format, focusing on real-world problems solicited from government agencies, industry, and non-governmental organizations in one or more partnering cities. Students work in multidisciplinary teams with faculty advisors from multiple departments and colleges. Same as NRES 592 and UP 576. Prerequisite: One of ATMS 421, CEE 491, NRES 439, UP 456, UP 480, or equivalent course related to sustainable urban systems; and one of NRES 454, UP 418, GEOG 480, or equivalent course related to geographic information systems (GIS).

CEE 595 Seminar credit: 0 to 1 Hours.

Discussion of current topics in civil and environmental engineering and related fields by staff, students, and visiting lecturers. Approved for S/U grading only. May be repeated.

CEE 597 Independent Study credit: 1 to 16 Hours.

Individual investigations or studies of any phase of civil engineering selected by the student and approved by the adviser and the staff member who will supervise the investigation. May be repeated. Prerequisite: Consent of instructor.

CEE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in civil and environmental engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

CEE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Classical Civilization (CLCV)

CLCV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CLCV>)

Courses

CLCV 100 Vocab Building-GRK & LAT Roots credit: 2 Hours.

Vocabulary building assistance for students through an analysis of Greek and Latin roots, prefixes, and suffixes found in English.

CLCV 102 Medical Terms-GRK & LAT Roots credit: 3 Hours.

Introduction to the study of the Greek and Latin roots of contemporary medical terminology and to the linguistic patterns governing their combination and usage.

CLCV 111 Mythology of Greece and Rome credit: 2 Hours.

Study of the major myths of Greece and Rome and their impact upon later art, music, and literature. Credit is not given for both CLCV 111 and CLCV 115.

CLCV 114 Introduction to Greek Culture credit: 3 Hours.

Studies the social and cultural life in Greece during the classical period. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CLCV 115 Mythology of Greece and Rome credit: 3 Hours.

Studies the major myths of Greece and Rome and their impact upon later art, music, and literature. Shares two hours of lecture with CLCV 111; additional hour of lecture-discussion for a closer analysis of topics. Credit is not given for both CLCV 115 and CLCV 111.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 116 The Roman Achievement credit: 3 Hours.

Introduces Roman civilization through the study of the social and cultural life of ancient Rome.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 120 The Classical Tradition credit: 3 Hours.

Survey of the Greco-Roman tradition from late antiquity to the present. Examination of pagan culture in medieval Christianity and Islam, the literary tradition of the Troy tale, the rediscovery of Greek texts and the Florentine Renaissance, classical allusions in Shakespeare and Milton, the political foundation of the U.S. constitution, and the persistence of the classical tradition in contemporary American popular culture.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 131 Classical Archaeology, Greece credit: 3 Hours.

Introduction to the archaeology of ancient Greece and the Aegean world.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 132 Class Archaeology, Rome-Italy credit: 3 Hours.

Introduction to the archaeology of Italy and Rome to the fall of the Roman Empire.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 160 Ancient Greek & Roman Religion credit: 3 Hours.

Study of Greek and Roman Paganism and the rise of Christianity within that context. Readings are confined to ancient sources in English translation. Same as REL 160.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

CLCV 203 Ancient Philosophy credit: 4 Hours.

Same as PHIL 203. See PHIL 203.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

CLCV 206 Classical Allusions in Cinema credit: 3 Hours.

Examination of hundreds of contemporary films containing allusions to Greco-Roman antiquity. From the Matrix to Napoleon Dynamite, today's films often mention an ancient character, story or art object. These motifs are conscious and often essential to the theme of the film. We examine this interesting phenomenon by discussing film segments in class, reading about the history of the classical tradition in popular culture, and finally, forming into groups and examining specific types of films. Same as CWL 206. Prerequisite: CLCV 111 or CLCV 115 or consent of instructor.

CLCV 217 Greek Art credit: 3 Hours.

Same as ARTH 215. See ARTH 215.

CLCV 220 Origins of Western Literature credit: 3 Hours.

Origins and development of selected major genres in Western literature, emphasizing the relationship between classical representatives and their modern successors. Same as CWL 220. May be repeated as topic varies.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 221 The Heroic Tradition credit: 3 Hours.

Study of ancient epics and their relation to the social consciousness of their period; introductory and background lectures; and readings in the epic tradition of antiquity and its successors. Same as CWL 263. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 222 The Tragic Spirit credit: 3 Hours.

Readings in the tragic drama of Greece and Rome; a systematic study of the contents and development of this classical literary/dramatic genre. Same as CWL 264 and THEA 210. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 223 Myth,History,Fiction,Tradition credit: 3 Hours.

A unique examination of several legendary figures from Greco-Roman antiquity. Employing the disciplines of mythology, historiography, and the study of popular culture, the student develops a synchronic, multi-millennial understanding of such men and women as Achilles, Medea, Alexander the Great, and Cleopatra by studying primary ancient, medieval, Renaissance, and modern sources from such diverse perspectives as those of epic, lyric, and dramatic poetry, scientific and romantic biography, political propaganda, painting, popular fiction, and documentary television, as well as feature film.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

CLCV 225 Greco-Roman Demo, Econ, Cult credit: 3 Hours.

Greco-Roman Democracies, Economic Policies, and Cultures: Examines the ancient city-states of Athens and Rome; the creation, development and demise of their democratic governments, the relationship between their democracies and militarized empires as well as their economics and fiscal policies; and how these influenced or were represented by their cultural products - including literature, architecture, sculpture, and coinage. Examines the influence of Greco-Roman culture and political institutions on late-medieval and neo-Roman Renaissance city-states, as well as on the foundation of the United States.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 231 Development of Ancient Cities credit: 3 Hours.

Monuments and archaeological remains illustrating the development of the Greek and Roman city (polis). Same as ARTH 217. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

CLCV 232 Ancient Greek Sanctuaries credit: 3 Hours.

Survey of the archaeological remains of ancient Greek sanctuaries and their importance to ancient society and religion. Same as ARTH 218, and REL 232. Prerequisite: Sophomore standing or consent of instructor.

CLCV 240 Sex & Gender in Antiquity credit: 3 Hours.

Understanding of the place of women in ancient societies can be gained through the examination of the ways in which the ancients conceptualized sex and gender. The myths, religion, art and literature of Egypt, Greece, Rome and the Near East contain a wide array of representations of men and women, of their emotions, as well as of their social, legal and political status and relations. Same as CWL 262 and GWS 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

CLCV 291 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

CLCV 323 The Comic Imagination credit: 3 Hours.

Study of Greek and Roman comedies in their historical context, with attention to formal elements, stylistic features, aspects of performance and central themes and ideas. Same as CWL 322 and THEA 323.

Prerequisite: Sophomore standing or consent of the instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

CLCV 410 Ancient Egyptian & Greek Arch credit: 3 Hours.

Same as ARCH 410. See ARCH 410.

CLCV 411 Ancient Roman Architecture credit: 3 Hours.

Same as ARCH 411. See ARCH 411.

CLCV 415 Classical Rhetorics credit: 3 or 4 Hours.

Same as CMN 415 and MDVL 415. See CMN 415.

CLCV 430 History of Translation credit: 3 or 4 Hours.

Same as CWL 430, ENGL 486, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

CLCV 440 Roman Republic to 44 B C credit: 3 or 4 Hours.

Same as HIST 440. See HIST 440.

CLCV 443 The Archaeology of Greece credit: 3 Hours.

Monuments, material remains, and sculpture and other arts illustrating the development of Greek civilization to 323 B.C. Same as ARTH 415. 3 undergraduate hours. 3 graduate hours. Prerequisite: A course in ancient history, art, or language, or consent of instructor.

CLCV 444 The Archaeology of Italy credit: 3 Hours.

Monuments, material remains, and sculpture and other arts illustrating the development of Greco-Roman and other ancient Italian civilizations to 330 A. D. Same as ARTH 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: A course in ancient history, art, or language, or consent of instructor.

CLCV 490 Topics in Classical Literature credit: 3 or 4 Hours.

Study of selected topics in Greek and Latin literature in translation; content is variable. Same as CWL 490. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: A 200-level classical civilization course or consent of instructor.

CLCV 491 Topics Classic Arch & Civ credit: 3 or 4 Hours.

Study of selected topics; variable content. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

CLCV 492 Senior Thesis credit: 2 to 4 Hours.

Thesis and honors; for candidates for departmental distinction in classical civilization and for other seniors. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

CLCV 493 Independent Reading credit: 1 to 4 Hours.

Reading in selected fields in consultation with the instructor. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated up to 8 hours if topics vary. Prerequisite: 9 hours of CLCV classes. For majors and minors only.

CLCV 498 Senior Survey credit: 2 to 4 Hours.

For candidates for departmental distinction in the classics major. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

CLCV 515 Seminar in Ancient Art credit: 4 Hours.

Same as ARTH 515. See ARTH 515.

CLCV 520 Seminar in Class Archaeology credit: 4 Hours.

Problems in classical archaeology. Various topics in all fields of classical archaeology such as ancient topography, agricultural practices, ancient industries and crafts, and trade patterns as documented by pottery, will be offered in separate terms. Same as ARTH 520. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in Classics, Art History, Anthropology, Architecture, or History, or consent of instructor.

CLCV 550 Intro to Teaching of Classics credit: 4 Hours.

An introduction, designed for Classics Teaching Assistants, to teaching ancient Greek, Latin, and Classical Civilization courses. Prerequisite: Appointment as a Teaching Assistant in Classics or consent of instructor.

Committee on Inst Cooperation (CIC)

CIC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CIC>)

Courses

CIC 390 CIC Intercampus Reg credit: 0 to 18 Hours.

CIC 500 CIC Traveling Scholar credit: 0 to 20 Hours.

For students participating in the Traveling Scholar Program. 0 to 20 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated.

Communication (CMN)

CMN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CMN>)

Courses

CMN 101 Public Speaking credit: 3 Hours.

Preparation and presentation of short informative and persuasive speeches; emphasis on the selection and organization of material, methods of securing interest and attention, and the elements of delivery. Credit is not given for both CMN 101 and either CMN 111 or CMN 112.

CMN 102 Intro to Comm Theory & Res credit: 4 Hours.

Survey of the questions probed, the methods employed, and the current status of knowledge in the study of communication.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

CMN 111 Oral & Written Comm I credit: 3 Hours.

Principles and practice in communication; stress on fundamentals of critical thinking in writing and speaking. The campus rhetoric requirement is fulfilled by this course in conjunction with CMN 112. Credit is not given for both CMN 111 + CMN 112, and other courses that fulfill the Composition I requirement (i.e., RHET 100, RHET 101+RHET 102, RHET 103+RHET 104, RHET 105, ESL 114+ESL 115). Credit is also not given for both CMN 111+CMN 112, and CMN 101. CMN 111+CMN 112 cannot be taken by students who have completed the University's Composition I requirement.

This course satisfies the General Education Criteria for:
Composition I

CMN 112 Oral & Written Comm II credit: 3 Hours.

Continuation of Oral & Written Comm I; stress on deliberation and fundamentals of communication and public argument through speaking and writing. The campus rhetoric requirement is fulfilled by this course in conjunction with CMN 111. Credit is not given for both CMN 111+CMN 112 and other courses that fulfill the Composition I requirement (i.e., RHET 100; RHET 101+ RHET 102; RHET 103+RHET 104; RHET 105; ESL 114+ESL 115). Credit is also not given for both CMN 111+CMN 112 and CMN 101. CMN 111+CMN 112 may not be taken by students who have completed the University's Composition I requirement. Prerequisite: CMN 111.

This course satisfies the General Education Criteria for:
Composition I

CMN 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to Chancellors Scholars, Cohn Scholars and James Scholars. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

CMN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

May be repeated to a maximum of 6 hours.

CMN 204 Internship in Teaching Comm credit: 3 Hours.

Supervised experience in assisting in the teaching of an undergraduate course in communication; practice in preparing and presenting brief lectures, conducting activities within class, and assisting students outside of class. Prerequisite: Junior standing, cumulative 3.0 grade-point average, 3.5 grade-point average in Communication coursework, recommendation from an instructor, and approval by application.

CMN 210 Public Comm in Everyday Life credit: 3 Hours.

Introduces concepts useful for the critical analysis of public communication in everyday life. Drawing on communication theory and practice, especially theories of rhetoric, the course investigates techniques of persuasion, offers tools for critical analysis of public discourse, and considers the political and ethical implications of various forms of public communication.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CMN 211 Business Communication credit: 3 Hours.

Focus on relevant theory and research on communication strategies and skills vital to diverse business contexts. Topics include personal branding and self-marketing; job interviewing basics; business ethics; business writing; networking; professional etiquette and behaviors; and business presentations. Activities include presentations, written assignments, and practice interviews. Prerequisite: CMN 101.

CMN 212 Intro to Organizational Comm credit: 3 Hours.

Considers major theories, research questions, and approaches to organizational communication.

CMN 213 Small Group Communication credit: 3 Hours.

Considers major theories, processes, and practical measures contributing to effective communication in small group and team contexts. Credit is not given for CMN 113 and CMN 213.

CMN 215 Interviewing Principles & Practices credit: 3 Hours.

Provides a survey of communication-based interviewing theories and practices. Students will learn theoretical and practical principles related to major types of interviews, the ethics and legalities of interviewing, and apply this knowledge through repeated practice, as both an interviewer and interviewee, leading to competency in employment, informational, and persuasive scenarios. Credit is not given for both CMN 115 and CMN 215. Prerequisite: CMN 101 or CMN 111 and CMN 112.

CMN 220 Communicating Public Policy credit: 3 Hours.

Study of the nature of policy-oriented communication; analysis and formulation of positions on issues of professional, personal, or public interest; design and presentation of public policy messages addressed to varying tasks and audiences, with special emphasis on advanced writing skills. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

CMN 230 Intro to Interpersonal Comm credit: 3 Hours.

Study of communication theory and its application to interpersonal relationships; extensive discussion of problems of conflict and misunderstanding in personal affairs to facilitate the development of knowledge, insights, and skills in the processes of face-to-face interaction.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CMN 231 Communication and Conflict credit: 3 Hours.

Examines how people experience and manage conflict in both private and public settings. Units focus on conflict in interpersonal, small group, and organizational contexts.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

CMN 232 Intro to Intercultural Comm credit: 3 Hours.

Introduction to the study of intercultural communication in a variety of contexts, including domestic and international; examines theory and research to explain what happens when people from different cultural and linguistic backgrounds interact. Requires students to think critically about the ways in which "taken-for-granted" ways of thinking, acting, and interacting are culturally specific.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

CMN 260 Intro to Health Communication credit: 3 Hours.

Introduces theory and research on communication in health and illness contexts. Explores how messages from media, interpersonal, and organizational sources affect health beliefs and behaviors.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci
Cultural Studies - Western

CMN 275 Media, Money and Power credit: 3 Hours.

Describes the political economy of the media in the U.S. Acquaints students with a core understanding of how the media system operates, and with what effects, in a capitalist society. Examines the role of advertising, public relations, corporate concentration, and government regulation upon news reporting, entertainment, culture, and participatory democracy. Also examines issues related to the Internet, globalization, and public broadcasting.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

CMN 277 Intro to Mediated Comm credit: 4 Hours.

Survey of the history, structure, forms, and social effects of the American mass media.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

CMN 280 Comm Technology & Society credit: 3 Hours.

Introduction to theory and research on both old and new communication technologies; focus will be on how these technological systems develop and are used, and what implications of these systems have for culture and society.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

CMN 304 Communication Internship credit: 1 to 3 Hours.

Directed internship experience for Communication majors. Students must have consent of the Internship Coordinator. May be repeated in separate terms to a maximum of 6 hours.

CMN 310 The Rhetorical Tradition credit: 3 Hours.

Survey of major trends in the development of rhetorical theory from Homer to the present.

CMN 320 Comm Controversy Public Policy credit: 3 Hours.

Examines how public policy shapes American life, by providing an advanced analysis of the controversies, discourses and effects of public policy with a focus on sustainability issues. Explores the American landscape, energy sources, environment, food systems, political process, and government lobbying rules and reform. Provides in-depth analysis of the definitions and histories of public policy and the tensions between public and private spheres that shape it. Develops a fundamental understanding of public versus private spheres; analyzes and critiques how public policy shapes American historical and cultural landscapes; increases skillfulness in oral and written analysis of controversies, institutions, political and economic power brokers, and social norms. Prerequisite: CMN 220 or consent of instructor.

CMN 321 Strategies of Persuasion credit: 3 Hours.

Studies of powerful instances of public persuasion; students examine key means of public influence.

CMN 323 Argumentation credit: 3 Hours.

Study of the theory of argument, e.g., evidence, reasoning, and construction of briefs; practice in formal and informal forms of debate and public discourse on current public questions. Prerequisite: CMN 101.

CMN 325 Politics and the Media credit: 3 Hours.

Same as MACS 322 and PS 312. See PS 312.

CMN 326 Mass Media and the Audience credit: 3 Hours.

Presents information on how to conceptualize audiences, mass media use, and reception of media messages. Also examines the character of the audience experience, uses and gratifications of mass media, social cognition, and studies of audiences as interpretive communities.

CMN 336 Family Communication credit: 3 Hours.

Examines the nature and functions of communication in various family configurations (e.g. nuclear families, single-parent families, stepfamilies); discusses both problematic interaction patterns and links between family interaction and strong families.

CMN 338 Relationships and Technologies credit: 3 Hours.

Examines the uses, functions, and effects of communication technologies in personal relationships (e.g., friendships, dating relationships, families). Emphasis on contemporary and emerging modes of communication with some consideration of historical and enduring modes of interaction.

CMN 340 Visual Politics credit: 3 Hours.

Explores the role of visual images in U.S. culture, paying special attention to the ways that images function persuasively as political communication. Provides tools for analyzing historical and contemporary images and artifacts, such as photographs, prints, paintings, advertisements, and memorials. Emphasis on how visual images are used for remembering and memorializing; confronting and resisting; consuming and commodifying; governing and authorizing; and visualizing and informing.

CMN 345 Visual Media Effects credit: 3 Hours.

Provides an introduction to visual media effects in communication, and is intended for students with little or no experience with visual aspects of communication. Focuses on social scientific approaches to understanding visual media effects and theories of visual communication.

CMN 357 Intro to Conversation Analysis credit: 3 Hours.

Same as LING 357. See LING 357.

CMN 361 Storytelling as Oral Communication credit: 3 Hours.

Explores the role of traditional oral narrative in contemporary social life. Examines some major genres: folktales, family stories, personal growth narratives, professional autobiographical presentations, TED talks. Each of these genres will be examined in terms of content, context in a larger community of discourse, and performance demands. In addition, students will create and perform their own stories representing these genres.

CMN 362 Folklore as Communication credit: 3 Hours.

Study of unofficial, noncommercial and face-to-face modes of communication, called "folklore" or "vernacular culture." For purposes of this course, "folklore" includes speech, stories, legends, sayings, proverbs, customs, rituals and performances. Students will be asked to develop and use a variety of cultural description and documentation skills. The goal is to give students a strong sense of variety, persistence, and flexibility of traditional culture as it lives in the present, and practice in recording it, writing about it, and analyzing it.

CMN 368 Sexual Communication credit: 3 Hours.

Describes sex as a fundamental activity in the development and maintenance of human relationships. Communication about sex happens in a variety of interpersonal, group, organizational, and mediated contexts. Explores the many ways in which sexual communication intersects our personal, relational, cultural, and institutional norms and values. Topics will include social norms about sexual communication, sexual harassment, family communication about sex, sexual health education, doctor-patient communication about sex, and sex in the media and in advertising. Theory and research on communication processes will be used to elaborate how talk about sex can achieve multiple goals.

CMN 370 Political Economy of Communication credit: 3 Hours.

Addresses significant contemporary social issues from the perspective of the political economy of communication. Issues may include, but are not limited to, the influence of money on political communication, the role of the media in American attitudes toward racial inequalities, or the politics of science reporting. This course will feature a number of recent books on social problems in the United States that have a communication twist. Class-time will be focused on discussing the books. Prerequisite: Junior or senior standing required.

CMN 375 Popular Media and Culture credit: 3 Hours.

Using the critical lens of theories on race, class, gender, and sexuality, this class will investigate the complicated relations among popular media and culture, including how our everyday life and attitudes are thought to be shaped by the media, and how cultural systems can be said to inform the media. By exploring a wide range of media (e.g., film, television, music, the internet, and computer games), students will investigate the national, political, and personal dimensions of popular media and the varied ways in which media construct, reflect and intersect with specific cultural systems, identities, and classifications. May be repeated in separate terms to a maximum of 6 hours.

CMN 377 Propaganda and Modern Society credit: 3 Hours.

Traces the social, economic, and political underpinnings of propaganda and public relations. Examines the rise of corporate propaganda in the early 20th century and explores how these strategies were adapted by a wide range of social and political actors. The second part of the course discusses the above issues from contemporary perspectives. The role of WWI, WWII, and the more recent Iraqi war, in solidifying the role of government and commercial propaganda in society and the frequently blurry distinctions between government propaganda and commercial public relations will also be discussed. The relationship between propaganda, PR and the mass media will constitute a constant site of inquiry. This course focuses on theory, especially critical theory.

CMN 390 Individual Study credit: 1 to 3 Hours.

Individual investigation of special problems. May be repeated to a maximum of 6 hours. Prerequisite: Twelve hours of communication coursework; a grade-point average of 3.25; and consent of head of department.

CMN 396 Special Topics in Comm credit: 3 Hours.

Special topics in communication not treated in regularly scheduled courses. See Class Schedule for current topics. May be repeated as topics vary.

CMN 410 Workplace Comm Technology credit: 3 or 4 Hours.

Focuses on how communication technologies are designed, implemented, adopted, and used within and across organizations. Reviews a broad array of theories used to conceptualize technology in the workplace. Emphasis on how theory may be used to understand applications such as knowledge management, telecommuting, distributed work, and virtual organizations. Further focus on analyzing real-world cases to develop skills necessary for working in contemporary organizations. 3 undergraduate hours. 4 graduate hours.

CMN 411 Organizational Comm Assessment credit: 3 or 4 Hours.

Organizational communication theory applied to the assessment of communication practices in organizations; systematic procedures for diagnosing communication problems and facilitating effective communication in organizations. Extensive use of case studies. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 212.

CMN 412 Adv Organizational Comm credit: 3 or 4 Hours.

Advanced study of theory and research in organizational communication; considers such topics as communication networks, superior-subordinate communications, task-related and social information processing, and communicating with the external environment. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 212.

CMN 413 Adv Small Group Communication credit: 3 or 4 Hours.

Advanced study of theory, research, techniques, and training methods in interviewing and group discussion; emphasis on empirical research findings concerning communication processes in face-to-face groups. 3 undergraduate hours. 4 graduate hours.

CMN 415 Classical Rhetorics credit: 3 or 4 Hours.

Survey of the contributions to the theory and practice of rhetoric from Homer to the Renaissance. Same as CLCV 415 and MDVL 415. 3 undergraduate hours. 4 graduate hours.

CMN 416 Early Modern Rhetorics credit: 3 or 4 Hours.

Significant developments in European rhetorical theory from 1500 to the 20th Century. 3 undergraduate hours. 4 graduate hours.

CMN 417 Contemporary Rhetorics credit: 3 or 4 Hours.

Major contributors to rhetorical theory from I.A. Richards to the present. 3 undergraduate hours. 4 graduate hours.

CMN 421 Persuasion Theory & Research credit: 3 or 4 Hours.

Survey of major theories of persuasion, research on factors influencing persuasive effectiveness, and application to problems of persuasive discourse. 3 undergraduate hours. 4 graduate hours.

CMN 423 Rhetorical Criticism credit: 3 or 4 Hours.

Methods of interpreting and judging persuasive discourse with emphasis on political speaking and writing; extensive practice in criticism of rhetorical texts. 3 undergraduate hours. 4 graduate hours.

CMN 424 Campaigning to Win credit: 3 or 4 Hours.

Using a case study approach to illustrate how campaigns attempt to persuade and mobilize voters, students learn how to plan and manage effective political campaigns. Same as PS 411. 3 undergraduate hours. 4 graduate hours.

CMN 427 Children and the Media credit: 3 or 4 Hours.

Examines the role of the mass media in the lives of children. Focuses on how developmental differences influence how children process and respond to the media. Topics include media violence, media advertising, stereotypes in the media, and educational content. 3 undergraduate hours. 4 graduate hours.

CMN 429 Race and the Mass Media credit: 3 or 4 Hours.

Presents an overview of racial stereotypes in the mass media and the effects of stereotypical imagery on viewers. Discussion of the structural and social origins of stereotypic media from multiple perspectives focusing on published scholarship that systematically assesses the content and effects of racial representations from a social scientific perspective. Intersections between race, ethnicity, class, and gender also will be explored. 3 undergraduate hours. 4 graduate hours.

CMN 432 Gender and Language credit: 3 or 4 Hours.

Study of actual and perceived differences and similarities in the use of language by women and by men; emphasizes the social contexts of speech. Same as GWS 432, and LING 432. 3 undergraduate hours. 4 graduate hours.

CMN 435 Adv Interpersonal Comm credit: 3 or 4 Hours.

Study of the major processes involved in an individual's adjustment to the communication situations of everyday life; emphasis on the development of interpersonal competency and orientations, social perception, interpersonal sentiment and hostility, trust, and the social context as factors influencing the understanding and evaluation of interpersonal messages. 3 undergraduate hours. 4 graduate hours. Prerequisite: CMN 230 or consent of instructor.

CMN 437 Comm in Personal Relationships credit: 3 or 4 Hours.

Examines theories of communication within personal relationships, including family, friendship, and romantic associations. Specific topics include relationship development, conflict, power, self-disclosure, and relational uncertainty. 3 undergraduate hours. 4 graduate hours.

CMN 450 Adv Topics in Public Discourse credit: 3 or 4 Hours.

Study of selected periods and genres of public discourse in historical context, including British, American, French, Russian, German, Chinese, and Japanese. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: One course in rhetorical criticism or consent of instructor.

CMN 462 Interpersonal Health Comm credit: 3 or 4 Hours.

Examines the role of communication in the management of mental and physical health. Focuses on topics such as communication and illness identity, health and interpersonal relationships, health care provider-patient interactions, impacts of technology on health communication, and health education and prevention efforts. 3 undergraduate hours. 4 graduate hours.

CMN 463 Organizational Health Comm credit: 3 or 4 Hours.

Focuses on organizational issues shaping communication between providers, patients, and consumers of health care and information, including background on financing personal medical services; organizations, professions, and their interrelationships involved in providing medical services; theorizing communication and organization in personal medical services; and communication between organizations and the public on health issues. Topics include managed care, professional communication, the hospital as a unique communication site, ethics in health communication, direct-to-consumer drug advertising, and health crisis communication. 3 undergraduate hours. 4 graduate hours.

CMN 464 Health Communication Campaigns credit: 3 or 4 Hours.

Focuses on the theoretical principles behind designing, implementing, and evaluating a health communication campaign. Students will be exposed to campaigns pertaining to alcohol abuse, illicit drug use, organ donation, safe sex, tobacco use, among others. The first part of the course reviews theories used in health communication campaigns, derived from the disciplines of communication, social psychology, and public health. The second part of the course focuses on designing campaigns and creating messages as well as evaluating the effects of those campaigns and messages. 3 undergraduate hours. 4 graduate hours.

CMN 465 Social Marketing Health&Behav credit: 3 or 4 Hours.

Applies marketing concepts and practices to bring about behavior change for a social good. Social marketing is an approach to planning and implementing projects and programs that emphasizes a customer-centered mindset to learn what people want and need to change their behavior. Designed to give students a thorough orientation to the discipline of social marketing and its application to a range of problems with an emphasis on issues in health contexts. Topics will include audience research, segmentation strategies, communication channels, marketing mix, and the application of behavioral theory. Students will acquire practical skills in the design, implementation, and evaluation of health intervention initiatives that use social marketing. Same as CHLH 465. 3 undergraduate hours. 4 graduate hours.

CMN 467 Communication & Health Equity credit: 3 or 4 Hours.

Explores the role that communication plays as both a potential contributor to existing health inequalities and a means of helping to reduce them. Drawing on theories and research from communication, public health, and related social science disciplines, the course reviews relevant academic literature and utilizes media and policy examples to engage with key topics, such as communication inequalities and public discourse surrounding inequality and social determinants of health. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above.

CMN 476 Commercialism and the Public credit: 3 or 4 Hours.

Explores the influences of advertising and commercialism and their role in defining our political culture, social institutions, and personal lives. Through readings, written reflection, visual presentations, and class discussions, the course explores a wide range of advertising and consumer issues and discusses how consumers negotiate these forces. The first part of the course is devoted to a historical overview; discussing the risk and evolving nature of advertising throughout the 20th century. Having established a historical framework, the course offers six contemporary topics to be discussed in the remainder of the semester. Topics may include, but not be limited to: the commercial mass media; the public relations industry; gender in advertising; commercialization of childhood; the commercialization of medicine and science; contemporary consumer society; advertising in schools; and food, advertising, and body image. 3 undergraduate hours. 4 graduate hours.

CMN 491 Honors Individual Study credit: 2 Hours.

Individual investigation of special problems. 2 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Twelve hours of communication; a grade-point average of 3.50; and consent of head of department.

CMN 493 Honors Senior Thesis credit: 2 Hours.

Individual study leading to a thesis for honors in the Department of Communication. 2 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Senior standing; a grade-point average of 3.50; and consent of head of department.

CMN 496 Adv Topics in Communication credit: 3 or 4 Hours.

Advanced topics in communication not treated in regularly scheduled courses; see Class Schedule for current topics. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary.

CMN 501 Intro to Health Communication credit: 4 Hours.

Introduction to theory and research on communication in health and illness contexts, focusing on how messages from interpersonal, organizational, cultural and media sources affect health beliefs and behaviors. Some topics to be explored include: the theoretical foundations underlying differences in the ways individuals communicate about health, health campaign strategies and organizational influences on health and strategies for generating successful or beneficial health-related communication (as well as recognize problematic communicative trends).

CMN 502 Health Comm Research Methods I credit: 2 Hours.

Introduction to social scientific methods for research on health communication and health outcomes. These methods may be used either to build general (theoretical) knowledge about communication or to aid in design and evaluation of actual messages and campaigns. Spring terms only. Prerequisite: Only for students enrolled in the MS in Health Communication degree program.

CMN 503 Health Comm Research MethodsII credit: 2 Hours.

Focuses on analytic strategy in both qualitative and quantitative analysis. Complements and expands upon the social scientific methods for collecting data introduced in CMN 502. Prerequisite: CMN 502 strongly recommended.

CMN 504 Health & Family Communication credit: 4 Hours.

Exploration of current perspectives on the interplay between family communication processes and health-related issues. Using theoretical foundations such as systems theory, communication privacy management theory, narrative theory and family communication patterns theory, students will explore the ways that family members communicate about health, cope with health-related problems, and influence one another's health-related behaviors.

CMN 505 Provider-Patient Communication credit: 2 Hours.

Study of theoretical bases for understanding social interactions in health care settings focusing on three general areas: (a) communication and identity, (b) health and personal relationships, and (c) health care provider-patient interaction.

CMN 506 Health Informatics credit: 4 Hours.

Explores: (1) contexts of health informatics applications; (2) reciprocal relationships among people, activities, and health informatics applications; and (3) consequences surrounding the design, implementation, and use of health informatics applications. Course content includes: an introduction to health informatics and associated theoretical perspectives; health information as a strategic resource; provider health informatics applications; the e-health movement and consumer health informatics applications; and the intersection of health informatics with current challenges in health care.

CMN 507 Hlth Comm Orgs Profs & Policy credit: 4 Hours.

Study of the organizational features of the U.S. health care systems, generating a comprehensive image of the context in which communication between patients and providers, health care consumers and organizations, and public health care messages are sent, received, exchanged, interpreted, and circulated. Offered Fall terms only. Prerequisite: Only for students enrolled in the MS in Health Communications degree program.

CMN 508 Successful Health Campaigns credit: 4 Hours.

Introduction to theoretical frameworks, research, and applications of health campaigns. Literature from contributing disciplines will be reviewed (e.g., advertising, communication, marketing, public health, political science, psychology and sociology) and key aspects of campaign development will be discussed (e.g., formative research, audience segmentation, message tailoring and evaluation). Offered Spring terms only. Prerequisite: Only for students enrolled in the MS in Health Communication degree program.

CMN 509 Soc Mktng & Health Behavior credit: 2 Hours.

Orientation to the discipline of social marketing with some application to a range of problems, emphasizing issues with a health context. Topics will include audience research, segmentation strategies, communication channels, and the marketing mix. Students will acquire practical skills in audience research and learn about the design, implementation, and evaluation of health intervention initiatives that use social marketing. Offered Spring terms only. Prerequisite: Only for students enrolled in the MS in Health Communication degree program.

CMN 529 Seminar Communication Theory credit: 4 Hours.

Special topics in communication theory and research. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

CMN 530 Family Communication Theory credit: 4 Hours.

Graduate seminar that examines theory and research on the development of families, communication in various types of families and family relationships, and current issues that affect family communication.

CMN 531 Narr in Interdisc Perspective credit: 4 Hours.

Engages fresh interdisciplinary perspectives on narrative and identifies aspects of narrative that are not illuminated by current thinking. Identifies gaps and absences in the literature on the social creation of reality through narrative. Of particular interests are the dream, the relationship between personal oral history and myth, people who have "no stories" or have untellable stories, and the trauma narrative as compulsory testimony. Approaches these issues from the perspective of scholarship in folklore, sociolinguistics, developmental psychology, communication, cultural psychology, and anthropology.

CMN 538 Seminar Rhetorical Theory credit: 4 Hours.

Study of special topics in the history of rhetorical theory. May be repeated to a maximum of 16 hours.

CMN 550 Intro to Comm Grad Study credit: 1 Hour.

Orientation to discipline of Communication and too departmental research areas. Discusses disciplinary norms, research ethics/IRB, academic writing, and professional conduct. Advice on choosing areas of research, identifying suitable graduate advisor, time management, and career planning. Faculty visitors discuss their research and professional development topics. Approved for S/U grading only. Prerequisite: Communication graduate students only.

CMN 574 Communication Research Methods credit: 4 Hours.

Introduction to content analysis, survey, and experimental research designs and quantitative and qualitative analysis in communication research.

CMN 575 Capstone Individual Study credit: 4 Hours.

Provides capstone experience for students in the MS in Health Communication degree program.

CMN 595 Special Problems credit: 1 to 12 Hours.

Individual investigation of special projects not included in theses. May be repeated in separate terms. Open to master's candidates for a maximum of 4 graduate hours and to doctoral candidates for a maximum of 12 graduate hours. Prerequisite: Consent from head of department.

CMN 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Community Health (CHLH)

CHLH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CHLH>)

Courses

CHLH 100 Contemporary Health credit: 3 Hours.

Examines concepts of health and health promotion in contemporary society with emphasis on a healthy lifestyle for individuals and groups. Topics include self care, health insurance, exercise, nutrition and weight control, sexuality, contraception, tobacco, alcohol, cardiovascular health, infectious diseases, and cancer.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CHLH 101 Introduction to Public Health credit: 3 Hours.

Introduction to the nation's public health system; includes an overview of the basic concepts and core functions of public health practice, the scope of applications, and the variety of service organizations (both public and private) that shape public health.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CHLH 110 Intro to the Health Sciences credit: 3 Hours.

This elective course provides students with a general overview of the day to day job requirements and responsibilities of variety of allied healthcare professionals and how they interact with other members of the healthcare team. Students will also learn about the wide variety of practice settings available along the continuum of care. Through the course, students will learn basic medical terminology, concepts and skills in preparation for internships and graduate school. Same as KIN 110.

CHLH 125 Orientation KIN & Comm Health credit: 1 Hour.

Serves as an introduction to the Kinesiology and Community Health Department and provides an overview of the Kinesiology and Community Health curricula, areas of study, and opportunities available for careers in the field. Enrollment required for Community Health freshmen and transfer students. Credit is not given for both CHLH 125 and KIN 125.

CHLH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated up to a maximum of 10 hours.

CHLH 200 Mental Health credit: 2 Hours.

Introduction to the science of mental health and illness including personality development, the genesis and manifestations of mental illness, and the maintenance of mental health; taught with an emphasis on the preventive and medical aspects of mental health.

CHLH 201 Public Health Research Methods credit: 3 Hours.

This course is designed to provide students with an introduction to the basic principles and concepts underlying research methods on public health. Topics include conceptualization, measurement, research design, sampling, evaluation, data sources and ethics. The students will be exposed to a wide range of quantitative, and mixed methods.

CHLH 206 Human Sexuality credit: 2 Hours.

Emphasizes the behavioral aspects of human sexuality. Topics include: birth control; prenatal care, pregnancy and childbirth; sex roles; premarital sex; lifestyles; marriage and divorce.

CHLH 210 Community Health Organizations credit: 2 Hours.

Overview of institutions and agencies which provide health information, education, services, and care. Includes historical foundations, constituencies, organizational goals and structure, funding and expenditures, modes of service delivery, political and ethical issues.

CHLH 243 Drug Use and Abuse credit: 2 Hours.

Introduction to the biological, psychological, pharmacological, and legal aspects of drug use and abuse; surveys community and university resources concerned with drug use and abuse; emphasizes personal and social actions for responsible drug use.

CHLH 244 Health Statistics credit: 3 Hours.

Introduction to biostatistics. Students learn concepts necessary to understand statistical inference as applied to health issues.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CHLH 250 Health Care Systems credit: 3 Hours.

Overview of the major issues confronting health care systems from a macro perspective. Identification and analysis of the functions, major participants and trends in health care systems in the United States and abroad. Attention on current and emerging issues having implications for health care systems in industrialized nations.

CHLH 260 Introduction to Medical Ethics credit: 3 Hours.

Course stresses normative bioethics: decisions about what is ethical behavior in a variety of real and practical issues. Analysis of medical ethical cases at the individual, community and wider national and international levels will be addressed. Approved for both letter and S/U grading.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

CHLH 274 Introduction to Epidemiology credit: 3 Hours.

Basic concepts and methods of epidemiology; patterns of disease occurrence; applications of epidemiology to health education, health services administration and planning, health policy, and environmental health.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CHLH 304 Foundations of Health Behavior credit: 4 Hours.

Examination of the application of the social and behavioral sciences to health and health behavior. Psychological, social psychological, and sociological approaches to health behavior are analyzed. Topics covered include development of health attitudes and behaviors, perceptions of health and illness, methods of changing health behavior and patient-provider interaction. Prerequisite: CHLH 100, or consent of instructor; completion of the campus Composition I requirement.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci
Advanced Composition

CHLH 314 Introduction to Aging credit: 3 Hours.

A multidisciplinary introduction to the study of aging; the social, psychological and physiological context of changing roles in later life; public and private policies that affect older people and their families. Same as HDFS 314, RST 314, PSYC 314, and REHB 314.

CHLH 330 Disability in American Society credit: 3 Hours.

Same as REHB 330. See REHB 330.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

CHLH 336 Tomorrow's Environment credit: 3 Hours.

Same as CPSC 336 and ENVS 336. See CPSC 336.

CHLH 340 Health Promotion Practicum credit: 3 Hours.

Preparation and presentation of lifestyle workshops to campus community groups. Practica selected from one or more of the following topics: chemical education, sexuality, stress management or campus acquaintance rape education (CARE). Same as SOCW 350. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing or consent of instructor.

CHLH 365 Civic Engagement in Wellness credit: 3 Hours.

Same as AHS 365, KIN 365, RST 365, and SHS 370. See KIN 365.

CHLH 380 Orientation to Internship credit: 1 Hour.

Provides students with information concerning placement in internship. Topics include internship requirements; student responsibilities; preparation of resumes and cover letters; selecting an organization or site; interviewing; issues of professional development. Prerequisite: Junior standing.

CHLH 390 Honors credit: 2 Hours.

Same as KIN 390 and RST 390. See KIN 390.

CHLH 393 Special Projects credit: 2 or 3 Hours.

Special projects in research and independent investigation in any phase of health, kinesiology, recreation, and related areas selected by the students. May be repeated to a maximum of 12 hours.

CHLH 402 Cancer Epidemiology credit: 3 or 4 Hours.

Class on cancer epidemiology will address the investigation of the descriptive and analytic epidemiology of cancer. It will include information on the development of malignancy and characteristics of tumor cells. The investigation of the relationship between various risk and protective factors and the development of different types of cancer will be discussed in an epidemiologic context. The role of primary prevention and secondary prevention (screening) will also be covered. 3 undergraduate hours. 4 graduate hours. Prerequisite: Previous or concurrent class in epidemiology or consent of instructor. Junior standing or above.

CHLH 404 Gerontology credit: 3 or 4 Hours.

Interdisciplinary approach to the study of aging and the aged from physiological, psychological, and social perspectives. Same as HDFS 404. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 405 Aging with Disability credit: 3 or 4 Hours.

Due to improvements in medical management, persons with disabilities are living longer lives. They, however, face new problems and impairments. This course will explore the psychological and physical changes persons with disabilities face as they age. In addition, the course examines the impact that aging with disability has on the US healthcare system, legislation and healthcare professionals. 3 undergraduate hours. 4 graduate hours.

CHLH 407 Disability, Culture & Society credit: 3 or 4 Hours.

Examines the cultural and social contexts of disability, their consequences for the experience and management of disability, and implications for cultural competence in disability-related research and practice. Same as ANTH 404, KIN 407, and REHB 407. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 409 Women's Health credit: 3 Hours.

Examines the culture of women in relationship to their health. Study is devoted to selected health care issues, developmental and physiological changes in the life cycle, health problems that affect women, and the maintenance of health. Same as GWS 409. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHLH 100 or equivalent; or consent of instructor.

CHLH 410 Public Health Practice credit: 4 Hours.

Theory and practice of public health promotion as they relate to educational approaches in solving community health problems. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHLH 210 or consent of instructor.

CHLH 415 International Health credit: 3 or 4 Hours.

Explores the various factors that impact the health of populations around the world. Political, cultural, social, environmental and other domains will be examined in relation to how they affect the health of residents of various countries. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

CHLH 421 Health Data Analysis credit: 3 or 4 Hours.

Introduces health data analysis, sources and uses of health data, collection techniques and classification procedures, commonly used health indices, techniques of rate adjustment, graphic presentation of data as they relate to the planning, conducting, and evaluating of community health programs. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Quantitative Reasoning I course or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning II

CHLH 429 Research Techniques credit: 4 Hours.

Study of the ethics of research, research literature, research designs, and health measurement techniques utilized in the public health sciences. Emphasizes developing skills in analyzing research and assessment of health behaviors, and problem identification and research design for individual student research projects. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHLH 590, or SOC 485, or EPSY 480; or equivalent.

CHLH 439 Health Applications of GIS credit: 3 Hours.

Same as GEOG 439 and PATH 439. See PATH 439.

CHLH 444 LGBT Indiv, Fam & Community credit: 3 or 4 Hours.

Same as HDFS 444. See HDFS 444.

CHLH 448 Exercise & Health Psychology credit: 3 or 4 Hours.

Same as KIN 448. See KIN 448.

CHLH 455 Health Services Financing credit: 3 Hours.

Examines major topics and emerging trends in health financing, including sources of revenue, public and private financing organizations, reimbursement and sources of revenue to health providers, and capital financing in the health care industry. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

CHLH 456 Organization of Health Care credit: 2 to 4 Hours.

Examines types and performance of health care organizations (e.g., doctors' offices, clinics, hospitals, and nursing homes), networks of health services, evaluation of health care, and social policy issues relating to organizations in the U. S. health care system. Same as SOC 476. 2 to 4 undergraduate hours. 2 to 4 graduate hours.

CHLH 457 Health Planning credit: 3 Hours.

Survey of the history and objectives of health planning as related to medical care delivery in the United States; methods of health, institutional and community planning; planning and marketing concepts and methods; analysis of consumer behavior, public policies, and private competitive forces. Same as SOCW 457. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHLH 250 and junior standing.

CHLH 458 Health Administration credit: 3 Hours.

Examines management principles relative to health care institutions emphasizing goal setting, decision making, system analysis, organizational structure, conflict resolution, and leadership theories. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate standing, or consent of instructor.

CHLH 461 Environ Toxicology & Health credit: 3 Hours.

Same as ENVS 431 and IB 485. See IB 485.

CHLH 465 Social Marketing Health&Behav credit: 3 or 4 Hours.

Same as CMN 465. See CMN 465.

CHLH 469 Environmental Health credit: 3 or 4 Hours.

Appreciation of the concepts and mechanisms used to prevent or control environmental conditions that may lead to infectious or other environmentally induced diseases. Presents topics from a public health perspective that include air pollution, water supply management, waste management, radiation protection, food hygiene, occupational health and disaster management. Same as ENVS 469. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CHLH 274 or equivalent.

CHLH 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as LLS 473, SOC 473, and SOCW 473. See LLS 473.

CHLH 474 Principles of Epidemiology credit: 4 Hours.

Investigation of descriptive epidemiologic techniques (comparisons of disease rates in different populations) and analytic study designs (case-control and cohort studies and randomized trials). Applications to and examples from infectious and chronic diseases are presented. Group exercises involving the investigation of epidemiologic problems and application of analytic epidemiologic techniques are performed. Same as ENVS 474 and PATH 474. 4 undergraduate hours. 4 graduate hours. Prerequisite: One statistics course.

CHLH 485 Community Health Internship credit: 8 Hours.

Supervised field experience in official, voluntary and professional health agencies; designed to provide students with work experience in actual field situations. Students work in University approved health agencies for a minimum of 320 undergraduate hours. 8 undergraduate hours. 8 graduate hours. Approved for S/U grading. Prerequisite: Senior standing in Community Health.

CHLH 494 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

CHLH 501 Issues in Health Education credit: 4 Hours.

Analyzes current developments, trends, and controversies in health education with emphasis on developing student competencies for intervention planning, implementation and analyses; and examines issues affecting the health educator in various work settings, including patient care, public health, school health, and higher.

CHLH 510 Public Health Dev credit: 4 Hours.

Advanced study of the principles, practice and current issues of public health at the local, state, national and international levels, including the relationships between public health departments, voluntary health agencies, and other community organizations.

CHLH 517 Principle/Method Epidemiology credit: 4 Hours.

Same as PATH 517. See PATH 517.

CHLH 527 Statistics in Epidemiology credit: 4 Hours.

Description and application of quantitative issues and statistical techniques prominent in the analysis of classification data arising from epidemiologic cohort or case-control aetiologic studies; studies of preventive public health; and therapeutic clinical interventions. Practice using available computing software for implementation is stressed. Same as ENVS 527 and PATH 525. Prerequisite: CHLH 474 and minimum of two statistics courses covering multiple regression and correlation.

CHLH 530 Childhood Obesity I credit: 3 Hours.

Same as FSHN 530, HDFS 551, KIN 530, NUTR 530, SOCW 570. See NUTR 530.

CHLH 531 Childhood Obesity II credit: 4 Hours.

Same as FSHN 531, HDFS 552, KIN 531, NUTR 531, SOCW 571. See NUTR 531.

CHLH 540 Health Behavior: Theory credit: 4 Hours.

Analysis of social science theories and perspectives that comprise the foundation of health education theory and practice. Includes development of a conceptual frame of reference for understanding, predicting, and facilitating change in health behaviors. Same as KIN 540. Prerequisite: Graduate standing.

CHLH 550 Health Policy: United States credit: 4 Hours.

Comprehensive analysis of the policy process in health care in the United States; systematic and critical review of health policy development, implementation, and evaluation; impact of government at all levels and the role of providers, industry, labor, and consumer in health policy. Prerequisite: Admission to graduate program in community health or the MBA Administration Program; CHLH 429; or consent of instructor.

CHLH 565 Teaching in the Professoriate credit: 4 Hours.

Same as KIN 565, RST 560, and SHS 565. See KIN 565.

CHLH 569 Systematic Review and Meta-analysis credit: 4 Hours.

The goals of this course are to: (1) Deepen understanding on the key concepts and essential methods in systematic review and meta-analysis through lectures and reading assignments; (2) Master basic skills on conducting systematic review and meta-analysis through hands-on exercises and projects; and (3) complete a publication-quality systematic review and/or meta-analysis of a student's own choice as the final project of this course. 4 graduate hours. 4 professional hours.

CHLH 570 Intro Public Hlth Practice credit: 1 Hour.

An introduction to principles of public health practice, covering a range of topics including history of public health, determinants of health, structure and function of the public health system, ethics, and public health approaches to prevention and to improving population health. Approved for S/U grading only. Prerequisite: MPH student or consent of the instructor.

CHLH 572 Principles of Epidemiology credit: 4 Hours.

Advanced course designed to provide an introduction to the fundamental concepts and principles of epidemiology and demonstrate their applicability in the field of public health. Emphasizes the use of epidemiologic data and research to a) describe the pattern of diseases in communities, and b) identify risk factors for diseases and for health disparities. Prerequisite: Completion or concurrent enrollment of basic statistics course is encouraged.

CHLH 573 Biostatistics in Public Health credit: 4 Hours.

Introduction to fundamental topics in biostatistics in public health, covering univariate and bivariate statistics as well as basic topics in multivariate analysis. Including practice in analyzing health data through computer laboratory sessions.

CHLH 575 Chronic Disease Prevention credit: 4 Hours.

Advanced course in population-based approaches to chronic disease prevention, with emphasis on policy and environmental strategies affecting lifestyle risk factors. Provides an understanding of common diseases, screen tests, community assessment, systematic evidence reviews, and evidence-based community interventions. Prerequisite: MPH students or consent of instructor.

CHLH 577 Health Program Evaluation credit: 4 Hours.

Use of research methods and theory for evaluation of initiatives and programs in public health and medical care. Emphasis on acquiring skills in evaluation and conducting evaluations whose results have impact on public health practice. Covers different theories and perspectives on health evaluation. Review of published evaluations used to illustrate research methods and practical issues in program evaluation. Prerequisite: MPH student or consent of instructor.

CHLH 578 Applied Epidemiology credit: 4 Hours.

Advanced epidemiologic analysis of disease problems. Covers research designs including cohort, case-control, and intervention trials; methods of analysis including multivariate adjustment for confounding and description of effect modification; and application of statistical computer software with emphasis on chronic diseases. Same as PATH 520. Prerequisite: CHLH 474, PATH 517, or equivalent and advanced course work in statistics through multivariate analysis.

CHLH 579 Cultural Competence in Public Health credit: 4 Hours.

Cultural competence education increases public health professionals' cultural awareness, knowledge of self and others, communication skills, attitudes, and behaviors. This course will examine theoretical models in public health and explore community-based programs as they relate to cultural competence and health promotion. 4 graduate hours. No professional credit. Prerequisite: Restricted to MPH Graduate Students.

CHLH 580 Landscapes and Human Health credit: 3 Hours.

Same as GEOG 561 and LA 570. See LA 570.

CHLH 585 Community Health Internship credit: 4 Hours.

Observation, study, and practical work in student's area of specialization under supervision in professional field situations; student works for a minimum of 12 weeks in a University-approved agency or site. Prerequisite: CHLH 429, CHLH 474 and CHLH 510; or graduate standing in community health; or consent of the department.

CHLH 587 MPH Applied Practice Experience credit: 1 to 4 Hours.

Provides MPH students with planned, supervised and evaluated field experience in a public health practice setting where students will synthesize knowledge and skills acquired through the course of MPH study. Approved for letter and S/U grading. May be repeated up to 4 hours in separate terms. Prerequisite: Completion of all Core MPH Courses.

CHLH 589 MPH Integrative Learning Experience credit: 2 Hours.

Provides MPH students an opportunity to synthesize, integrate, and apply knowledge and skills acquired in MPH coursework, through work on a project relevant to public health practice. Generally offered for MPH students in their last semester of study in the MPH program. Prerequisite: MPH student.

CHLH 591 Seminar credit: 1 Hour.

Lecture, discussions, and critiques on kinesiology and community health related subjects by faculty members and visiting professional leaders; presentation and criticism of student research. Approved for S/U grading only. May be repeated in subsequent terms as topics vary.

CHLH 593 Special Projects credit: 2 to 4 Hours.

Independent research on special projects. May be repeated to a maximum of 8 hours. Prerequisite: EPSY 480, KIN 501, and CHLH 540 or equivalent.

CHLH 594 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Class Schedule. May be repeated.

CHLH 599 Thesis Research credit: 0 to 16 Hours.

Preparation of theses in community health. Approved for S/U grading only. May be repeated to a maximum of 16 hours.

Comparative & World Literature (CWL)

CWL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CWL>)

Courses

CWL 111 Bible as Literature credit: 3 Hours.

Same as ENGL 114 and REL 101. See REL 101. This course satisfies the General Education Criteria for: Humanities - Lit Arts

CWL 112 Literature of Global Culture credit: 3 Hours.

Same as ENGL 112. See ENGL 112.

CWL 114 Global Consciousness and Lit credit: 3 Hours.

Exploration of the cultural and historical roots of globalization and the development of global consciousness from ancient Greece to the present, as reflected primarily in literature, but also with reference to historiography, cartography, religion, art, politics, economics, and popular culture. Course materials including literary texts, articles, historical accounts, political tracts, films, and paintings focus on the mutual perception of, and historical relationships among Europe, the Arab world, Africa, Asia, and the Americas.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 117 Russ & E Euro Science Fiction credit: 3 Hours.

Same as SLAV 117. See SLAV 117. This course satisfies the General Education Criteria for: Humanities - Lit Arts

CWL 119 Literature of Fantasy credit: 3 Hours.

Same as ENGL 119. See ENGL 119.

CWL 151 Cross-Cultural Thematics credit: 3 Hours.

Explores a combination of western and non-western literature through the focus on a shared theme, exploring differences in treatment both within and among different cultures. Two such thematic focuses are offered in rotation; one on concepts of love and one on ways of writing about death. Both themes introduce students to a wide array of famous texts from different cultures and also offer some varied perspectives for their own inevitable thoughts on these major topics. May be repeated to a maximum of 6 hours if topics vary. Students may register in more than one section per term.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 189 Lit of Asia & Africa I credit: 3 Hours.

Comparative study of major works from Africa, the Middle East, South and East Asia, from ancient times through the medieval period, emphasizing literary, cultural, philosophical, and religious traditions, and cross-cultural contact. Topics studied may include Egyptian and Mesopotamian mythology, Hinduism, Buddhism, Confucianism, Daoism, and the Abrahamic tradition. All readings in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 190 Lit of Asia & Africa II credit: 3 Hours.

Comparative study of major works from Africa, the Middle East, South and East Asia, from the early modern to the contemporary period, emphasizing literary, cultural, philosophical, and religious traditions and cross-cultural contact. Topics studied may include Hinduism, Buddhism, Confucianism, Daoism, Islam, colonialism and globalization. All readings in English.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

CWL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors students or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

CWL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. Approved for both letter and S/U grading. May be repeated.

CWL 201 Comparative Lit Studies credit: 3 Hours.

Introduction to various methods in comparative literary study, including genres, thematics, literary relations, literary movements, and interdisciplinary approaches. Prerequisite: One semester of college literature or consent of instructor.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 202 Literature and Ideas credit: 3 Hours.

Analysis of several important world-views in Western civilization (such as classical, Romantic, modern, and so forth), studied comparatively and in relation to selected figures in Western literature. Prerequisite: CWL 241 and CWL 242; or one year of college literature; or consent of instructor.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 205 Islam & West Through Lit credit: 3 Hours.

Organized around major cultural/historical/religious topics presented in literature through Western and Islamic eyes, beginning with the Crusades and proceeding into the present. This course will examine stereotypes, fantasies, identifications and political opportunism promoted by the encounter between the West and the Islamic World. Prerequisite: CWL 241 and CWL 242 or one year of college literature.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 206 Classical Allusions in Cinema credit: 3 Hours.

Same as CLCV 206. See CLCV 206.

CWL 207 Indian Cinema in Context credit: 3 Hours.

Introduction to Indian mainstream (mainly Bollywood) cinema and its evolution through the last seven decades. Topics to be explored include, but not limited to, the relation between Indian society/culture and its cinematic representations, cinema's resistance to dominant nationalist and patriarchal ideologies, its interactions with the postcolonial nation-state of India, how globalization has changed the industry. All films will be screened with subtitles. No knowledge of Hindi or any other Indian language is required. Same as MACS 207.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

CWL 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as ASST 208, REL 208 and SAME 208. See REL 208.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

CWL 209 Jewish American Literature credit: 3 Hours.

Same as JS 209 and ENGL 222. See JS 209.

CWL 210 Intro to Mod African Lit credit: 3 Hours.

Same as AFST 210 and ENGL 211. See AFST 210.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

CWL 211 War & Peace in Israeli Lit credit: 3 Hours.

War has been a constant shadow over the lives of Israelis. We will examine the history of attitudes to war and peace in Israel as presented through poetry, film and short stories, and explores the plurality of voices and experiences in Israel. Same as JS 211 and SAME 211.

CWL 215 Madness, Myth, and Murder credit: 3 Hours.

Same as SCAN 215. See SCAN 215.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 216 Legends of King Arthur credit: 3 Hours.

Same as ENGL 216 and MDVL 216. See ENGL 216.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 218 Survey of Ukrainian Literature credit: 3 Hours.

Same as UKR 218. See UKR 218.

CWL 220 Origins of Western Literature credit: 3 Hours.

Same as CLCV 220. See CLCV 220.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 221 Jewish Storytelling credit: 3 Hours.

Same as ENGL 223, JS 220, REL 220, and YDSH 220. See YDSH 220.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 223 The Qur'an (Koran) credit: 3 Hours.

Same as REL 223, SAME 223. See REL 223.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

CWL 224 German Literature in Trans credit: 3 Hours.

Same as GER 200. See GER 200.

CWL 225 Constr Afr and Carib Identity credit: 3 Hours.

Same as AFST 209, FR 240, and LAST 240. See FR 240.
This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

CWL 226 Humanist Persp of Afro-Am Exp credit: 3 Hours.

Same as AFRO 224. See AFRO 224.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

CWL 227 Golden Age of Russian Lit credit: 3 Hours.

Same as RUSS 220. See RUSS 220.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

Same as ITAL 240 and MDVL 240. See ITAL 240.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 241 Early Masterpieces of Western Culture credit: 3 Hours.

Comparative study of major works of literature, philosophy and culture in the Western tradition from the ancient world to the Renaissance, from Homer and the Bible to Shakespeare and Cervantes. Emphasis on the works as representative of their historical and cultural period, as well as how these works create the cultural world we live in today. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

CWL 242 Modern Masterpieces of Western Culture credit: 3 Hours.

Comparative study of major works of literature, philosophy and culture in the Western tradition from the Enlightenment to today, from Descartes and Voltaire to Dickinson and Calvino. Emphasis on the works as representative of their historical and cultural period, as well as how these works create the cultural world we live in today.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 245 Survey of Polish Literature credit: 3 Hours.

Same as POL 245. See POL 245.

CWL 249 Russian Lit and Revolution credit: 3 Hours.

Same as RUSS 225. See RUSS 225.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 250 Grimms' Fairy Tales - ACP credit: 3 Hours.

Same as ENGL 267 and GER 250. See GER 250.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

CWL 251 Viking Mythology credit: 3 Hours.

Same as MDVL 251, REL 251, and SCAN 251. See SCAN 251.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

CWL 252 Viking Sagas in Translation credit: 3 Hours.

Same as MDVL 252 and SCAN 252. See SCAN 252.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 253 Medieval Lit and Culture credit: 3 Hours.

Same as ENGL 202 and MDVL 201. See ENGL 202.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 254 Grimm's Fairy Tales in Context credit: 3 Hours.

Same as ENGL 266 and GER 251. See GER 251.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 255 Renaissance Lit and Culture credit: 3 Hours.

Same as ENGL 204. See ENGL 204.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 257 Enlightenment Lit and Culture credit: 3 Hours.

Same as ENGL 206. See ENGL 206.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 259 Afro-American Literature I credit: 3 Hours.

Same as AFRO 259 and ENGL 259. See ENGL 259.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

CWL 260 Afro-American Literature II credit: 3 Hours.

Same as AFRO 260 and ENGL 260. See ENGL 260.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

CWL 262 Sex & Gender in Antiquity credit: 3 Hours.

Same as CLCV 240 and GWS 240. See CLCV 240.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 263 The Heroic Tradition credit: 3 Hours.

Same as CLCV 221. See CLCV 221.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 264 The Tragic Spirit credit: 3 Hours.

Same as CLCV 222 and THEA 210. See CLCV 222.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

CWL 265 Modern Drama I credit: 3 Hours.

Same as ENGL 243. See ENGL 243.

CWL 266 Modern Drama II credit: 3 Hours.

Same as ENGL 244. See ENGL 244.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 267 The Short Story credit: 3 Hours.

Same as ENGL 245. See ENGL 245.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 269 Brit, Amer & Contin Fiction credit: 3 Hours.

Same as ENGL 248. See ENGL 248.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CWL 271 The Holocaust in Context - ACP credit: 3 Hours.

Same as ENGL 268 and GER 260. See GER 260.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

CWL 272 Sexuality and Literature credit: 3 Hours.

Same as GER 270 and GWS 270. See GER 270.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 273 The Holocaust in Context credit: 3 Hours.

Same as ENGL 269 and GER 261. See GER 261.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

CWL 275 Masterpieces of East Asian Lit credit: 3 Hours.

Same as EALC 275. See EALC 275.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 276 Asian Film Genres credit: 3 Hours.

Same as EALC 276 and ENGL 276. See ENGL 276.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 277 Slavic Literature Survey credit: 3 Hours.

Same as SLAV 277. See SLAV 277.

CWL 282 Arctic Narratives credit: 3 Hours.

Same as EURO 240, SCAN 240. See SCAN 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

CWL 283 Jewish Sacred Literature credit: 3 Hours.

Same as ENGL 283 and REL 283. See REL 283.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 284 Modern Jewish Literature credit: 3 Hours.

Same as ENGL 284 and REL 284. See ENGL 284.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

CWL 307 Classical Chinese Lit credit: 3 Hours.

Same as EALC 307. See EALC 307.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 308 Chinese Popular Lit credit: 3 Hours.

Same as EALC 308. See EALC 308.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 311 Japan Lit in Translation I credit: 3 Hours.

Same as EALC 305. See EALC 305.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 312 Japan Lit in Translation II credit: 3 Hours.

Same as EALC 306. See EALC 306.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Non-West

CWL 317 Introduction to Francophone Literature credit: 3 Hours.

Same as FR 319. See FR 319.

CWL 320 Lit Responses to the Holocaust credit: 3 Hours.

Same as ENGL 359, JS 320, REL 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

CWL 321 Russian Writers credit: 3 Hours.

Same as RUSS 320. See RUSS 320.

CWL 322 The Comic Imagination credit: 3 Hours.

Same as CLCV 323 and THEA 323. See CLCV 323.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

CWL 323 Tolstoy credit: 3 Hours.

Same as ENGL 323 and RUSS 323. See RUSS 323.

CWL 324 Dostoevsky credit: 3 Hours.

Same as ENGL 322 and RUSS 322. See RUSS 322.

CWL 325 Chekhov credit: 3 Hours.

Same as RUSS 325 and THEA 362. See RUSS 325.

CWL 328 Special Topics German Studies credit: 3 Hours.

Same as GER 396. See GER 396.

CWL 335 Nabokov credit: 3 Hours.

Same as RUSS 335. See RUSS 335.

CWL 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Love and Sex have been literary themes from the bible, through the modern ages and into the present day in Hebrew Literature. This course will examine the treatments of these themes in different historical periods, paying attention to external influences and literary forms such as poems, stories, films and novels. This course will consider treatments of the erotic, devotional, affectionate, romantic and sexual; including heterosexual and homosexual representations, as well as love of God and Israel. Same as JS 341, REL 340 and SAME 341. Prerequisite: Completion of Advanced Composition requirement or a prior college-level literature course is recommended.

CWL 350 South Asian Goddesses credit: 3 Hours.

Same as REL 350 and SAME 350. See REL 350.

CWL 376 Children and Youth Literature credit: 3 Hours.

Same as EURO 376, GWS 376, and SCAN 376. See SCAN 376.

CWL 387 French & Comparative Cinema I credit: 3 Hours.

Same as FR 387, HUM 387, and MACS 382. See FR 387.

CWL 389 French & Comparative Cinema II credit: 3 Hours.

Same as FR 389, HUM 389, and MACS 383. See FR 389.

CWL 395 Special Topics Comp Lit I credit: 3 Hours.

Presentation and discussion of subjects relating literature to other disciplines; topic varies. May be repeated to a maximum of 6 hours.

CWL 400 African Diasporic Lit Americas credit: 3 or 4 Hours.

Same as AFRO 400. See AFRO 400.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

- CWL 410 Modern African Fiction credit: 3 or 4 Hours.**
Same as AFST 410, ENGL 470, and FR 410. See AFST 410.
- CWL 411 The Chinese Novel credit: 3 or 4 Hours.**
Same as EALC 411. See EALC 411.
- CWL 412 Mod Chinese Lit in Translation credit: 3 or 4 Hours.**
Same as EALC 412. See EALC 412.
- CWL 413 Dante credit: 3 or 4 Hours.**
Same as ITAL 413 and MDVL 413. See ITAL 413.
- CWL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.**
Same as ITAL 414 and MDVL 414. See ITAL 414.
- CWL 415 Mod Japan Lit in Translation credit: 2 to 4 Hours.**
Same as EALC 415. See EALC 415.
- CWL 416 Premodern Chinese Drama credit: 3 or 4 Hours.**
Same as EALC 413 and THEA 488. See EALC 413.
- CWL 417 Topics in Medieval Brit Lit credit: 3 or 4 Hours.**
Same as ENGL 412 and MDVL 410. See ENGL 412.
- CWL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.**
Same as ITAL 420 and MDVL 420. See ITAL 420.
- CWL 421 Jewish Life-Writing credit: 3 or 4 Hours.**
Same as HIST 436, REL 420, SLAV 420, and YDSH 420. See YDSH 420.
- CWL 428 Japan at War and Peace credit: 3 or 4 Hours.**
Same as EALC 428. See EALC 428.
- CWL 430 History of Translation credit: 3 or 4 Hours.**
Same as CLCV 430, ENGL 486, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.
- CWL 434 Studies in Francophonie credit: 3 or 4 Hours.**
Same as FR 479. See FR 479.
- CWL 436 Problems of Polish Literature credit: 3 or 4 Hours.**
Same as POL 446. See POL 446.
- CWL 440 Russian Culture Studies credit: 3 or 4 Hours.**
Same as RUSS 460. See RUSS 460.
- CWL 441 Themes in Narrative credit: 3 or 4 Hours.**
Analysis of literary themes and types in narratives of Western and non-Western literature (e.g., the hero, east and west, dream visions), emphasizing comparative perspectives. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.
- CWL 444 Problems in Romanticism credit: 3 or 4 Hours.**
Same as RUSS 444. See RUSS 444.
- CWL 445 Problems in Realism credit: 3 or 4 Hours.**
Same as RUSS 445. See RUSS 445.
- CWL 450 Topics in Bodies and Genders credit: 3 Hours.**
How do gender, sexuality, and the body emerge through cultural representations and across artistic forms? How do literature, film, and the visual arts construct gender identities in various times and places? Topics and regions vary by semester and instructor. All readings in English. Same as GWS 450. 3 undergraduate hours. 3 graduate hours. May be repeated up to 6 hours maximum. Prerequisite: Consent of instructor.
- CWL 451 International Film Genres and Auteurs credit: 3 or 4 Hours.**
Advanced, in-depth study of either (a) cinematic genres, or (b) major film directors. Genres may include musicals, horror films, Westerns, melodrama, comedies, film noir. Auteurs will include major figures of world cinema whose influence over the medium is widespread, such as Hitchcock, Woody Allen, Vertov, Bergman. No foreign language knowledge required. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or subsequent semesters to a maximum of 6 undergraduate hours or 8 graduate hours if topics vary. Prerequisite: One cinema course or consent of instructor.
- CWL 453 Slavic Cultural Studies credit: 3 or 4 Hours.**
Same as SLAV 452. See SLAV 452.
- CWL 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.**
Seminar covering advanced topics in Israeli literature and culture. Same as JS 454 and SAME 454. 3 undergraduate hours. 4 graduate hours. May be repeated up to 6 undergraduate hours or 8 graduate hours in separate terms if topics vary. Prerequisite: One year of college literature or consent of instructor.
- CWL 457 Russian Modernism credit: 3 or 4 Hours.**
Same as RUSS 424. See RUSS 424.
- CWL 460 Ecological Criticism credit: 3 or 4 Hours.**
Same as ESE 462 and REL 462. See REL 462.
- CWL 461 Lit Genres and Forms credit: 3 or 4 Hours.**
Structure and development of literary genres and forms in historical perspective (for instance, drama, parody and the grotesque, poetry, fables and fabulists, and modern fiction); essential international components and significant national variations of such genres and forms. Emphasis changes from term to term. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.
- CWL 463 Modern Scandinavian Drama credit: 3 or 4 Hours.**
Same as SCAN 463 and THEA 483. See SCAN 463.
- CWL 465 Topics in Drama credit: 3 or 4 Hours.**
Same as ENGL 465. See ENGL 465.
- CWL 466 Russia and the Other credit: 3 or 4 Hours.**
Same as RUSS 461. See RUSS 461.
- CWL 470 Imagining the Welfare State credit: 3 or 4 Hours.**
Same as EURO 470 and SCAN 470. See SCAN 470.
- CWL 471 International Lit Relations credit: 3 or 4 Hours.**
Study of specific relations between authors of different countries; influences of certain works, concepts, or tastes on another work, author, or country; and literary interaction between Eastern and Western cultures. Emphasis changes from term to term. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: One year of college literature or consent of instructor.
- CWL 472 Kierkegaard and the Self credit: 3 or 4 Hours.**
Same as PHIL 472, REL 472, and SCAN 472. See SCAN 472.
- CWL 477 Post-Communist Fiction credit: 3 or 4 Hours.**
Same as SLAV 477 and REES 477. See SLAV 477.
- CWL 478 Classical Chinese Thought credit: 3 or 4 Hours.**
Same as EALC 476 and HIST 425. See EALC 476.

CWL 481 Topics in Arabic Literature & Culture credit: 3 or 4 Hours.
Studies in Arabic literature and culture of various genres, periods, and regions. Graduate students are encouraged to read the texts in the original language. 3 undergraduate hours. 4 graduate hours. May be repeated in the same semester to a maximum of 6 undergraduate hours or 8 graduate hours if topics vary; May be repeated in separate semesters to a maximum of 12 undergraduate hours or 16 graduate hours if topics vary. Prerequisite: One year of college literature or consent of instructor.

CWL 490 Topics in Classical Literature credit: 3 or 4 Hours.
Same as CLCV 490. See CLCV 490.

CWL 493 Senior Thesis and Honors credit: 3 to 6 Hours.
Independent research guided by tutor(s), leading to the writing of a comparative thesis. Intended primarily for candidates for honors in comparative literature, but open to other seniors. 3 to 6 undergraduate hours. No graduate credit. May be repeated to a maximum of 12 hours.

CWL 496 Special Topics in Comp Lit II credit: 3 to 4 Hours.
Selected literary topics of international significance in relation to other cultural expressions. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 9 undergraduate or 12 graduate hours. Prerequisite: Consent of instructor.

CWL 501 Theory of Literature credit: 4 Hours.
Major issues of literary theory, critical approaches, and comparative research.

CWL 502 Methods of Comparative Lit credit: 4 Hours.
Problems and methods of cross-cultural literary studies, concentrating on the effects of historical encounters between different civilizations and on theoretical issues in comparing literatures across cultures. Prerequisite: Knowledge of two languages other than English or (with instructor's consent) advanced knowledge of one foreign language.

CWL 503 Historiography of Cinema credit: 4 Hours.
Same as ENGL 503 and MACS 503. See MACS 503.

CWL 504 Theories of Cinema credit: 4 Hours.
Same as ENGL 504 and MACS 504. See MACS 504.

CWL 535 Nabokov credit: 4 Hours.
Same as RUSS 535. See RUSS 535.

CWL 551 Seminar Lit Movements credit: 4 Hours.
Investigation of the development and mutation of literary movements (classicism, romanticism, symbolism, etc.) through a study of critical texts and their reception in various countries. May be repeated to a maximum of 12 hours if topics vary.

CWL 552 Studies French & Comp Cinema credit: 4 Hours.
Same as FR 552. See FR 552.

CWL 561 Seminar Genres - Forms credit: 4 Hours.
Study of a form (the lyric, the novel, the drama, etc.) to discover its essential components in all the literatures studied and the significance of national variations. May be repeated to a maximum of 12 hours if topics vary.

CWL 562 Sem Spanish-American Lit credit: 4 Hours.
Same as SPAN 535. See SPAN 535.

CWL 570 Studies in Critical Theory credit: 4 Hours.
Same as GER 570. See GER 570.

CWL 571 Seminar in Literary Relations credit: 4 Hours.
Investigation of the impact of one literature upon another, or of some specific works upon others (the role of English literature in continental Europe, the influence of Russian novelists on French and German writers, etc.). May be repeated to a maximum of 12 hours if topics vary.

CWL 576 Methods in Slavic Grad Study credit: 4 Hours.
Same as SLAV 576. See SLAV 576.

CWL 578 Seminar 20thC French Lit credit: 4 Hours.
Same as FR 578. See FR 578.

CWL 581 Seminar Lit Themes credit: 4 Hours.
Study of a theme or type (the Faust myth, the romantic hero, etc.) to discover its essential components in all the literatures studied and the significance of national variations. The subject of the seminar varies each term. May be repeated to a maximum of 12 hours if topics vary.

CWL 582 Proseminar credit: 4 Hours.
Introduction to comparative literature as a discipline, history and philosophy of comparative literature, and training in practical professional skills, including conference presentations, grant writing, and course development. Prerequisite: Graduate standing.

CWL 586 Children and Youth Literature credit: 4 Hours.
Same as EURO 576, GWS 576, and SCAN 576. See SCAN 576.

CWL 593 Special Studies credit: 1 to 4 Hours.

CWL 599 Thesis Research credit: 0 to 16 Hours.
Intended for students engaged in writing a thesis as a partial requirement for the M.A. or Ph.D. degree in comparative literature. Approved for S/U grading only. May be repeated to a maximum of 8 graduate hours.

Comparative Biosciences (CB)

CB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CB>)

Courses

CB 290 Independent Research credit: 1 to 10 Hours.
Supervised scholarly laboratory work and/or reading in fields selected in consultation with an appropriate faculty member. May be repeated to a maximum of 10 hours in separate terms. Prerequisite: Permission of the instructor.

CB 420 Stem Cell Journal Club credit: 1 Hour.
This course will consist of a weekly journal club that will meet to discuss published journal articles related to stem cells. The focus will be primarily on clinical applications of stem cells, both adult and embryonic. Journal articles will be selected on a weekly basis to facilitate review of the most recent work in the field. Faculty, staff, post-doctoral fellows, and students from labs conducting stem cell research at the Veterinary School will attend and participate in the discussion. 1 undergraduate hour. 1 graduate hour. Approved for both letter and S/U grading. May be repeated in separate terms to a maximum of 2 undergraduate hours or 6 graduate hours.

CB 434 Pesticide Toxicology credit: 3 or 4 Hours.
Same as ENVS 433 and IB 486. See IB 486.

CB 449 Basic Toxicology credit: 3 Hours.
Same as CPSC 433, ENVS 480 and FSHN 480. See FSHN 480.

CB 467 Fund Phar Discovery & Dev credit: 2 Hours.

Examines fundamental aspects, practices and strategies utilized in the discovery and evaluation of pharmaceutical agents developed for human and animal use. The discovery, preclinical and clinical assessment of drugs is reviewed from both a chemical and biological perspective, in addition to the regulatory guidelines governing those activities and the required post-market surveillance. Also examines major ethical approaches and the strengths and limitation of various development strategies. 2 undergraduate hours. 2 graduate hours. Approved for both letter and S/U grading. Prerequisite: At least one semester of physiology (MCB 103, MCB 240, or equivalent), and biochemistry (MCB 354 or MCB 450 or equivalent) or consent of instructor.

CB 512 Advanced Endocrinology credit: 2 Hours.

Same as ANSC 530 and MCB 512. See MCB 512.

CB 514 Neurotoxicology credit: 3 Hours.

Examines toxic responses of the mammalian nervous system to xenobiotics (therapeutic agents, drugs of abuse, toxins, environmental and industrial chemicals) from the molecular and cellular levels to the behavioral level. Also covers neuroteratology, sensitive periods for neurotoxicity and the potential role of environmental factors/xenobiotics in the etiology of nervous system disorders. Same as ENVS 514 and PSYC 515. Prerequisite: Credit or concurrent registration in MCB 450 or equivalent.

CB 516 Reprod & Dev Toxicology credit: 3 Hours.

Introduction to reproductive and developmental toxicology that examines causes and manifestations both of structural malformations and of functional deficits in mammals. Topics covered include interactions between external factors and developmental gene expression, the behavioral consequences of chemical exposure, identification and regulation of reproductive and developmental toxicants. Examples emphasize reproductive and developmental toxicants that are present in the human environment. Same as ENVS 516. Prerequisite: Consent of instructor.

CB 520 Models in Biomedical Research credit: 2 Hours.

Students enrolled in this course will review scientific literature pertaining to experimental models used in biomedical research, and will present selected papers to the class. Faculty members who use these models in their research will attend student presentations and participate in the associated discussions. By the end of the course, student will be familiar with the uses, advantages and limits of key molecular, cellular and animal models used in a range of biomedical research fields. 2 graduate hours. 2 professional hours. May be repeated in separate terms if topics vary. Prerequisite: No prerequisites for graduate students enrolled in a Master of Science or PhD program in a biomedical field. Professional students must obtain the coordinator's authorization.

CB 533 Repro Physiology Lab Methods credit: 1 to 3 Hours.

Same as ANSC 533 and MCB 533. See ANSC 533.

CB 540 Wildlife Ecosystem Health credit: 1 or 2 Hours.

Provides veterinary professional students and graduate students with an introduction to the use of medical reasoning and technology in the investigation of problems related to conservation biology and ecosystem health. The course is an interactive, video conference assisted seminar series, jointly hosted by the University Of Illinois College Of Veterinary Medicine, Loyola University Chicago Stritch School of Medicine, and the Chicago Zoological Society/Brookfield Zoo. Together, these institutions comprise the "Conservation Medicine Center of Chicago." Topics include the evolutionary origins of HIV/AIDS, the ecology of vector-borne diseases, global amphibian population declines, wildlife epidemiology and pathology, and the role of zoos in disease surveillance and management. Approved for S/U grading only.

CB 550 Detect/Anal Gene Transcripts credit: 4 Hours.

Gives participants the background information and hands-on experience in the methodologies necessary to utilize cloned genes for the detection and quantitation of specific mRNA transcripts in RNA extracted from tissue or cell culture samples. Methodologies covered will include: recombinant plasmid propagation, cDNA probe isolation and isotopic labeling, RNA isolation, Poly A+ mRNA selection, gel separation and transfer of RNA to a membrane (Northern blot), hybridization of specific gene probes to membrane bound RNA (Northern hybridization), detection and quantitation of hybridization signal. These basic methodologies are widely applicable to different experimental systems. They allow an investigator to monitor the effects of physiological manipulations, to animals or cultured cells, at the molecular level. Prerequisite: Consent of instructor.

CB 551 Ecotoxicology North Hemisphere credit: 1 Hour.

Sources, environmental fate, and adverse effects of manmade and naturally-occurring chemicals on terrestrial and aquatic wildlife and ecological systems will be addressed. Historical and contemporary issues in wildlife health, including direct toxic effects and indirect effects of environmental contaminants will be examined. Focuses mainly on northern hemisphere with multiple examples from North America and Europe. Includes perspectives from academia, industry and public sector. Prerequisite: At least one semester of biology (IB 150 or equivalent), and biochemistry (MCB 354 or equivalent).

CB 552 Ethics in Toxicology credit: 1 Hour.

Ethical issues in the practice of toxicological research collaboration, authorship and plagiarism, professional responsibility to subjects (both human and animal), whistle-blowing, codes of ethics, legal obligations. Case Studies.

CB 554 Systems Toxicology credit: 3 Hours.

Provides an overview of the effects of chemicals and their mechanisms of action in a variety of organ systems. Topics include toxicology of the nervous, developmental, reproductive, thyroid, renal, hepatic, immune, pulmonary, and gastrointestinal systems. Prerequisite: Completion of a course in basic toxicology or consent of instructor.

CB 564 Comp Clinical Pharmacology credit: 3 Hours.

Lecture-discussion of the clinical use in animals of human and veterinary drugs, including current literature review on pharmacodynamic species differences, novel indications, and contrast of therapeutic alternatives. Prerequisite: Graduate Veterinarian or consent of instructor.

CB 590 Seminar credit: 1 Hour.

Required of all graduate students whose major is comparative biosciences.

CB 591 Biosciences Seminar Series credit: 0 to 1 Hours.

Review and discussion of selected topics. Students are required to participate in weekly discussions and present one formal seminar per year, on a topic approved by the instructor. Approved for S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: Enrollment in CB graduate program or consent of instructor.

CB 592 Special Problems credit: 1 to 12 Hours.

Basic and applied study including orientation and research on pertinent initial and continuing problems in the student's area of interest. Prerequisite: Consent of instructor.

CB 594 Comparative Bioscience credit: 1 to 4 Hours.

To be used to designate a trial or experimental course for five or more students. It is designed to be a graduate course. A course can be taught under this designation two times within a two-year period and cannot be renewed as a CB 594 course. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

CB 596 Interdisciplinary Tox Sem credit: 1 Hour.

Interdisciplinary seminar on topics within the area of toxicology; topics vary each term. Seminars are presented by faculty, visiting lecturers, and students based upon their study, research, and/or professional activities in the selected topic area. Same as ENV5 596 and PATH 596. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

CB 599 Thesis Research credit: 0 to 16 Hours.

Individual direction of research and thesis writing. Approved for S/U grading only. May be repeated.

CB 646 Advanced Therapeutics credit: 1 Hour.

Designed as an elective offering for veterinary professional students and graduate students interested in clinical pharmacology. As an extension of core veterinary pharmacology modules in the veterinary professional curriculum, case and/or problem-based discussions will be used to highlight rational therapeutic decision-making and its evidence basis. Drug classes presented in core instruction will be reviewed and new drug classes will be introduced in the context of case management discussions. 1 graduate hour. 1 professional hour. Approved for S/U grading only. May be repeated in separate terms to a maximum of 3 hours. Prerequisite: VM 607 or consent of instructor.

CB 692 Special Problems credit: 1 to 6 Hours.

Individual research on a special problem chosen in consultation with the instructor and department head. 1 to 6 graduate hours. 1 to 6 professional hours. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Enrollment in veterinary medicine curriculum with grade-point average of 3.0 or above, or consent of instructor.

CB 694 Comparative Bioscience credit: 1 to 3 Hours.

Basic and applied study including orientation and research on pertinent initial and continuing problems for veterinary medical students. These studies are elective to the CVM professional curriculum. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Enrollment in the veterinary medicine curriculum or consent of instructor.

Computational Science and Engr (CSE)

CSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CSE>)

Courses

CSE 401 Numerical Analysis credit: 3 or 4 Hours.

Same as CS 450, ECE 491 and MATH 450. See CS 450.

CSE 402 Parallel Progrmg: Sci & Engrg credit: 3 or 4 Hours.

Same as CS 420 and ECE 492. See CS 420.

CSE 408 Applied Parallel Programming credit: 4 Hours.

Same as CS 483 and ECE 408. See ECE 408.

CSE 412 Numerical Thermo-Fluid Mechs credit: 2 to 4 Hours.

Same as ME 412. See ME 412.

CSE 414 Algorithms credit: 4 Hours.

Same as CS 473 and MATH 473. See CS 473.

CSE 422 Computer System Organization credit: 3 or 4 Hours.

Same as CS 433. See CS 433.

CSE 423 Operating Systems Design credit: 3 or 4 Hours.

Same as CS 423. See CS 423.

CSE 426 Software Engineering I credit: 3 or 4 Hours.

Same as CS 427. See CS 427.

CSE 427 Interactive Computer Graphics credit: 3 or 4 Hours.

Same as CS 418. See CS 418.

CSE 428 Statistical Computing credit: 3 or 4 Hours.

Same as STAT 428. See STAT 428.

CSE 429 Software Engineering II credit: 3 or 4 Hours.

Same as CS 428. See CS 428.

CSE 440 Statistical Data Management credit: 3 or 4 Hours.

Same as STAT 440. See STAT 440.

CSE 441 Introduction to Optimization credit: 3 or 4 Hours.

Same as ECE 490. See ECE 490.

CSE 448 Advanced Data Analysis credit: 4 Hours.

Same as STAT 448. See STAT 448.

CSE 450 Computational Mechanics credit: 3 or 4 Hours.

Same as TAM 470. See TAM 470.

CSE 451 Finite Element Analysis credit: 3 or 4 Hours.

Same as AE 420 and ME 471. See ME 471.

CSE 461 Computational Aerodynamics credit: 3 or 4 Hours.

Same as AE 410. See AE 410.

CSE 485 Atomic Scale Simulations credit: 3 or 4 Hours.

Same as MSE 485 and PHYS 466. See MSE 485.

CSE 505 Computational Bioengineering credit: 4 Hours.

Same as BIOE 505. See BIOE 505.

CSE 510 Numerical Methods for PDEs credit: 4 Hours.

Same as CS 555. See CS 555.

CSE 511 Iterative & Multigrid Methods credit: 4 Hours.

Same as CS 556. See CS 556.

CSE 512 Parallel Numerical Algorithms credit: 4 Hours.

Same as CS 554. See CS 554.

CSE 513 Topics in Numerical Analysis credit: 4 Hours.

Same as CS 558. See CS 558.

CSE 515 Algorithms credit: 4 Hours.

Same as CS 573. See CS 573.

CSE 517 Adv Finite Element Methods credit: 4 Hours.

Same as TAM 574. See TAM 574.

CSE 521 Computer Architecture credit: 4 Hours.

Same as ECE 511. See ECE 511.

CSE 522 Parallel Computer Architecture credit: 4 Hours.

Same as CS 533. See CS 533.

CSE 525 Computational Statistics credit: 4 Hours.

Same as STAT 525. See STAT 525.

CSE 527 Scientific Visualization credit: 4 Hours.

Same as CS 519. See CS 519.

CSE 529 Interact of Rad w/Matter II credit: 4 Hours.

Same as NPRE 529. See NPRE 529.

CSE 530 Computational Electromagnetics credit: 4 Hours.

Same as ECE 540. See ECE 540.

CSE 532 Numerical Circuit Analysis credit: 4 Hours.

Same as ECE 552. See ECE 552.

CSE 542 Statistical Learning credit: 4 Hours.

Same as STAT 542. See STAT 542.

CSE 543 Topics in Image Processing credit: 4 Hours.

Same as ECE 547. See ECE 547.

CSE 551 Finite Element Methods credit: 4 Hours.

Same as CEE 570. See CEE 570.

CSE 552 Nonlinear Finite Elements credit: 4 Hours.

Same as CEE 576. See CEE 576.

CSE 553 Computational Inelasticity credit: 4 Hours.

Same as CEE 577. See CEE 577.

CSE 554 Computational Plates & Shells credit: 4 Hours.

Same as CEE 571. See CEE 571.

CSE 560 Computational Fluid Mechanics credit: 4 Hours.

Same as TAM 570. See TAM 570.

CSE 561 Computational Process Modeling credit: 4 Hours.

Same as ME 554. See ME 554.

CSE 566 Numerical Fluid Dynamics credit: 4 Hours.

Same as ATMS 502. See ATMS 502.

CSE 576 Computational Chemical Biology credit: 4 Hours.

Same as BIOP 576 and CHEM 576. See CHEM 576.

Computer Science (CS)

CS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CS>)

Courses

CS 100 Freshman Orientation credit: 1 Hour.

Introduction to Computer Science as a field and career for computer science majors. Overview of the field and specific examples of problem areas and methods of solution.

CS 101 Intro Computing: Engrg & Sci credit: 3 Hours.

Fundamental principles, concepts, and methods of computing, with emphasis on applications in the physical sciences and engineering. Basic problem solving and programming techniques; fundamental algorithms and data structures; use of computers in solving engineering and scientific problems. Intended for engineering and science majors. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 102 Little Bits to Big Ideas credit: 4 Hours.

Same as INFO 102. See INFO 102.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 105 Intro Computing: Non-Tech credit: 3 Hours.

Computing as an essential tool of academic and professional activities. Functions and interrelationships of computer system components: hardware, systems and applications software, and networks. Widely used application packages such as spreadsheets and databases. Concepts and practice of programming for the solution of simple problems in different application areas. Intended for non-science and non-engineering majors. Prerequisite: MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 125 Intro to Computer Science credit: 4 Hours.

Basic concepts in computing and fundamental techniques for solving computational problems. Intended as a first course for computer science majors and others with a deep interest in computing. Prerequisite: Three years of high school mathematics or MATH 112.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

CS 126 Software Design Studio credit: 3 Hours.

Fundamental principles and techniques of software development. Design, documentation, testing, and debugging software, with a significant emphasis on code review. Credit is not given for both CS 242 and CS 126. Prerequisite: CS 125. For majors only.

CS 173 Discrete Structures credit: 3 Hours.

Discrete mathematical structures frequently encountered in the study of Computer Science. Sets, propositions, Boolean algebra, induction, recursion, relations, functions, and graphs. Credit is not given for both CS 173 and MATH 213. Prerequisite: One of CS 125, ECE 220; one of MATH 220, MATH 221.

CS 196 Freshman Honors credit: 1 Hour.

Offered for honors credit in conjunction with other 100-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 100-level computer science course (see Schedule).

CS 199 Undergraduate Open Seminar in Computer Science credit: 0 to 5 Hours.

Topics vary. Approved for Letter and S/U grading. May be repeated.

CS 210 Ethical & Professional Issues credit: 2 Hours.

Ethics for the computing profession. Ethical decision-making; licensing; intellectual property, freedom of information, and privacy. Credit is not given for both CS 210 and ECE 316. Prerequisite: CS 225. Junior standing required.

CS 225 Data Structures credit: 4 Hours.

Data abstractions: elementary data structures (lists, stacks, queues, and trees) and their implementation using an object-oriented programming language. Solutions to a variety of computational problems such as search on graphs and trees. Elementary analysis of algorithms. Prerequisite: CS 125 or ECE 220; CS 173 or MATH 213.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

CS 233 Computer Architecture credit: 4 Hours.

Fundamentals of computer architecture: digital logic design, working up from the logic gate level to understand the function of a simple computer; machine-level programming to understand implementation of high-level languages; performance models of modern computer architectures to enable performance optimization of software; hardware primitives for parallelism and security. Prerequisite: CS 125 and CS 173; credit or concurrent enrollment in CS 225.

CS 241 System Programming credit: 4 Hours.

Basics of system programming, including POSIX processes, process control, inter-process communication, synchronization, signals, simple memory management, file I/O and directories, shell programming, socket network programming, RPC programming in distributed systems, basic security mechanisms, and standard tools for systems programming such as debugging tools. Credit is not given for both CS 241 and ECE 391. Prerequisite: CS 225; credit or concurrent registration in CS 233.

CS 242 Programming Studio credit: 3 Hours.

Intensive programming lab intended to strengthen skills in programming. Prerequisite: CS 241.

CS 296 Honors Course credit: 1 Hour.

Group projects for honors credit in computer science. Sections of this course are offered in conjunction with other 200-level computer science courses taken concurrently. A special examination may be required for admission to this course. May be repeated. Prerequisite: Concurrent registration in another 200-level computer science course (see Schedule).

CS 357 Numerical Methods I credit: 3 Hours.

Fundamentals of numerical methods for students in science and engineering; floating-point computation, systems of linear equations, approximation of functions and integrals, the single nonlinear equation, and the numerical solution of ordinary differential equations; various applications in science and engineering; programming exercises and use of high quality mathematical library routines. Same as MATH 357. Credit is not given for CS 357 if credit for CS 450 has been earned. (Counts for advanced hours in LAS). Prerequisite: A 100-level computer science course; MATH 225 or MATH 415; MATH 241.

CS 361 Probability & Statistics for Computer Science credit: 3 Hours.

Introduction to probability theory and statistics with applications to computer science. Topics include: visualizing datasets, summarizing data, basic descriptive statistics, conditional probability, independence, Bayes theorem, random variables, joint and conditional distributions, expectation, variance and covariance, central limit theorem. Markov inequality, Chebyshev inequality, law of large numbers, Markov chains, simulation, the PageRank algorithm, populations and sampling, sample mean, standard error, maximum likelihood estimation, Bayes estimation, hypothesis testing, confidence intervals, linear regression, principal component analysis, classification, and decision trees. Same as STAT 361. Credit is not given for both CS 361 and ECE 313. Prerequisite: MATH 220 or 221; credit or concurrent registration in MATH 225. For majors only.

CS 374 Introduction to Algorithms & Models of Computation credit: 4 Hours.

Analysis of algorithms, major paradigms of algorithm design including recursive algorithms, divide-and-conquer algorithms, dynamic programming, greedy algorithms, and graph algorithms. Formal models of computation including finite automata and Turing machines. Limitations of computation arising from fundamental notions of algorithm and from complexity-theoretic constraints. Reductions, undecidability and NP-completeness. Same as ECE 374. Prerequisite: CS 225; MATH 225 or MATH 415.

CS 397 Individual Study credit: 1 to 3 Hours.

May be repeated. Prerequisite: Consent of instructor.

CS 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

CS 410 Text Information Systems credit: 3 or 4 Hours.

Theory, design, and implementation of text-based information systems. Text analysis, retrieval models (e.g., Boolean, vector space, probabilistic), text categorization, text filtering, clustering, retrieval system design and implementation, and applications to web information management. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 411 Database Systems credit: 3 or 4 Hours.

Examination of the logical organization of databases: the entity-relationship model; the hierarchical, network, and relational data models and their languages. Functional dependencies and normal forms. Design, implementation, and optimization of query languages; security and integrity; concurrency control, and distributed database systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 412 Introduction to Data Mining credit: 3 or 4 Hours.

Concepts, techniques, and systems of data warehousing and data mining. Design and implementation of data warehouse and on-line analytical processing (OLAP) systems; data mining concepts, methods, systems, implementations, and applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 413 Intro to Combinatorics credit: 3 or 4 Hours.

Same as MATH 413. See MATH 413.

CS 414 Multimedia Systems credit: 3 or 4 Hours.

Organization and structure of modern multimedia systems; audio and video encoding; quality of service concepts; scheduling algorithms for multimedia within OS and networks multimedia protocols over high-speed networks; synchronization schemes, user-interface design; multimedia teleservices. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 418 Interactive Computer Graphics credit: 3 or 4 Hours.

Basic mathematical tools and computational techniques for modeling, rendering, and animating 3-D scenes. Same as CSE 427. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; MATH 225 or MATH 415; MATH 241.

CS 419 Production Computer Graphics credit: 3 or 4 Hours.

Advanced methods for representing, displaying, and rendering two-, three-, and four-dimensional scenes. General algebraic curves and surfaces, splines, Gaussian and bump-function representation, fractals, particle systems, constructive solid geometry methods, lighting models, radiosity, advanced ray-tracing methods, surface texturing animation techniques, data visualization methods. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 418.

CS 420 Parallel Progmng: Sci & Engrg credit: 3 or 4 Hours.

Fundamental issues in design and development of parallel programs for various types of parallel computers. Various programming models according to both machine type and application area. Cost models, debugging, and performance evaluation of parallel programs with actual application examples. Same as CSE 402 and ECE 492. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 421 Progrmg Languages & Compilers credit: 3 or 4 Hours.

Structure of programming languages and their implementation. Basic language design principles; abstract data types; functional languages; type systems; object-oriented languages. Basics of lexing, parsing, syntax-directed translation, semantic analysis, and code generation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233 and CS 373.

CS 422 Programming Language Design credit: 3 or 4 Hours.

Exploration of major language design paradigms using imperative and functional programming as unifying themes. Tools include both practical language processor construction and theoretical models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 423 Operating Systems Design credit: 3 or 4 Hours.

Organization and structure of modern operating systems and concurrent programming concepts. Deadlock, virtual memory, processor scheduling, and disk systems. Performance, security, and protection. Same as CSE 423. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 424 Real-Time Systems credit: 3 or 4 Hours.

Supervisory control aspects of Cyber Physical Systems (CPS): fundamentals of reliability analysis, real-time scheduling, simple feedback control, software fault tolerance architecture, wireless networking and energy saving, principles of safety critical system engineering. Student groups design and demonstrate supervisory control architecture for a robot. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 425 Distributed Systems credit: 3 or 4 Hours.

Protocols, specification techniques, global states and their determination, reliable broadcast, transactions and commitment, security, and real-time systems. Same as ECE 428. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 426 Compiler Construction credit: 3 or 4 Hours.

Compiler structure, syntax analysis, syntax-directed translation, automatically constructed recognizers, semantic analysis, code generation, intermediate language, optimization techniques. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 421.

CS 427 Software Engineering I credit: 3 or 4 Hours.

Software process, analysis and design. Software development paradigms, system engineering, function-based analysis and design, and object-oriented analysis and design. Course will use team-projects for hands-on exercises. Same as CSE 426. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 and CS 373.

CS 428 Software Engineering II credit: 3 or 4 Hours.

Continuation of CS 427. Software development, management, and maintenance. Project and configuration management, collaborative development models, software quality assurance, interoperability domain engineering and software reuse, and software re-engineering. Same as CSE 429. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 427.

CS 429 Software Engineering II, ACP credit: 3 Hours.

Continuation of CS 427. Identical to CS 428 except for the additional writing component. See CS 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: CS 427.

This course satisfies the General Education Criteria for: Advanced Composition

CS 431 Embedded Systems credit: 3 or 4 Hours.

A survey of sampled data systems and embedded architecture; key concepts in common embedded system applications; signal processing and control; embedded microprocessor and device interface; time-critical I/O handling; data communications; real-time operating systems and techniques for the development and analysis of embedded real-time software; hands-on laboratory projects. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 433 Computer System Organization credit: 3 or 4 Hours.

Computer system analysis and design. Organizational dependence on computations to be performed; speed and cost of parts and overall machines; instruction set design; pipeline and vector machines; memory hierarchy design. Same as CSE 422. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 233.

CS 436 Computer Networking Laboratory credit: 3 or 4 Hours.

Same as ECE 435. See ECE 435.

CS 438 Communication Networks credit: 3 or 4 Hours.

Layered architectures and the OSI Reference Model; design issues and protocols in the transport, network, and data link layers; architectures and control algorithms of local-area, point-to-point, and satellite networks; standards in networks access protocols; models of network interconnection; overview of networking and communication software. Same as ECE 438. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391; one of ECE 313, MATH 461, MATH 463.

CS 439 Wireless Networks credit: 3 or 4 Hours.

Same as ECE 439. See ECE 439.

CS 440 Artificial Intelligence credit: 3 or 4 Hours.

Major topics in and directions of research in artificial intelligence: AI languages (LISP and PROLOG), basic problem solving techniques, knowledge representation and computer inference, machine learning, natural language understanding, computer vision, robotics, and societal impacts. Same as ECE 448. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225 or ECE 391.

CS 445 Computational Photography credit: 3 or 4 Hours.

Computer vision techniques to enhance, manipulate, and create media from photo collections, such as panoramic stitching, face morphing, texture synthesis, blending, and 3D reconstruction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225, MATH 225, and MATH 231.

CS 446 Machine Learning credit: 3 or 4 Hours.

Theory and basic techniques in machine learning. Major theoretical paradigms and key concepts developed in machine learning in the context of applications such as natural language and text processing, computer vision, data mining, adaptive computer systems and others. Review of several supervised and unsupervised learning approaches: methods for learning linear representations; on-line learning, Bayesian methods; decision-trees; features and kernels; clustering and dimensionality reduction. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373 and CS 440.

CS 447 Natural Language Processing credit: 3 or 4 Hours.

Part-of-speech tagging, parsing, semantic analysis and machine translation. Relevant linguistics concepts from morphology (word formation) and lexical semantics (the meaning of words) to syntax (sentence structure) and compositional semantics (the meaning of sentences). 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 447 and LING 406. Prerequisite: CS 374.

CS 450 Numerical Analysis credit: 3 or 4 Hours.

Linear system solvers, optimization techniques, interpolation and approximation of functions, solving systems of nonlinear equations, eigenvalue problems, least squares, and quadrature; numerical handling of ordinary and partial differential equations. Same as CSE 401, ECE 491, and MATH 450. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both CS 450 and CS 457. Prerequisite: CS 101 or CS 125; CS 357 or MATH 415; MATH 285.

CS 457 Numerical Methods II credit: 3 Hours.

Continuation of CS 357. Orthogonalization methods for least squares, Krylov subspace methods, non-linear equations and optimization in multiple dimensions, initial and boundary value problems for ordinary and partial differential equations. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 457 and CS 450. Prerequisite: CS 357.

CS 460 Security Laboratory credit: 3 or 4 Hours.

Operating systems security: access control, least privilege mechanism and malware techniques. Network security: firewalls, sniffing, tunnels, intrusion detection, AAA and worm structure. System security: forensics security architectures, and attack/defend exercises. Complements CS 461 via hands-on project. Same as ECE 419. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461.

CS 461 Computer Security I credit: 4 Hours.

Fundamental principles of computer and communications security and information assurance: ethics, privacy, notions of threat, vulnerabilities, and risk in systems, information warfare, malicious software, data secrecy and integrity issues, network security, trusted computing, mandatory and discretionary access controls, certification and accreditation of systems against security standards. Security mechanisms: authentication, auditing, intrusion detection, access control, cryptography, security protocols, key distribution. Same as ECE 422. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 241 or ECE 391.

CS 463 Computer Security II credit: 3 or 4 Hours.

Program security, trusted base, privacy, anonymity, non-interference, information flow, confinement, advanced auditing, forensics, intrusion detection, key management and distribution, policy composition and analysis, formal approaches to specification and verification of secure systems and protocols, and topics in applied cryptography. Same as ECE 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 461. Recommended: CS 475.

CS 465 User Interface Design credit: 3 or 4 Hours.

A project-focused course covering fundamental principles of user interface design, implementation, and evaluation. Small teams work on a term-long project that involves: analysis of the problem domain, user skills, and tasks; iterative prototyping of interfaces to address user needs; conducting several forms of evaluation such as cognitive walkthroughs and usability tests; implementation of the final prototype. Non-technical majors may enroll as non-programmers who participate in all aspects of the projects with the possible exception of implementation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 466 Introduction to Bioinformatics credit: 3 or 4 Hours.

Algorithmic approaches in bioinformatics: (i) biological problems that can be solved computationally (e.g., discovering genes, and interactions among different genes and proteins); (ii) algorithmic techniques with wide applicability in solving these problems (e.g., dynamic programming and probabilistic methods); (iii) practical issues in translating the basic algorithmic ideas into accurate and efficient tools that biologists may use. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 467 Social Visualization credit: 3 or 4 Hours.

Visualizing social interaction in networked spaces: investigation of patterns in networked communications systems such as messaging (email, instant messaging), social networking sites and collaborative sites; social network theory and visualizations; exploration of how to move beyond existing visualization techniques; visualizing the network identity over compilations of online data. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225.

CS 468 Tech and Advertising Campaigns credit: 3 Hours.

Same as ADV 492. See ADV 492.

CS 473 Algorithms credit: 4 Hours.

Design and analysis techniques, approximation algorithms, randomized algorithms and amortized analysis, and advanced topics such as network flow, linear programming, and dynamic data structures, among others. Same as CSE 414 and MATH 473. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 374, and one of CS 361, MATH 461, or STAT 400.

CS 475 Formal Models of Computation credit: 3 or 4 Hours.

Finite automata and regular languages; pushdown automata and context-free languages; Turing machines and recursively enumerable sets; linear-bounded automata and context-sensitive languages; computability and the halting problem; undecidable problems; recursive functions; Chomsky hierarchy; computational complexity. Same as MATH 475. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 373.

CS 476 Program Verification credit: 3 or 4 Hours.

Formal methods for demonstrating correctness and other properties of programs. Invariant assertions; Hoare axiomatics; well-founded orderings for proving termination; structural induction; computational induction; data structures; parallel programs; overview of predicate calculus. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 374 or MATH 414.

CS 477 Formal Software Devel Methods credit: 3 or 4 Hours.

Mathematical models, languages, and methods for software specification, development, and verification. Same as ECE 478. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 225; CS 373 or MATH 414.

CS 481 Stochastic Processes & Applic credit: 3 or 4 Hours.

Same as IE 410. See IE 410.

CS 482 Simulation credit: 3 or 4 Hours.

Same as IE 413. See IE 413.

CS 483 Applied Parallel Programming credit: 4 Hours.

Same as CSE 408 and ECE 408. See ECE 408.

CS 484 Parallel Programming credit: 3 or 4 Hours.

Techniques for the programming of all classes of parallel computers and devices including shared memory and distributed memory multiprocessors, SIMD processors and co-processors, and special purpose devices. Key concepts in parallel programming such as reactive and transformational programming, speculation, speedup, isoefficiency, and load balancing. Synchronization primitives, libraries and languages for parallel programming such as OpenMP and MPI, performance monitoring, program tuning, analysis and programming of numerical and symbolic parallel algorithms. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241.

CS 491 Seminar credit: 0 to 4 Hours.

Seminar on topics of current interest as announced in the Class Schedule. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for S/U grading only. May be repeated in the same or separate terms if topics vary to a maximum of 4 hours. Prerequisite: As specified for each topic offering, see Class Schedule or departmental course description.

CS 492 Senior Project I credit: 3 Hours.

First part of a project course in computer science. Students work in teams to solve typical commercial or industrial problems. Work involves planning, design, and implementation. Extensive oral and written work is required both on-campus and possibly off-campus at sponsors' locations. CS 492 must be taken as a sequence with either CS 493 or CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 492 and a project course in another engineering department for the same project. Prerequisite: For Computer Science majors with senior standing.

CS 493 Senior Project II, ACP credit: 3 Hours.

Continuation of CS 492. Identical to CS 494 except for an additional writing component. See CS 494. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 493 and a project course in another engineering department for the same project. Prerequisite: CS 492. This course satisfies the General Education Criteria for: Advanced Composition

CS 494 Senior Project II credit: 3 Hours.

Continuation of CS 492. 3 undergraduate hours. No graduate credit. Credit is not given for both CS 494 and a project course in another engineering department for the same project. Prerequisite: CS 492.

CS 497 CS Team Project credit: 1 to 3 Hours.

Student teams work with CS faculty to complete a significant project requiring advanced knowledge of CS principles. Project topics vary. 1 to 3 undergraduate hours. No graduate credit. May be repeated in the same term up to 6 hours, if topics vary; may be repeated in separate terms. Prerequisite: For majors only; junior or senior standing required.

CS 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

CS 499 Senior Thesis credit: 3 Hours.

Research and thesis development experience in computer science under guidance of a faculty member. Literature search, oral presentation, analysis and implementation, paper preparation, and completion of a written thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

CS 508 Manycore Parallel Algorithms credit: 4 Hours.

Same as ECE 508. See ECE 508.

CS 510 Advanced Information Retrieval credit: 4 Hours.

Advanced concepts, models, and algorithms in information retrieval and major recent developments in the field, including historical milestones in information retrieval research, evaluation methodology, vector space retrieval model, probabilistic retrieval models, learning to rank algorithms, probabilistic topic models, information retrieval systems, text analytics, and topics of research frontiers in information retrieval. 4 graduate hours. No professional credit. Prerequisite: One of CS 410, CS 412, CS 446 or LING 406.

CS 511 Advanced Data Management credit: 4 Hours.

Advanced concepts in data management and information system design and implementation, and recent developments in the field. 1) Relational roots, objects and extensibility, query languages, data indexing, query processing, transaction processing, benchmarks, and 2) semi-structured data and unstructured data, information extraction, information integration, web search and mining, and other emerging directions in the field. Prerequisite: CS 411.

CS 512 Data Mining Principles credit: 4 Hours.

An advanced course on principles and algorithms of data mining. Data cleaning and integration; descriptive and predictive mining; mining frequent, sequential, and structured patterns; clustering, outlier analysis and fraud detection; stream data, web, text, and biomedical data mining; security and privacy in data mining; research frontiers. Prerequisite: CS 412.

CS 513 Theory & Practice of Data Cleaning credit: 4 Hours.

Same as IS 532. See IS 532.

CS 519 Scientific Visualization credit: 4 Hours.

Visualization techniques useful in analysis of engineering and scientific data. Physical models; methods of computational science; two- and three-dimensional data types; visual representation schemes for scalar, vector, and tensor data; isosurface and volume visualization methods; visual monitoring; interactive steering. Same as CSE 527. Prerequisite: CS 418.

CS 522 Programming Language Semantics credit: 4 Hours.

Theory of programming languages including functional programming, meta-circular interpreters, typed, untyped and polymorphic lambda-calculi, and denotational semantics. Prerequisite: CS 422 and CS 426.

CS 523 Advanced Operating Systems credit: 4 Hours.

Advanced concepts in operating system design and coverage of recent research directions. Resource management for parallel and distributed systems. Interaction between operating system design and computer architectures. Process management, virtual memory, interprocess communication, context switching, parallel and distributed file system designs, persistent objects, process and data migration, load balancing, security, protection. Term projects. Prerequisite: CS 423, CS 425, and CS 433.

CS 524 Concurrent Program Languages credit: 4 Hours.

Theory of concurrency and concurrent programming languages. Formal models of concurrent computation such as process algebras, nets, and actors; high level concurrent programming languages and their operational semantics; methods for reasoning about correctness and complexity of concurrent programs. Prerequisite: CS 422; CS 475 or CS 476.

CS 525 Advanced Distributed Systems credit: 4 Hours.

Peer-to-peer systems, sensor networks, and fundamental theoretical distributed computing. Review of classical work in each area, and application of design methodologies to explore overlaps across them. Emphasis on protocol design, systems issues, and theory. Reading selections are roughly two-third classical to one-third contemporary. Students write critiques, make presentations, and create a conference paper in a systematic manner. Prerequisite: One of CS 423, CS 425, CS 438.

CS 526 Advanced Compiler Construction credit: 4 Hours.

Incremental and interactive compiling, error correction, code optimization, models of code generators. Prerequisite: CS 426.

CS 527 Topics in Software Engineering credit: 4 Hours.

Fault-tolerant software, software architecture, software patterns, multi-media software, and knowledge-based approaches to software engineering. Case studies. Prerequisite: CS 428 or CS 429.

CS 528 Obj-Oriented Progrmg & Design credit: 4 Hours.

Principles of object-oriented design; design patterns; use and design of frameworks; reflection, refactoring, use of unit tests as specifications. Prerequisite: CS 427.

CS 533 Parallel Computer Architecture credit: 4 Hours.

Theoretical aspects of parallel and pipeline computation; time and processor bounds on classes of computations; data alignment network speed and cost bounds; conflict-free access memories; overall computer system ideas. Same as CSE 522. Prerequisite: CS 433.

CS 536 Fault-Tolerant Dig Syst Design credit: 4 Hours.

Same as ECE 542. See ECE 542.

CS 538 Advanced Computer Networks credit: 4 Hours.

Advanced concepts in computer networks, including congestion control, quality of service, naming, routing, wireless networks, Internet architecture, measurement, network security, and selected recent research directions. Prerequisite: CS 438.

CS 539 Distributed Algorithms credit: 4 Hours.

Same as ECE 526. See ECE 526.

CS 541 Computer Systems Analysis credit: 4 Hours.

Same as ECE 541. See ECE 541.

CS 543 Computer Vision credit: 4 Hours.

Same as ECE 549. See ECE 549.

CS 544 Optimiz in Computer Vision credit: 4 Hours.

Applications of continuous and discrete optimization to problems in computer vision and machine learning, with particular emphasis on large-scale algorithms and effective approximations: gradient-based learning; Newton's method and variants, applied to structure from motion problems; the augmented Lagrangian method and variants; interior-point methods; SMO and other specialized algorithms for support vector machines; flows and cuts as examples of primal-dual methods; dynamics programming, hidden Markov models, and parsing: 0-1 quadratic forms, max-cut, and Markov random-fields solutions. Prerequisite: CS 450 and CS 473.

CS 545 Systems Modeling & Simulation credit: 4 Hours.

Same as BADM 575. See BADM 575.

CS 546 Machine Learning in NLP credit: 4 Hours.

Central learning frameworks and techniques that have emerged in the field of natural language processing and found applications in several areas in text and speech processing: from information retrieval and extraction, through speech recognition to syntax, semantics and language understanding related tasks. Examination of the theoretical paradigms – learning theoretic, probabilistic, and information theoretic – and the relations among them, as well as the main algorithmic techniques developed within each paradigm and in key natural language applications. Prerequisite: CS 446 and CS 473.

CS 548 Models of Cognitive Processes credit: 4 Hours.

Formal models and concepts in automated cognition; integrating machine learning and prior knowledge; current approaches and detailed analyses of the role of reasoning in the learning process; computational complexity and fundamental tradeoffs between expressiveness and tractability; implications for state-of-the-art artificial intelligence areas such as automated planning, the semantic web, relational learning, structured prediction, latent models, structure learning, theory formation, etc.; philosophical and psychological aspects of integrating analytic and empirical evidence. Same as ECE 548. Prerequisite: CS 440 or CS 446.

CS 549 Seminar in Cognitive Science credit: 2 or 4 Hours.

Same as PSYC 514, ANTH 514, EPSY 551, LING 570, and PHIL 514. See PSYC 514.

CS 554 Parallel Numerical Algorithms credit: 4 Hours.

Numerical algorithms for parallel computers: parallel algorithms in numerical linear algebra (dense and sparse solvers for linear systems and the algebraic eigenvalue problem), numerical handling of ordinary and partial differential equations, and numerical optimization techniques. Same as CSE 512. Prerequisite: One of CS 450, CS 457, CS 555.

CS 555 Numerical Methods for PDEs credit: 4 Hours.

Numerical techniques for initial and boundary value problems in partial differential equations. Finite difference and finite element discretization techniques, direct and iterative solution methods for discrete problems, and programming techniques and usage of software packages. Same as CSE 510. Prerequisite: CS 450 or CS 457.

CS 556 Iterative & Multigrid Methods credit: 4 Hours.

Comprehensive treatment of algebraic and multigrid iterative methods to solve systems of equations, primarily linear equations arising from discretization of partial differential equations. Same as CSE 511.

CS 558 Topics in Numerical Analysis credit: 4 Hours.

Advanced topics in numerical analysis selected from areas of current research. Same as CSE 513. May be repeated. Prerequisite: As specified for each topic offering, see Schedule or departmental course description.

CS 563 Advanced Computer Security credit: 4 Hours.

Current research trends in computer and network security. Privacy, tamper-resistance, unwanted traffic, monitoring and surveillance, and critical infrastructure protection. Subtopics will vary depending upon current research trends. Students work in teams in close coordination with the course instructor to develop one of the topics in depth by carrying out background research and an exploratory project. Same as ECE 524. Prerequisite: CS 461 or CS 463.

CS 565 Human-Computer Interaction credit: 4 Hours.

In-depth coverage of advanced topics in human-computer interaction (HCI). Applied models of human performance and attention, design tools for creative design tasks, interruptions and peripheral displays, gestures, and bimanual input, and usability evaluation techniques. Students complete a research-oriented term project of their choosing. Prerequisite: CS 465.

CS 571 Combinatorial Mathematics credit: 4 Hours.

Same as MATH 580. See MATH 580.

CS 572 Extremal Graph Theory credit: 4 Hours.

Same as MATH 581. See MATH 581.

CS 573 Algorithms credit: 4 Hours.

NP-completeness, design and analysis techniques, approximation algorithms, randomized algorithms, combinatorial optimization, linear programming. Intended for graduate students in Computer Science. Same as CSE 515. 4 graduate hours. No professional credit.

CS 574 Randomized Algorithms credit: 4 Hours.

Basic and advanced concepts in the design and analysis of randomized algorithms. Sampling; concentration inequalities such as Chernoff-Hoeffding bounds; probabilistic method; random walks, dimension reduction; entropy; martingales and Azuma's inequality; derandomization. Randomized algorithms for sorting and searching; graphs; geometric problems. Basics of pseudorandomness and randomized complexity classes. Prerequisite: CS 473; MATH 461 or STAT 400.

CS 575 Methods of Combinatorics credit: 4 Hours.

Same as MATH 584. See MATH 584.

CS 576 Topics in Automated Deduction credit: 2 to 4 Hours.

Advanced topics in computer-aided methods for formal deduction, selected from areas of current research, such as: resolution theorem proving strategies, special relations, equational reasoning, unification theory, rewrite systems, mathematical induction, program derivation, hybrid inference systems, and programming with logic. May be repeated in separate terms. Prerequisite: As specified for each topic offering, see Schedule or departmental course description.

CS 579 Computational Complexity credit: 4 Hours.

Turing machines; determinism and non-determinism; time and space hierarchy theorems; speed-up and tape compression; Blum axioms; structure of complexity classes NP, P, NL, L, and PSPACE; complete problems; randomness and complexity classes RP, RL, and BPP; alternation, polynomial-time hierarchy; circuit complexity, parallel complexity, NC, and RNC; relativized computational complexity; time-space trade-offs. Same as ECE 579. Prerequisite: CS 473 or CS 475.

CS 581 Algorithmic Genomic Biology credit: 4 Hours.

Same as BIOE 540. See BIOE 540.

CS 583 Approximation Algorithms credit: 4 Hours.

Approximation algorithms for NP-hard problems. Basic and advanced techniques in approximation algorithm design: combinatorial algorithms; mathematical programming methods including linear and semi-definite programming, local search methods, and others. Algorithms for graphs and networks, constraint satisfaction, packing and scheduling. Prerequisite: CS 573 or consent of instructor.

CS 584 Embedded System Verification credit: 4 Hours.

Same as ECE 584. See ECE 584.

CS 585 Hardware Verification credit: 4 Hours.

Same as ECE 519. See ECE 519.

CS 591 Advanced Seminar credit: 0 to 4 Hours.

Seminar on topics of current interest as announced in the Class Schedule. Approved for S/U grading only. May be repeated in the same or separate terms if topics vary. Prerequisite: As specified for each topic offering, see Class Schedule or departmental course description.

CS 597 Individual Study credit: 2 to 16 Hours.

Individual study or reading in a subject not covered in normal course offerings. May be repeated. Prerequisite: Consent of instructor.

CS 598 Special Topics credit: 2 to 4 Hours.

Subject offerings of new and developing areas of knowledge in computer science intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

CS 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Creative Writing (CW)

CW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CW>)

Courses

CW 100 Intro to Creative Writing credit: 3 Hours.

Acquaint students with the technical choices a writer makes in creating a story or a poem. Mondays are given to lectures on specific elements of poetry and fiction. Wednesdays are dedicated to readings by faculty and visiting writers. Fridays allow students the opportunity to work in small group discussion sections applying the week's techniques and skills to a close reading of stories and poems.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

CW 104 Introductory Narrative Writing credit: 3 Hours.

Practice in the writing of narrative prose, with primary emphasis on short fiction. Prerequisite: Completion of campus Composition I general education requirement.

CW 106 Introductory Poetry Writing credit: 3 Hours.

Practice in the writing of poetry; experimentation with a number of fixed forms and free verse, but emphasis mainly on the student's freedom to develop a personal style. Prerequisite: Completion of campus Composition I general education requirement.

CW 200 Reading for Writers credit: 3 Hours.

Emphasizes the craft of short stories and poems through the study of formal elements central to the production of creative writing (e.g., plot, character, setting, point of view in short fiction and rhythm, meter, line break, imagery, simile, metaphor, formal patterns in poetry). Prerequisite: CW 104 or CW 106. For majors only.

CW 202 Topics in Creative Writing credit: 3 Hours.

Independent writing projects and examination of literature as the cultural basis of the student's specialized fields. May be repeated as topics vary.

CW 204 Intermediate Narrative Writing credit: 3 Hours.

Practice in the writing of fiction, with emphasis on the short story. Prerequisite: CW 104 or equivalent.

CW 206 Intermediate Poetry Writing credit: 3 Hours.

Builds upon the workshop format of CW 106, with an emphasis on prosody and poetic technique. Students will deepen their sense of craft by putting into practice their study and understanding of a variety of poetic forms (e.g., syllabic poetry, dramatic monologue, sonnet, bound/free verse) and technical concerns (e.g., voice, tone, line, line break, image). The workshop component of the course typically includes 8-12 completed poems and their revisions. Prerequisite: CW 106.

CW 208 Creative Nonfiction Writing credit: 3 Hours.

Types of nonfiction prose, including the personal essay, memoir, literary journalism, and historical writing. Prerequisite: RHET 233 or CW 243, or equivalent, or consent of instructor.

CW 243 Inter Expository Writing credit: 3 Hours.

Practice in expository types, with emphasis on style and critical analysis. Restricted to Creative Writing majors. Credit is not given for CW 243 and either RHET 243 or RHET 233. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

CW 404 Advanced Narrative Writing credit: 3 or 4 Hours.

Continued practice in the writing of fiction, with emphasis on the longer story. 3 undergraduate hours. 4 graduate hours. May be repeated for a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 204 or equivalent.

CW 406 Advanced Poetry Writing credit: 3 or 4 Hours.

Practice of the writing of poetry aided by intensive study of examples. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 206 or equivalent.

CW 455 Creative Writing Tutorial credit: 3 or 4 Hours.

Personal direction in a writing project: fiction (novel or short stories), poetry or creative nonfiction. Frequency of conference to be determined by the type of project. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: CW 208, CW 404 or CW 406, and consent of the Director of Creative Writing.

CW 460 Intro to Literary Editing credit: 3 Hours.

Practicum in which students learn all the stages of developing and editing a literary publication. Students will solicit, read, and select poems and stories for an online supplement to the Ninth Letter literary journal. At the end of the semester, the supplement will be published on the Ninth Letter website (www.ninthletter.com). Students will gain experience in professional communications, copyediting, and marketing. 3 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 6 hours. Prerequisite: CW 104 or CW 106.

CW 463 Adv Topics in Creative Writing credit: 3 or 4 Hours.

Advanced topics course in Creative Writing. Students study selected topic through a workshop model, pursuing advanced development in one or more approaches to writing in a specialized field or genre. 3 undergraduate hours. 4 graduate hours. May be repeated, if topics vary. Prerequisite: Junior standing required.

CW 500 The Craft of Fiction credit: 4 Hours.

Examination of the creative process of fiction from the perspectives of aesthetics and techniques, illustrated from the work of selected authors. Prerequisite: Graduate standing in English.

CW 502 Problems in Poetry Writing credit: 4 Hours.

Examination of the creative process of poetry from the perspective of aesthetics and techniques, illustrated from the work of selected authors. Prerequisite: Graduate standing in English.

CW 504 Writing Workshop in Fiction credit: 4 Hours.

Directed individual projects, with group discussion in fiction. May be repeated to a maximum of 16 hours. Prerequisite: Admission to the MFA program, or graduate standing in English with advanced submission of creative work and consent of instructor.

CW 506 Writing Workshop in Poetry credit: 4 Hours.

Directed individual projects, with group discussion in poetry. May be repeated to a maximum of 16 hours. Prerequisite: Admission to the MFA program, or graduate standing in English with advanced submission of creative work and consent of instructor.

CW 560 Literary Publishing & Promotion credit: 0 to 4 Hours.

A working practicum designed to teach graduate students the basics of literary journal publishing and to introduce them to career and entrepreneurial opportunities in other types of literary arts organizations. Students will attend weekly editorial meetings, complete weekly reading assignments, and will work 2 hours per week in the 'Ninth Letter' office, reading manuscript submissions and completing various clerical tasks for the journal. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours. Prerequisite: MFA candidate standing.

CW 563 Special Topics credit: 0 to 4 Hours.

Approved for both letter and S/U grading. May be repeated up to a maximum of 12 hours. Prerequisite: MFA candidate standing or consent of instructor.

CW 591 Independent Study credit: 0 to 4 Hours.

Approved for both letter and S/U grading. May be repeated up to a maximum of 12 hours. Prerequisite: MFA candidate standing.

CW 595 Final Project credit: 0 to 12 Hours.

Guidance in writing final projects. Approved for S/U grading only. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: MFA candidate standing.

Crop Sciences (CPSC)

CPSC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CPSC>)

Courses

CPSC 111 Farming Systems credit: 2 Hours.

General introduction to the equipment and practices commonly used on Midwest farms. Classes will consist of short lectures followed by demonstrations. All classes and demonstrations will be conducted at the University of Illinois Crop Sciences Research and Education Center. Includes field trips to local production and agribusiness facilities.

CPSC 112 Introduction to Crop Sciences credit: 4 Hours.

Introductory course covering the principles and practices of crop production and sustainable agroecosystem management. Topics include plant growth and development, environmental factors influencing plant productivity, soil management, fertility, and nutrient cycling, pest control principles, and sustainability challenges facing modern crop production. Concepts are discussed in lecture and reinforced in hands-on laboratory sections.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

CPSC 113 Environment, Agric, & Society credit: 3 Hours.

Introduction to agriculture and the environment; examine the largest managed ecosystem and its influence on natural ecosystems; develop a working understanding of natural and agriculture ecosystems and their interaction; examine various agriculture management strategies that can be used to produce food for an increasing world population while maintaining or improving environmental quality.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

Cultural Studies - Western

CPSC 116 The Global Food Production Web credit: 3 Hours.

Introduces students to the global web involved in the production of food we consume on a daily basis. Selected ecosystems of plants, people, and cultures in Asia, Africa, and Latin America will be studied based on involvement with various crops. Presents the origin and biology of plants; their evolution with humankind in various cultures; the spread and economic importance of crops around the world; and considers current hunger and environmental issues resulting from the global food web. Interactive communications with selected scientists, producers, and traders around the world through the World Wide Web and email system of the INTERNET permit students to get personal exposure to information and activities.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

CPSC 117 Agriculture and Science of Coffee credit: 3 Hours.

The growth and production of coffee and its impact on society and culture. The botanical aspects of coffee, coffee varieties/cultivars, and technologies for coffee growth, harvesting, post-harvest processing, and roasting will be discussed. The wide variety of coffee beverages, coffee flavor evaluation, coffee chemistry, coffee economics, and the physiological effects of coffee will also be examined.

CPSC 131 Agriculture in Mythology credit: 3 Hours.

Compare and contrast the role agriculture and plant sciences played in the development of ancient cultures. Study agricultural references in ancient global mythology. Develop an appreciation of how agricultural diversity of various ancient cultures influenced mythology in the cultures in different regions.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

CPSC 180 Medicinal Plants and Herbiology credit: 3 Hours.

Same as HORT 180. See HORT 180.

CPSC 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Experimental course on a special topic in crop sciences. Topic may not be repeated except in accordance with the Code. Approved for Letter and S/U grading. May be repeated up to a maximum of 12 hours in separate terms if topics vary.

CPSC 213 Evolution in Action credit: 2 Hours.

Introduction to evolutionary theory. Examination of how domesticated species have evolved. Develops an appreciation of how agroecosystems have influenced evolution of adjacent natural ecosystems. Elucidation of evolutionary mechanisms necessary for agricultural species to adapt to global climate change.

CPSC 215 The Prairie and Bioenergy credit: 3 Hours.

Designed for students who are interested in bioenergy and its production from prairie land. Instructors will provide information on the global trend of bioenergy production and consumption, importance of bioenergy, the role of Illinois prairie land in bioenergy production, potential U.S. bioenergy production, biofuels from plants, and socio-environmental benefits of bioenergy.

CPSC 226 Introduction to Weed Science credit: 3 Hours.

Fundamentals of weed biology, ecology, and management. Emphasis is placed on basic principles and specific management strategies that are relevant to both crop and non-crop ecosystems. Includes a laboratory/discussion. Same as HORT 226. Prerequisite: CPSC 112 or HORT 100 or IB 103.

CPSC 241 Intro to Applied Statistics credit: 3 Hours.

Introduces fundamental statistical procedures used to analyze and interpret data. General principles of descriptive and inferential statistics, measures of central tendency and dispersion, probability, correlation and regression, and tests of hypotheses are covered. An emphasis is placed on biological, environmental, and agricultural sciences, but numerous examples from other areas are discussed. Course content enhances students' ability to critically assess statistical information encountered in professional and every day activities. Credit is not given for both CPSC 241 and STAT 100 or ACE 261.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

CPSC 261 Biotechnology in Agriculture credit: 3 Hours.

Basic introduction to the techniques and application of biotechnology to a wide range of agricultural areas, and specific examples are given. May serve as either a terminal course explaining the techniques or as an introductory base for future studies. Same as HORT 261. Prerequisite: Any 100-level course in a biosciences discipline.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 265 Genetic Engineering Lab credit: 3 Hours.

Laboratory/discussion course that provides a hands-on introduction to the techniques and principles of genetic engineering, recombinant DNA and the impact of molecular genetics on society. Students will isolate DNA from plants and clone specific genes into bacterial plasmids, perform polymerase chain reactions, DNA restriction analysis and DNA blotting, and discuss the relevance of these techniques to both medicine and agriculture. Prerequisite: A general biology course.

CPSC 266 Data in Biology and Agriculture credit: 4 Hours.

This course focuses on the use of computing and data analysis to solve problems in biology and agriculture and includes an overview of computer methods and limitations of current computer, network and storage hardware for big data sets. The nature, use and future potential of different types of computer hardware and software in biology and agriculture (e.g. mobile applications, high performance computing, wireless networking) will be discussed. Examples of computing-related and computing-limited problems in biology and agriculture, such as image analysis, remote sensing and genetic analysis will be used as case studies. The potential of computing to improve the food system, medicine and other applications will be presented.

CPSC 270 Applied Entomology credit: 3 Hours.

Lectures, laboratory, and field trips cover the biology of insects and the recognition and management of insect pests of agricultural, forest, and urban ecosystems. Covers insect structure and physiology, classification, life histories, behavior, and pest management. Same as IB 220 and NRES 270.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

CPSC 293 Off-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, off-campus experience in a field directly pertaining to a subject matter in crop sciences. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, cumulative GPA of 2.0 or above at the time the internship is arranged, and consent of instructor.

CPSC 294 On-Campus Crop Sci Internship credit: 1 to 5 Hours.

Supervised, on-campus learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 10 hours. For registration in this course, students should contact the Department Teaching Coordinator. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

CPSC 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

CPSC 336 Tomorrow's Environment credit: 3 Hours.

Introduction to interdisciplinary methods of analysis of environmental problems in a finite world; examination of the concept of the limits to growth; development of a working understanding of natural systems and environmental economics; and examination of various management strategies (technical, economic, and social) that can be used to improve environmental quality. Same as CHLH 336, and ENVS 336. Prerequisite: One course in the life sciences and one course in the social sciences, or consent of instructor.

CPSC 352 Plant Genetics credit: 4 Hours.

The principles of heredity in relation to plant improvement. Same as NRES 352. Prerequisite: IB 103 or IB 104.

CPSC 382 Organic Chem of Biol Processes credit: 4 Hours.

An overview of the structure, properties, and reactions of carbon-containing compounds relevant to biological processes and cellular structure. The chemistry of hydro carbon, aromatic, as well as oxygen-nitrogen-, phosphorus-, and sulfur-containing compounds will be examined. Macromolecular structures including biological membranes, carbohydrates, proteins and nucleic acids will also be discussed. Prerequisites: CHEM 102 and CHEM 104 or CHEM 202 and CHEM 204.

CPSC 396 Undergrad Honors Res or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

CPSC 407 Diseases of Field Crops credit: 3 Hours.

Same as PLPA 407. See PLPA 407.

CPSC 408 Integrated Pest Management credit: 3 Hours.

Examination of fundamental concepts of pest management including a historical review of pests and pest management; an overview of major pests (insects, weeds, plant diseases and vertebrate) in a variety of settings (agronomic, specialty crops, urban and structural); management options (area-wide, chemical, biological, cultural and physical); regulatory issues; and topics of current interest. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or CPSC 270 or equivalent, both are preferred but only 1 is required.

CPSC 412 Principles of Crop Advising credit: 3 Hours.

Fundamentals in crop development and management, soil structure, management, and fertility, and how crops and soils interact are examined. Students learn how to diagnose real-world problems in fields and field crops grown in the Midwestern US, and to develop practical solutions to such problems. Prepares students to be competitive in careers within commercial crop agriculture and to pass the Certified Crop Adviser examination. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 and NRES 201, or equivalent, or consent of instructor.

CPSC 413 Agriculture, Food, and the Environment credit: 2 Hours.

Advanced course in the complex interactions of food production resulting from different agricultural systems and the environment. Develop an appreciation of the intricacies of producing food for a growing world population while minimizing the impact on the natural environment. Understand the implementation of new technology and strategies for future food production. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 112 or CPSC 113 or equivalent course or consent of instructor. For Online MS Program.

CPSC 414 Forage Crops and Pasture Eco credit: 3 Hours.

Forages, their plant characteristics, ecology, and production; grasslands of farm and range as related to animal production and soil conservation. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: An introductory class in biology.

CPSC 415 Bioenergy Crops credit: 3 Hours.

Provides an overview and understanding of biomass feedstock production systems for sustainable biofuels production. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112 or consent of instructor.

CPSC 416 Native Plants and Agroecosystems credit: 4 Hours.

Introduction to native plants and to their conservation use and agronomic benefit. Topics include learning to identify native plants using a regional flora, knowing the different ecological niches in the state of Illinois and which plants inhabit them, and choosing appropriate native plants to enhance the interaction between agronomic crops and natives. 4 undergraduate hours. 4 graduate hours. Credit is not given for CPSC 416 if credit for NRES 415 has been earned. Prerequisite: HORT 100 or IB 103.

CPSC 418 Crop Growth and Management credit: 3 Hours.

Crop physiology and management as influenced by environment, plant species, and cropping system; relates plant growth processes to crop production practices based on current research. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or CPSC 112 or equivalent, or consent of instructor.

CPSC 419 Midwest Agricultural Practices credit: 1 Hour.

Introduces agronomic production practices in the Midwest and economics of the crop production value chain. Specifically designed for beginning graduate students in crop genetic improvement from non-agricultural backgrounds. 1 undergraduate hour. 1 graduate hour.

CPSC 426 Weed Mgt in Agronomic Crops credit: 3 Hours.

Principles of weed ecology and biology, and their application to weed management. Herbicides and their use in corn, soybeans and other agronomic crops. Specialized topics include weed management in reduced tillage, herbicide tolerant crops and management of problem weeds. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 226 or consent of instructor.

CPSC 428 Weed Science Practicum credit: 2 Hours.

Intensive course on field diagnostic skills in weed science. Topics include weed and weed seed identification, sprayer calibration, herbicide application, herbicide injury symptomatology, and field diagnostics. Students who complete the course will be encouraged to enter the North Central Weed Science Society weeds contest, which occurs during the summer. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 226 or CPSC 426 or consent of instructor.

CPSC 431 Plants and Global Change credit: 3 Hours.

The science of global atmospheric and climate change in the 21st Century. Understanding of how plants, including crops, will respond and may be adapted to these changes. Using plants to ameliorate predicted climate change. Same as IB 440 and NRES 431. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 112 or IB 103.

CPSC 433 Basic Toxicology credit: 3 Hours.

Same as CB 449, ENVS 480 and FSHN 480. See FSHN 480.

CPSC 436 Conservation Biology credit: 4 Hours.

Same as ENVS 420 and IB 451. See IB 451.

CPSC 437 Principles of Agroecology credit: 3 Hours.

Examines the dynamics and function of agricultural ecosystems and reviews fundamental concepts of ecology. Agricultural systems will be compared on the basis of energy flow, nutrient cycling, diversity, stability and required inputs. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 100 or IB 103 or equivalent.

CPSC 438 Soil Nutrient Cycling credit: 3 Hours.

Same as NRES 438. See NRES 438.

CPSC 439 Env and Sustainable Dev credit: 3 Hours.

Same as NRES 439. See NRES 439.

CPSC 440 Applied Statistical Methods I credit: 4 Hours.

Statistical methods involving relationships between populations and samples; collection, organization, and analysis of data; and techniques in testing hypotheses with an introduction to regression, correlation, and analysis of variance limited to the completely randomized design and the randomized complete-block design. Same as ABE 440, ANSC 440, FSHN 440, and NRES 440. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 112 or equivalent.

CPSC 448 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, GEOG 468, and IB 491. See GEOG 468.

CPSC 452 Advanced Plant Genetics credit: 3 Hours.

Survey of selected contemporary topics in plant genetics and genomics. Topics include the nature of genes and genomes, crop domestication, selection, allelic diversity in populations, and genetics mapping. Serves as an introduction to functional genomics, population genetics, transmission genetics, quantitative genetics, and bioinformatics. Same as IB 478. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 352 or IB 204, or consent of instructor.

CPSC 453 Principles of Plant Breeding credit: 4 Hours.

Principles, concepts and tools used in plant breeding. Includes methods and breeding schemes used with different plant species. Same as HORT 453. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 103; CPSC 352 or equivalent.

CPSC 454 Plant Breeding Methods credit: 2 Hours.

Discussion of the application of current scientific tools and methods available to plant breeders for improving plants; emphasis on actual use of plant breeding methods and production of high quality seed. 2 undergraduate hours. 2 graduate hours. Offered summer only in alternate years. Prerequisite: CPSC 453.

CPSC 462 Plant Molecular Biology credit: 1 Hour.

Same as IB 472. See IB 472.

CPSC 466 Genomics for Plant Improvement credit: 2 Hours.

An overview of applying the methods of genomics to discover variation in genes and their expression, creating new genetic variation, and applying this information to the improvement of economically important plants. Emphasis is on recent advances in genomic science and activities where functional genomics information is used to efficiently create and manipulate desirable phenotypes. Same as IB 477. 2 undergraduate hours. 2 graduate hours. Prerequisite: CPSC 352 or a similar course, or consent of instructor.

CPSC 467 Plant Genomics credit: 1 Hour.

Same as IB 473. See IB 473.

CPSC 468 Plant Proteomics-Metabolomics credit: 2 Hours.

Same as IB 474. See IB 474.

CPSC 473 Mgmt of Field Crop Insects credit: 3 Hours.

Ecological principles of insect populations in agroecosystems including: sampling insect populations, threshold development, bioeconomics and decision-making, population regulation, designing management strategies for field crop insect pests, and deployment of transgenic crops for management of insect pests. Case studies describing various pest management programs in field-crop settings will be provided. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 270 or an equivalent course, or consent of instructor.

CPSC 475 Insect Pathology credit: 3 Hours.

Same as IB 483. See IB 483.

CPSC 479 Insect Pest Management credit: 3 Hours.

Same as IB 482. See IB 482.

CPSC 482 Plant Tissue Culture credit: 4 Hours.

Same as HORT 482. See HORT 482.

CPSC 483 Outreach Education Skills credit: 3 Hours.

Provides graduate and undergraduate students interested in outreach and extension education programs with opportunities to develop their skills and effectiveness in development and presentation of outreach and extension programs. Same as ANSC 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior or graduate student status.

CPSC 484 Plant Physiology credit: 3 Hours.

Same as IB 420. See IB 420.

CPSC 488 Soil Fertility and Fertilizers credit: 3 Hours.

Same as NRES 488. See NRES 488.

CPSC 489 Photosynthesis credit: 3 Hours.

Same as BIOP 432 and IB 421. See IB 421.

CPSC 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Same as INFO 491 and IS 483. See INFO 491.

CPSC 498 Crop Sci Professional Developmt credit: 1 Hour.

Topics related to professional development including resumes, interview skills, business etiquette, ethics, and presentations on opportunities in crop sciences and horticulture. 1 undergraduate hour. No graduate credit. Prerequisite: Junior standing in Crop Sciences or Horticulture.

CPSC 499 Seminar credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in crop sciences. Approved for both letter and S/U grading. May be repeated to a maximum of 12 hours.

CPSC 501 Programming for Genomics credit: 4 Hours.

Same as IB 501. See IB 501.

CPSC 505 Research Methods in Plant Sci credit: 4 Hours.

Lectures, discussions, demonstrations, and laboratory exercises dealing with methods and apparatus used in plant sciences research. 4 graduate hours. No professional credit.

CPSC 518 Crop Growth and Development credit: 4 Hours.

Study of the physiological processes involved in growth and development of crop plants and the interaction of these processes with the environment that influences productivity. Prerequisite: CPSC 418 or CPSC 484.

CPSC 526 Herbicide Action in Plants credit: 4 Hours.

Study of various chemicals used to inhibit plant growth, including their uptake, translocation, mode of action, metabolism and resistance mechanisms in plants; and the relationship of chemical structure to the environmental fate of herbicides. Offered in alternate years. Prerequisite: CPSC 426 and CPSC 484.

CPSC 538 Environmental Plant Physiology credit: 4 Hours.

Same as IB 542. See IB 542.

CPSC 541 Regression Analysis credit: 5 Hours.

The application of regression methods to problems in agriculture and natural resources. Topics include simple linear, multiple linear, and nonlinear regression analysis and correlation analysis. Emphasis is placed on predictor variable selection, diagnostics and remedial measures and validation. Both quantitative and qualitative predictor variables are examined. The SAS system is used for all analyses. Same as ANSC 541. Prerequisite: CPSC 440 or equivalent.

CPSC 542 Applied Statistical Methods II credit: 5 Hours.

Statistical methods as tools for research. Principles of designing experiments and methods of analysis for various kinds of designs, experimental (completely randomized, randomized complete block, split plots, Latin square) and treatment (complete factorial); covariate analysis; use of SAS for all analyses. Prerequisite: CPSC 440 or equivalent.

CPSC 543 Appl. Multivariate Statistics credit: 4 Hours.

This class introduces students to statistical methods that consider several variables at once. Emphasis will be given to the applications of multivariate methods to data sets in biology and ecology. Students will develop good knowledge as to how multivariate methods work, they will be able to apply these methods using SAS and R and they will be able to make inferences on the results of the analyses for subsequent scientific publication. Same as STAT 543. Prerequisites: CPSC 440 or equivalent or consent of instructor.

CPSC 545 Statistical Genomics credit: 3 or 4 Hours.

Same as ANSC 545 and IB 507. See ANSC 545.

CPSC 553 Advanced Plant Breeding credit: 3 Hours.

A practical application of plant breeding, genetics, and statistics to devise effective approaches to meet particular breeding goals. Highlighting real life situations and key decisions facing the plant breeder, the course builds upon knowledge of plant breeding methods and quantitative genetic theory. Four specific functional areas, which reflect divisions of labor in the seed industry are addressed: population development, population evaluation, trait integration, and product commercialization and supply. Offered in alternate years. Prerequisite: CPSC 453 or equivalent; CPSC 558 or equivalent; CPSC 542 or equivalent.

CPSC 555 Crop Germplasm Resources credit: 2 Hours.

In this course students will explore the use, curation and collection of germplasm resources to facilitate crop improvement. Genetic diversity is the foundational resource that plant breeders use for the benefit of society; however, it is often challenging to identify, access, and use desirable genes from relatives of crop plants. Strategies and methods employed by plant breeders, curators and collectors will be discussed. Topics will include using distant relatives in breeding program, selecting a subset of accessions for evaluations when large collections are available, circumventing breeding barriers to obtain wide-cross progenies, navigating intellectual property issues, and writing a successful plant exploration proposal. 2 graduate hours. No professional credit. Prerequisite: Introductory courses in genetics (e.g. CPSC 352) and plant breeding (e.g. CPSC 453) or equivalent.

CPSC 556 Plant Breeding Literature credit: 1 Hour.

Students will read a diverse group of plant breeding journal articles, will learn skills involved in evaluating a scientific paper, and will discuss articles with plant breeding faculty members. Approved for S/U grading only. May be repeated in separate terms to a maximum of 5 hours. Prerequisite: Graduate student status.

CPSC 558 Quantitative Plant Breeding credit: 4 Hours.

Studies the theoretical bases for plant breeding procedures with special emphasis on the relationship between type and source of genetic variability, mode of reproduction, and effectiveness of different selection procedures. Offered in alternate years. Prerequisite: CPSC 453 or equivalent.

CPSC 563 Chromosomes credit: 3 Hours.

Includes cytogenetic analysis of eukaryotic organisms, the role of chromosomes in genome organization and evolution, and introduction to molecular cytogenetic laboratory techniques such as mitotic analysis, chromosome banding, flow cytogenetics, somatic cell genetics, chromosomal length polymorphisms, fluorescent microscopy and in situ hybridization. 3 graduate hours. No professional credit. Prerequisite: CPSC 352 or consent of instructor.

CPSC 564 Molecular Marker Data Analyses credit: 3 Hours.

Topics include QTL mapping, association mapping, genomic selection, linkage disequilibrium, estimation and control of population structure, and the analysis of genotypic datasets produced using next-generation sequencing technology. All topics will be explored using real datasets analyzed in R (www.cran.org), and each class will include a lecture/discussion followed by a computer exercise. 3 graduate hours. No professional credit. Prerequisite: Previous course work in evolutionary, population, or quantitative genetics is recommended.

CPSC 565 Perl & UNIX for Bioinformatics credit: 2 Hours.

This intensive course is an introduction to high-throughput bioinformatics and genome data analysis. An introduction to programming with Perl and Bioperl will be given, and students will learn to write scripts relevant to their own research goals. We will also cover the use of UNIX and Perl for automating and customizing bioinformatics tools. Prerequisite: Graduate status or consent of instructor. In addition, familiarity with DNA and protein sequence data, and basic Windows computing skills are required.

CPSC 566 Plant Gene Regulation credit: 4 Hours.

Current topics and literature on the function and regulation of higher plant genes. Topics of emphasis: transposable elements, their effect on gene expression and variation, and uses in tagging and isolating genes; the developmental, tissue specific, or environmental regulations of plant genes; the structure, synthesis, subcellular targeting, and regulation of major cereal and legume seed proteins; the use of genetic engineering to explore the regulation of plant genes or to alter traits of agricultural importance. Same as HORT 566. Prerequisite: CPSC 352, MCB 450, or consent of instructor.

CPSC 567 Bioinformatics & Systems Biol credit: 4 Hours.

Bioinformatics and Systems Biology are emerging disciplines that address the need to manage and interpret the massive quantities of data generated by genomic research. In systems biology, advances in genomics, bioinformatics, and structural biology are used to generate global and unified views that integrate fragmentary knowledge of biological systems, their components and their interrelationships. This course is intended for students interested in the crossroads of biology and computational science and includes both lectures and hands-on experience. Same as IB 505. Prerequisite: Graduate level status or consent of instructor.

CPSC 569 Applied Bioinformatics credit: 4 Hours.

Same as ANSC 542 and IB 506. See ANSC 542.

CPSC 588 Plant Biochemistry credit: 4 Hours.

Enzymes and pathways involved in plant intermediary metabolism. Basic cell physiology, bioenergetics, and hormonal regulation of metabolism. Same as HORT 588 and IB 524. Prerequisite: CPSC 484 and MCB 450.

CPSC 590 Professionalism and Ethics credit: 2 Hours.

Topics related to professional activities of agricultural and natural resource scientists, including scientific writing and publishing, grantsmanship and money management, oral presentation skills, finding and keeping a job, and mentoring and teaching are discussed. Ethical dimensions of these areas are explored through case studies. Same as NRES 590.

CPSC 591 Grad Bioinformatics Seminar credit: 1 to 2 Hours.

Same as INFO 591 and IS 583. See INFO 591.

CPSC 593 Adv Studies in Crop Sciences credit: 1 to 8 Hours.

Directed studies of selected problems or topics relevant to Crop Sciences. Study may be in one of the following fields: 1) Plant Breeding and Genetics; 2) Plant Molecular Biology; 3) Plant Physiology; 4) Crop Production and Ecology; 5) Biometrics; 6) Plant Pathology; 7) Entomology; and 8) Weed Science. Prerequisite: Consent of instructor.

CPSC 594 Professional Orientation CPSC credit: 1 Hour.

Discussion of the philosophy and components of graduate education in Crop Sciences including discussion of the development of methods and strategies useful in research, teaching, and extension. Students will be required to develop and submit a proposal describing planned research for a non-thesis research project, M.S. thesis or Ph.D. Dissertation. Approved for S/U grading only.

CPSC 598 Seminar credit: 1 Hour.

Current research in crops, genetic engineering, plant protection and other topics relevant to Crop Sciences. Approved for both letter and S/U grading. May be repeated to a maximum of 14 hours if topics vary. Prerequisite: Graduate standing.

CPSC 599 Thesis Research credit: 0 to 16 Hours.

Individual research under supervision of faculty. Required of all students working toward the Master of Sciences (thesis option) or Doctor of Philosophy in Crop Sciences. Approved for S/U grading only. May be repeated to a maximum of 16 hours if topics vary.

Curriculum and Instruction (CI)

CI Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CI>)

Courses

CI 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

CI 210 Introduction to Digital Learning Environments credit: 3 Hours.

Surveys the field of digital environments and their capacity to support teaching and learning. Examines theories of interactivity, immersion, learning with multi-media, and digital literacies to discuss and evaluate various digital environments. Students learn to critically assess digital environments and to create original prototypes that target a specific and important learning or teaching goal. Environments that will be discussed and experimented with in class include virtual worlds, social networks, digital classrooms, interactive exhibits, video games, and tangible technologies.

CI 260 Serving Child in Schools/Comm credit: 3 Hours.

This community engagement course is designed for students interested in working with children (defined as birth through high school), careers serving children, and/or parenthood. The focus for this course is tutoring and mentoring children (elementary through high school). A minimum of two hours per week of approved community service related to children is a requirement of the course. Placements with schools will be made through the course instructor. Class content focuses on relating to children, motivating and engaging children in learning, community institutions and agencies serving children, and social issues affecting the lives of American children today.

CI 395 Independent Study credit: 2 or 3 Hours.

Permits study of problems not considered in other courses; for students who excel in self-direction and intellectual curiosity. Approved for both letter and S/U grading. Prerequisite: Junior or senior standing; minimum GPA of 3.5; completion of Advanced Composition requirement, and consent of adviser and staff member supervising the work.

CI 401 Introductory Teaching in a Diverse Society credit: 3 Hours.

Orients the student to ways in which English, Mathematics, Science, or Social Studies is learned in high school settings. Integrates an introduction to the use of technology as both a tool and a context for teaching and learning. As participants in a series of learning activities, students will reflect on the teaching and learning of English, Mathematics, Science, or Social Studies from an inquiry oriented perspective. Coursework is integrated with a high school field experience to connect theory with practice in an examination of research and current trends in English, Mathematics, Science, or Social Studies education. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Secondary Teacher Education Program or consent of the instructor/department.

CI 402 Teaching Diverse Middle Grade Students credit: 3 Hours.

Examines the curriculum and philosophy of teaching students in the middle grades. Students will focus on a number of related topics including teaching a diverse middle school student population, including all students in instruction, using technology for teaching middle school English, Mathematics, Science, and Social Studies and alternative means of assessing students' learning. Seminar content will be integrated with coursework in adolescent development, and special education in middle school settings. Coursework is integrated with a middle grade field experience. 3 undergraduate hours. 3 graduate hours. May be repeated up to 9 credit hours.

CI 403 Teaching a Diverse High School Student Population credit: 3 Hours.

Examines the curriculum and philosophy of teaching students in high school grades. Students will focus on a number of related topics including teaching a diverse student population, including all students in instruction, using technology for teaching high school English, Mathematics, Science, and Social Studies and alternative means of assessing students' learning. Seminar content will be integrated with coursework in instructional technology, assessment, and special education with high school students. Coursework is integrated with a high school field experience. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 401. Requires concurrent enrollment in CI/EPsy 485 and SPED 405.

CI 404 Teaching and Assessing Secondary School Students credit: 3 Hours.

Emphasizes the practical application of theory and recommended practices for developing curriculum, teaching, and assessing learning in the middle and senior high school years. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 402 or CI 403. Concurrent enrollment in EDPR 442 required.

CI 405 Introduction to Teaching Elementary Age Children credit: 3 Hours.

Examines the contexts of elementary education in the public schools. Includes content on teaching as a profession and community/family contexts of education. Coursework is integrated with field experiences with elementary children. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Elementary Teacher Education Program.

CI 406 Theory Practice in Elementary School Teaching I credit: 3 Hours.

Course examines teaching in the elementary grades. Students will focus on a number of related topics, including classroom management, instructional design, personal and professional attributes of effective teachers, and multicultural perspectives. Coursework is integrated with field assignments in public elementary schools. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 405; admission to the Elementary Teacher Education Program.

CI 407 Theory Practice in Elementary School Teaching II credit: 3 Hours.

Course continues the examination of teaching in the elementary grades, begun in CI 405 and CI 406. In addition to continuing the study of some topics introduced in the previous courses, students will focus on the following topics as they complete student teaching: designing instruction for classes including special needs students, managing technology in the classroom, and working with parents. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 406; admission to the Elementary Teacher Education Program. Requires concurrent enrollment in EDPR 432.

CI 410 Middle School Instruction, Philosophy and Structures credit: 3 Hours.

This course will introduce middle school concept and philosophy; cover common instructional and assessment strategies aligned with this concept, with a specific focus on curriculum integration and the use of newer communication technologies; and will review middle school organizational structures, including teaming, advisory, alternative scheduling, exploratory classes, and parental involvement. Students will connect theory and practice by incorporating their concurrent field placement (in middle level setting) into assignments and discussions. 3 undergraduate hours. 3 graduate hours.

CI 415 Language Varieties, Cultures and Learning credit: 3 Hours.

For students in the early childhood, elementary and middle grades licensure programs. Introduces students to issues related to first- and second-language development, cultural diversity, and language variation. Addresses the above issues in terms of teaching and learning and serves as a base for subsequent courses that will extend these issues in the content areas. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to a teacher preparation program.

CI 420 Foundations of Early Childhood Education credit: 5 Hours.

Students will study of the role of the early childhood teacher in designing, organizing, and implementing educational programs for children in preschools, kindergartens, and the primary grades. This course includes the history, philosophy, and theory of early childhood education. Students will complete a morning field placement in a local elementary school. 5 undergraduate hours. 5 graduate hours. Prerequisite: Admission to the Early Childhood Teacher Education Program; EPsy 236; EPS 201.

CI 421 Prin & Prac in Early Childhood credit: 3 Hours.

Studies the principles and practices of using play as an educational tool in early childhood education; reviews historical, philosophical, and psychological foundations of nursery-kindergarten methods; assesses techniques relating play to various aspects of instruction; surveys materials and equipment; and presents methods of classroom evaluation. 3 undergraduate hours. No graduate credit. Prerequisite: CI 420; admission to the Early Childhood Teacher Education Program. Concurrent enrollment in EDPR 420 and EDPR 438; credit or concurrent registration in EDPR 250, section EC.

CI 422 Families, Communities, Schools credit: 3 Hours.

Principles and practices of building partnerships and collaboration among families, community agencies, and schools in a diverse society for early childhood professionals; covers strategies for building understanding, trust, and effective communication with all children and their families including those who have special needs, have cultural and linguistic differences, come from non-traditional family configurations, and who face poverty, health problems, and/or family dysfunction. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Early Childhood Teacher Education Program.

CI 424 Child Development & Technology credit: 3 or 4 Hours.

Theories of development will inform an analysis of current technologies marketed for pre-school children; issues related to technology and childhood will be explored. One class each week will focus on lectures and discussions about child development, the second class will focus on presentation of technology or technology genre and evaluation of their value for young children. 3 undergraduate hours. 4 graduate hours. Approved for both letter and S/U grading.

CI 430 Teaching Children Mathematics credit: 3 Hours.

Examines children's learning of mathematics and meaningful instructional methods, representations and materials. Emphasis given to number and operations (including both whole and rational numbers), number theory and statistics/probability. Includes laboratory experience with supervised problem solving. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CI 430 and CI 431. Prerequisite: MATH 103; admission to the Elementary Teacher Education Program.

CI 431 Tchg Elementary Mathematics credit: 4 Hours.

Examines the organization, scope, and sequence of the mathematics program and the functional nature of mathematics; methods, techniques, experiences, and materials of value in teaching mathematics, and the role of the classroom teacher. Includes laboratory experience, with supervised problem solving. 4 undergraduate hours. 4 graduate hours. Credit is not given for both CI 430 and CI 431. Prerequisite: MATH 103; admission to the Special Education Program.

CI 432 Invest Approach Elem Math Inst credit: 3 Hours.

Course will model and examine an investigative approach to elementary mathematics instruction, which is purposeful, inquiry-based, and meaningful mathematics instruction. Particular focus will be given to the teaching and learning of measurement, geometry and algebra/functions. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 430 or CI 431; admission to the Elementary Teacher Education Program.

CI 433 Found of Bilingual Educ credit: 2 to 4 Hours.

Analyzes historical, political, and educational influences on bilingual/ESL education in US. Theoretical foundation of bilingual and ESL programs are examined as well as the effectiveness of program models in promoting academic achievement. Meets standards and course requirements for the Illinois State Board of Education Teaching Approval and Endorsement for Bilingual and ESL teachers. Same as LLS 433. 3 undergraduate hours. 2 or 4 graduate hours.

CI 434 Teaching Secondary Math credit: 3 Hours.

This is a required course for students seeking a mathematics endorsement at the middle school level while earning or holding teacher certification in another subject area. It is also required for students completing the campus Teacher Education Minor in Mathematics for grades 9-12 and the Teacher Education Minor in Mathematics for grades 6-8. This methods course covers: a) The NCTM and Illinois Learning Standards for Mathematics, b) "Best practice" in mathematics pedagogy, c) Assessment in the mathematics classroom, d) technology in mathematics classrooms, and e) the design of unit and lesson plans in mathematics. Students will design and deliver lessons as part of their course work. 3 undergraduate hours. 3 graduate hours. Prerequisite: Prerequisite: Although there are no stated prerequisites for this course, it is advised that most, if not all, of the mathematics content requirements be completed before taking this course.

CI 435 Computer-Assisted Instruction credit: 4 Hours.

Computer-assisted instruction (CAI) and its relation to classroom teaching; the teacher's role in development, management, and criticism of CAI lessons; treatment of topics including instructional capabilities of CAI systems, instructional programming, and the design of CAI lessons. 4 undergraduate hours. 4 graduate hours. Prerequisite: A 100 level Computer Science course or consent of instructor.

CI 436 Computer and Mathematics Educ credit: 4 Hours.

Examines the role of the computer as an instructional tool in the secondary school mathematics classroom; reviews curricular materials and develops sample classroom projects in computer mathematics; analyzes computational problems and develops algorithms for their solution; and includes iteration, Monte Carlo methods, and simulation. 4 undergraduate hours. 4 graduate hours. Prerequisite: CS 101 or consent of instructor.

CI 437 Educational Game Design credit: 3 or 4 Hours.

Examines the role that physical and digital games play in learning. Focuses on how people learn through play and how game structures support educational outcomes. Principles of game design are described and students apply them to the design of original games with a specified educational objective. Students learn to prototype, playtest, and evaluate the educational content of games. Surveys and samples games in the areas of serious games, persuasive games, games for impact, etc. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

CI 438 Comp Prgrmmg and the Classroom credit: 3 or 4 Hours.

A course for teaching methods related to computer programming in K-12 settings. Introduces theoretical and practical aspects of computer science education with an emphasis on learning to code and integrating coding into the classroom. Reviews pedagogical trends in computer science education for children of all ages, employing a variety of hands-on activities using developmentally-appropriate materials and resources. No prior programming experience required. 3 undergraduate hours. 4 graduate hours.

CI 442 Math, Sci, Tech in Early Child credit: 5 Hours.

The principles, place and practice of science and mathematics education in early childhood education and in the lives of young children; stresses the functional nature of science and mathematics and their inter-relatedness; presents methods, techniques, experiences, and materials of value in teaching mathematics and science in early childhood education; and the role of the classroom teacher. Opportunity for experience in field and laboratory work. 5 undergraduate hours. 5 graduate hours. Prerequisite: CI 420, general education requirements in mathematics (MATH 103 or equivalent), 2 years of college science, admission to the Early Childhood Teacher Education Program. Requires concurrent enrollment in EDPR 432.

CI 443 Mathematics in Early Childhood Education credit: 3 Hours.

This course focuses on the teaching of foundational mathematical concepts in prekindergarten, kindergarten, and the primary grades. Pre-service teachers will learn the value of "mathematizing" the worlds of children and creating authentic experiences through which children learn key mathematics concepts. 3 undergraduate hours. 3 graduate hours. Prerequisite: Completed or concurrent enrollment in general education requirements in mathematics, admission to the Early Childhood Teacher Education Program. Early Childhood Education majors only. Must be taken concurrently with CI 420.

CI 444 Social Stud Early Childhood Ed credit: 2 Hours.

Course emphasizes the place of social studies in early childhood education program (preschool - grade 3). Focuses on several areas of knowledge related to the social life of the community as it is concerned with young children; (1) knowledge from the social sciences, (2) social cognition and social skills learning, and (3) ways of dealing with cultural and social diversity. 2 undergraduate hours. 2 graduate hours. Prerequisite: CI 420; admission to the Early Childhood Teacher Education Program.

CI 445 Science and Social Studies Inquiry credit: 3 Hours.

This course is an exploration into the construct of inquiry as an essential human trait and methodological approach for teaching and learning. Through the disciplines of science and social studies we will inquire into elements and methods for building inclusive and critical communities of practice, designing curriculum for depth of understanding, and using documentation as democratic action. This course will encompass and revisit enduring understandings from the entire ECE professional program sequence, mediated by Danielson's Framework for Teaching. Cohort members will synthesize the above in the real context of student teaching placements, class meetings, online discussions, and course assignments. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 421. Concurrent enrollment in EDPR 432 is required.

CI 446 Culture in the Classroom credit: 2 to 4 Hours.

Explores cultural, political, and social factors that affect learning and teaching. Introduces students to the fields of educational anthropology and multicultural education and to the application of cultural information to curriculum development and classroom practice. The 3-hour undergraduate version and 4-hour graduate version meet the Cross-Cultural Studies for Teaching Limited-English-Proficient Students requirement for Bilingual and/or ESL Teaching Approval or Endorsement from the Illinois State Board of Education. 3 undergraduate hours. 2 or 4 graduate hours.

CI 448 Tchg Elem Social Studies credit: 3 Hours.

Course examines the nature and role of social studies in elementary schools, both in terms of the formal curriculum and of the impact of the school as a social system on children's social learning. Examines multiple approaches to what should be experienced and learned in social studies as well as the nature of social inquiry. Various instructional methods emphasizing direct experiences as well as reading are emphasized. Local, state, and national trends in curriculum and evaluation are addressed. Students engage in social inquiry, as well as develop, implement, and evaluate an action research project focusing in depth on a particular practice of social education. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Elementary Teacher Education Program.

CI 449 Issues in Latina/o Educ credit: 2 to 4 Hours.

Critiques and explores various theoretical frameworks used to explain Latina/Latino academic achievement. Examines curricular and instructional issues by investigating how different school systems have implemented schooling for Latina/Latino students. Develops critical understanding of the role of education within the Latina/Latino community. Same as LLS 449. 3 undergraduate hours. 2 or 4 graduate hours.

CI 450 Teaching Elementary Science I credit: 3 Hours.

Course is the first of two, 3-hour science methods courses in the elementary education program, which will examine elementary science content, learning theory, and the teaching of science in the elementary school. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Elementary Teacher Education Program.

CI 451 Teaching Elementary Science II credit: 3 Hours.

Course is the second of two 3-hour science methods courses in the elementary education program. Focus on in-depth understanding of inquiry science teaching. Coursework is integrated with field assignments in schools. Topics include curriculum materials; literacy instruction in science; children's "thinking" about science; differentiated instruction; assessment; incorporating technology. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 450; admission to the Elementary Teacher Education Program.

CI 452 Soc Stu as Action and Inquiry credit: 3 or 4 Hours.

This course continues the application of methods and content knowledge from CI 448 and will use an inquiry approach to study classrooms and school communities. Students will learn about teacher action research and begin planning an implement classroom inquiry in their teaching, first as a small pilot project and then a more extensive study connected with EdTPA assignments. The continuing themes of active citizenship, diversity, equity, and professional practices will guide learning and action research planning. 3 undergraduate hours. 4 graduate hours. Prerequisite: Admission to the Elementary Teacher Education Program.

CI 465 Lang Literacy in EC Educ I credit: 3 Hours.

Basic principles, techniques, and materials for the emergent literacy classroom. Emphasizes linguistic and cultural factors in culturally diverse settings. 3 undergraduate hours. 3 graduate hours. Prerequisite: EPSY 236; admission to the Early Childhood Teacher Education Program. Concurrent enrollment in CI 420.

CI 466 Lang Literacy in EC Educ II credit: 2 Hours.

Emphasizes developmentally appropriate practices for the teaching of reading and writing in grades K-2. 2 undergraduate hours. 2 graduate hours. Prerequisite: CI 465. Requires concurrent enrollment in EDPR 432.

CI 467 Princ Tchg Lit to Child Youth credit: 3 Hours.

Examines literature written for children and youth and the uses of literature in the school curriculum. 3 undergraduate hours. 3 graduate hours. Credit is not given for both CI 467 and LIS 403. Prerequisite: One college course in literature; admission to a teacher educator preparation program.

CI 468 Children's Lit for EC Edu credit: 2 Hours.

Examines literature written for children ages birth-eight years, extensive reading and analysis of literature in all genres and formats; evaluations of literature in relation to cognitive and linguistic development, emergent literacy, linguistic and cultural diversity, and family and school literacy; reviews and applies theories about the functions of literature. 2 undergraduate hours. 2 graduate hours. Prerequisite: One college course in literature; admission to the Early Childhood Teacher Education Program.

CI 471 Princ Prac Foster Indep Rdg credit: 3 or 4 Hours.

Emphasizes reading comprehension and reading to learn in content fields in grades K-8. Includes focus on teaching reading to students from diverse cultural and linguistic backgrounds, including dialect speakers and English learners. 3 undergraduate hours. 4 graduate hours.

CI 472 Tchg Reading in Grades 4-12 credit: 2 or 4 Hours.

Examines current literacy practices beyond the primary grades including factors related to reading comprehension, vocabulary development, fluency, and motivation. Includes issues related to diversity and ESL related to teaching reading. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: EPSY 201; junior standing or consent of instructor.

CI 473 Disciplinary Literacy credit: 2 or 3 Hours.

Provides secondary and K-12 level education majors with principles and practices of effective language and literacy instruction in their content areas, consistent with the Illinois Professional Teaching Standards for educator preparation of the Illinois State Board of Education. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Students in music and kinesiology education take for 2 credit hours; students in agriculture, art, mathematics, science, social studies, and English education take for 3 credit hours. Prerequisite: Admission to a teacher education program.

CI 475 Teaching Elementary Reading and Language Arts I credit: 3 or 4 Hours.

First of a two-course sequence that examines the basic theories, issues, methods, and materials for a developmental 1-6 language arts program. Emphasizes the need to integrate the four language arts (reading, writing, speaking, and listening) as tools for learning across the curriculum. Addresses cultural diversity in language arts instruction, with emphasis on linguistic diversity. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CI 467 and admission to the Elementary Teacher Education Program. Elementary Education students register for 3 hours. Special Education students register for 4 hours.

CI 476 Teaching Elementary and Middle Grade Language Arts credit: 3 Hours.

Second of a two-course sequence that examines the basic theories, issues, methods, and materials for a developmental K-8 language arts program. It continues to emphasize the need to integrate the four language arts (reading, writing, speaking, and listening) as tools for learning across the curriculum. This second course, however, places a relatively greater emphasis on writing than on reading, speaking, and listening. Continues to address cultural diversity in language arts instruction, with emphasis on linguistic diversity. 3 undergraduate hours. 3 graduate hours. Prerequisite: CI 467 and CI 475 or CI 471; admission to the middle grades major, elementary major, or consent of instructor.

CI 477 Biling ESL Methods & Material credit: 4 Hours.

Focuses on bilingual and English-as-a-second language (ESL) curriculum development and instruction for bilingual and second-language learners (K-12) in a variety of language and program settings. Emphasizes bilingual and ESL materials selection and development, bilingual and ESL literacy instruction, bilingual and ESL content area instruction, and sheltered English instruction. Issues related to second-language acquisition, cultural and linguistic diversity, and parental and community involvement are reviewed. 4 undergraduate hours. 4 graduate hours. Prerequisite: CI 433 or consent of instructor.

CI 482 Social Learning and Multimedia credit: 3 or 4 Hours.

Learning in multimodal environments from a social and cultural perspective. Topics include the formation and expression of individual and group identity across multiple contexts, including social networking, online gaming, reality television programs, streamed video, and in online courses. Assignments include both analytic and project-based tasks, with an emphasis on implications for formal learning environments. 3 undergraduate hours. 4 graduate hours.

CI 484 Learning Technologies credit: 3 or 4 Hours.

Same as HRD 472. See HRD 472.

CI 485 Assessing Student Performance credit: 3 or 4 Hours.

Same as EPSY 485. See EPSY 485.

CI 489 DELTA Capstone Project credit: 3 or 4 Hours.

Project-based course focusing on creating Digital Environments for Learning, Teaching and Agency. Students work in teams to build technology-supported learning activities. This course provides a studio-based, hands-on and participatory approach to the development and research of technology tools and curriculum materials. 3 undergraduate hours. 4 graduate hours. Approved for Letter and S/U grading. Prerequisite: CI 481 or consent of instructor. Required capstone project course for students enrolled in DELTA concentration, others can register with instructor's consent.

CI 499 Issues and Development in Educ credit: 2 to 4 Hours.

Seminar course on topics not treated by regularly scheduled courses; requests for initiation may be made by students or faculty member. 2 to 4 undergraduate hours. 2 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing.

CI 501 Fundamentals of Curr Develop credit: 4 Hours.

Examines a variety of definitions of curriculum developments; readings reflect current theories and research related to substantive issues in the field: how learning is influenced by stated goals of education, cultural background of the learners, structure of the school setting, competencies of teachers, psychological characteristics of the learners, and means of measuring student achievement.

CI 502 Introduction to Reading credit: 2 or 4 Hours.

Provides an overview of reading in the US. Topics covered include the definition of reading and its importance, theoretical models and philosophies of reading and reading instruction, the history of reading instruction, the development of reading skill, current research-based reading instruction, Federal legislation affecting reading instruction, and professional and state standards related to reading instruction.

CI 503 Reading Instruction, K-5 credit: 4 Hours.

The first of two courses focusing on research-based reading instruction for students in grades K-12. This course focuses primarily on the development of literacy from birth to preschool and reading instruction for the elementary grades, K-5.

CI 504 Reading Instruction, 6-12 credit: 4 Hours.

The second of two courses focusing on research-based reading instruction for students in grades K-12. This course focuses primarily on reading instruction for middle and high school students, grades 6-12. Reading comprehension in the content areas is a particular emphasis. Prerequisite: CI 503.

CI 505 Reading for Diverse Students credit: 4 Hours.

Reviews many of the linguistic, cultural, and social factors that affect students (K-12) reading instruction, assessment, and development. Drawing on socio-cognitive and socio-constructivist theories of literacy and culturally responsive pedagogy and social justice issues, the course involves the evaluation and design of instruction and assessments for students from diverse linguistic, cultural, and class backgrounds.

CI 506 Reading Coaching & Leadership credit: 4 Hours.

The course consists of two 2-hour components (1 and 2). The first component introduces students to course readings and discussions that explore the various roles of the K-12 reading specialist, including leadership, assessment, and coaching. The second component involves completion of an internship with a reading coach or reading specialist in which students observe and take on the roles of the reading specialist in professional development, curriculum design, instruction, and the management of resources. Both of these components are completed within the same semester. Prerequisite: CI 503, CI 504.

CI 507 Prob Trends in Spec Fields credit: 4 Hours.

Intensive examination of problems and trends in the subject fields. May be repeated to a maximum of 8 hours.

CI 508 Urban Schs & Schooling credit: 4 Hours.

This course is for anyone interested in issues of education in urban settings. It provides an overview of sociopolitical perspectives on teaching and learning for Latina/o, African American, American Indian, English learners, and other marginalized youth. The course explores how issues of identity and power are negotiated by students, communities, and teachers. Participants in the course will develop an understanding on how racism, classism, and the politics of language operate within urban schools. An emphasis of the course is on solutions that address social justice.

CI 509 Curriculum Research credit: 4 Hours.

Reviews the principal methodologies used in research on curriculum problems; emphasizes subject-analytical, large-scale survey, experimental, case methods, and clinical studies; emphasizes the conceptual and practical problems in such research.

CI 512 Mult Educ/Global Perspectives credit: 4 Hours.

Examines important topics in the area of multicultural education in the United States and around the world. Engages students in the critical exploration of theories and literature that interrogate traditional views of multicultural education. Analyzes issues of race, class, gender, religion, nationality, xenophobia, homophobia, and ability in the contexts of classrooms and other educational settings. Course work focuses on an emancipatory curriculum and pedagogy for transformation and social justice education. Same as AFST 555.

CI 517 Bilingual and English as a Second Language Assessment credit: 4 Hours.

Explores the role of assessment in education of culturally and linguistically diverse students in K - 12 classrooms. Current trends in assessment in the United States will be analyzed as well as how assessments are used for the identification and placement of bilingual and ESL students. The use and scoring of language proficiency assessments will be examined along with various forms of classroom-based assessment. Meets ISBE assessment requirements for a bilingual and ESL teaching approval or endorsement. Same as LLS 517. 4 graduate hours. No professional credit. Prerequisite: CI 433 and CI 477 or consent of instructor.

CI 518 Evaluation of Edu Programs credit: 4 Hours.

Origins, assumptions, applications, and development of approaches to educational program evaluation in practice over the past twenty years; unobtrusive measures and noneducation evaluation systems; and practice in collecting evaluative data. Same as EPSY 572. Prerequisite: EPSY 480, one year of work with children or youth in an institutional setting, or consent of instructor.

CI 519 Methods of Child Study credit: 4 Hours.

Studies ways in which teachers can evaluate child behavior and development with an emphasis on classroom application; instruction and practice in the use and interpretation of observations, anecdotal records, rating scales, interviews, achievement tests, intelligence tests, questionnaires, and sociometric and projective techniques. Prerequisite: EPSY 404 or consent of instructor.

CI 520 History of Early Childhood Pedagogy and Programs credit: 4 Hours.

This course is an overview of historical influences of contemporary early childhood pedagogy and programs. Topics may include, but are not limited to, Enlightenment Era educational reforms, German kindergartens, the Progressive Era, and the War on Poverty. 4 graduate hours. No professional credit.

CI 521 Curr Prob Trends in EC Edu credit: 4 Hours.

Includes principles underlying education practices in day care centers, preschool/nursery and kindergarten settings derived from theory and research in developmental psychology, social psychology, anthropology, and other related disciplines.

CI 522 Arts in Early Childhood and Elementary: Curriculum in Context credit: 4 Hours.

Role of dance, drama, music, literature, and the visual arts in early childhood and elementary education, focusing on production/performance, appreciation, history, and aesthetics. Interrelationships among curriculum, notions of child development, cultural contexts, and unique traditions of different arts disciplines. Current art education practices in the United States and other countries. Requires attendance at performances and visits to an art museum. 4 graduate hours. No professional credit. Prerequisite: Graduate status.

CI 526 Capstone II: Completion credit: 4 Hours.

Survey of research and best practices for producing instructional change within schools or programs, with an emphasis on the improvement of curriculum and instruction across grade levels. Students will analyze data collected from the current and previous semesters and write a report of their findings. Students will engage in professional learning communities to continue work in school contexts. Prerequisite: For students in the Advanced Instructional Design master's program.

CI 530 Trends and Issues in Math Edu credit: 4 Hours.

Addresses theories of learning, research studies, curriculum development projects, and other factors that have influenced elementary mathematics programs; also considers problems and issues in contemporary programs. Prerequisite: CI 500 or CI 520 or consent of instructor.

CI 532 Prof Development in Math Ed credit: 4 Hours.

Considers research perspectives, policies and practices associated with the professional development of mathematics teachers. Specifically, students will examine what policymakers recommend for effective professional development, what research findings seem to suggest, how schools do professional development for successful mathematics teaching, and the implications of policy and real world practices for equality of opportunity for mathematics learning.

CI 533 Problem Solving in Math Ed credit: 4 Hours.

Focuses on the role of problem solving in the learning and teaching of mathematics. Examines mathematical problem solving processes, as well as issues surrounding the use of problem solving in K-12 mathematics classrooms, including recent reform trends, equity issues, and distinctions among teaching "about", "for", and "through" problem solving.

CI 534 Teaching and Learning Geometry credit: 4 Hours.

This course concentrates on the teaching and learning of geometry in middle school and high school by examining the history of school geometry, comparing curricular expectations and rationales for geometry instruction over time. The course provides an overview of theoretical models regarding the teaching and learning of geometry. At the same time, the course provides opportunities for discussing practical issues of teaching geometry with work on geometrical problems and laboratory sessions using dynamic geometry. Prerequisite: Acceptance into a graduate program.

CI 535 Teaching and Learning Algebra credit: 4 Hours.

This course examines perspectives about the teaching and learning of algebra in middle school and high school. Topics include an examination of historical perspectives on algebra in the school curriculum, a study of the nature of algebra and algebraic thinking, an analysis of teaching strategies for teaching algebra, an examination of documents on algebraic reasoning, and explorations of the use of technological tools to support the teaching and learning of algebra. Prerequisite: Acceptance into a graduate program.

CI 536 MST Proseminar I credit: 2 Hours.

Provides an introduction to doctoral studies, research, and careers in Math, Science, and Technology (MST) Education. Topics include a basic orientation to research in MST education, doctoral program hurdles, potential career paths, and MST education research funding. Although this seminar is designed for CI students in MST education, students in other programs may also enroll.

CI 537 Discourse in STEM Classrooms credit: 4 Hours.

An overview of relevant literature regarding discourse in STEM classrooms with emphasis on teachers' perspectives, students' perspectives, and interactions between the teacher and the students. Discusses research methodologies for the study of discourse in STEM classrooms and implications of research for the education and the professional development of pre-service and in-service teachers. Prerequisite: Acceptance into a graduate program.

CI 540 Current Issues in Sci Edu credit: 4 Hours.

Advanced seminar in science education for teachers, consultants, and administrators. Identifies major problems and issues; analyzes current trends and research; and develops a philosophical framework related to science education. Prerequisite: Teacher education course in science and two years of college science; or consent of instructor.

CI 541 Learning in Science credit: 4 Hours.

Focuses on influential theories of student learning and their implications for science education. Examines the theoretical underpinnings of these learning theories as well as their implications for student learning, instruction, and assessment.

CI 542 Science Ed & Phil of Science credit: 4 Hours.

Surveys issues in philosophy of science that are central to science education through an exploration of the works of twentieth century philosophers of science who were most influential in shaping thinking about science in the science education community. Relevant readings from science and history of science are also explored. Prerequisite: College level coursework in a science discipline or consent of instructor.

CI 543 Constructivism and MST Educ credit: 4 Hours.

Intended for those interested in a perspective on mathematics, science, and technology (MST) learning and teaching called constructivism, which has come to prominence in the past two decades, particularly in MST education. Constructivism focuses on the processes of sense-making or meaning construction through experience and/or social discourse. Designed to help participants examine the implications of constructivism for learning and teaching in mathematics, science, and technology. Prerequisite: A basic familiarity with mathematics, science, and/or technology.

CI 544 Ed Reforms & Inquiry credit: 4 Hours.

This course examines the history of science education reform efforts since the 1950s from the lens of inquiry, teaching and learning. The course examines developments in our understandings of inquiry as a pedagogical approach and set of instructional outcomes in middle and high school science education, as well as implications for instructions in precollege science classroom.

CI 545 Virtual Worlds in Education credit: 4 Hours.

Same as EPSY 554. See EPSY 554.

CI 546 MST Proseminar II credit: 2 Hours.

The course examines the process of double-blind review and the metrics associated with refereed research journals and researcher productivity in mathematics, science, and technology education. Students will be provided with practical experiences as journal 'referees' through reviewing manuscripts submitted for publication, and will develop thorough understandings of the entire process of publishing in refereed journals in the field of science, mathematics, and technology education. May be repeated in separate terms to a maximum of 4 hours if topics vary.

CI 547 Sociopol Persp Math Science credit: 4 Hours.

This course is for anyone interested in equity-related issues in mathematics and science education. It provides an overview of sociopolitical perspectives on mathematics and science education, including how issues of identity, power, and equity play out in teachings, learning, and research. Students will develop an understanding of how racism, classism, and the politics of language operate within mathematics and science classroom and in the practice of mathematics and science in society at large. An emphasis of the course is on solutions that address social justice.

CI 548 Capstone Project credit: 2 Hours.

Part I of the course focuses on the design on an action research project (capstone project), which integrates pedagogical and science content ideas addressed in the program courses. The project amounts to an empirical investigation of a student-generated research question around issues focused on science teaching and learning. Students are expected to collect data for their project, preferably in their own classrooms, in the period between Parts I and II of the course. Part II focuses on the analysis, interpretation, and discussion of the data collected, and the implications of the findings for classroom practice. May be repeated in separate terms to a maximum of 4 hours.

CI 550 Methods of Educational Inquiry credit: 4 Hours.

Offers a graduate-level introduction to research in education, including quantitative, qualitative and mixed methods designs and approaches. Key concepts include: identifying a research problem, reviewing the literature, design and analysis, communicating evidence, and the ethics of research. Students should gain the ability to effectively evaluate and critique design/methods sections of research publications; plan and design research studies; and organize a presentation of research to an audience of peers. Same as EPOL 550, EPSY 573, and SPED 550. 4 graduate hours. No professional credit.

CI 552 Qualitative Writing credit: 4 Hours.

Focuses on analysis of data and writing of qualitative/ethnographic research in educational contexts. Topics include the history of qualitative research practices; approaches to the analysis and interpretation of multiple forms of data, including coding, discourse analysis, text analysis, and structural/post-structural analysis; different styles of qualitative writing; social theory as a framing device; and writing for publication. Provides a theoretically informed but very practical, hands-on approach to qualitative writing for graduate researchers across the broad range of educational and social science contexts. One part of the course focuses on methods of analysis through application, while a second part is designed as a writer's workshop in which students "write up" the data from a study in three narrative styles. Assignments include weekly readings, three short writing assignments, and a more substantial writing project. Advanced graduate standing is useful but not required.

CI 554 Advanced Inst. Approach credit: 4 Hours.

An action research-based approach to implementing and evaluating a broad range of research-based instructional approaches across grade levels and content areas. Includes an action-research component. Prerequisite: For students in the Advanced Instructional Design master's program.

CI 557 Using Theory in Teacher Education credit: 4 Hours.

Students in this course will read a variety of theoretical viewpoints in order to frame and critically examine teacher education research. Students will be encouraged to use multiple theories to frame research questions and findings as a way to situate themselves as researchers and consider ways in which multiple theoretical perspectives can be used to examine and interpret different aspects of their research in teacher education.

CI 558 Programs in Teacher Education credit: 4 Hours.

The focus of this course will be a study of programs in teacher education considered in light of historical, social, and policy influences and also related to wider issues in contemporary teacher education efforts and research. We will consider the current context of teacher preparation programs in the U.S., examine the historical factors that have brought U.S. teacher education to this point, assess the influence of public policy on teacher education in the U.S. and globally, and study a variety of exemplary models of teacher education in the U.S. and globally. Students will conduct a study of a particular program and present this in a poster session at the end of the semester.

CI 560 Trends & Issues in Language Arts credit: 4 Hours.

Advanced seminar in literacy for teachers, researchers, and specialists. Focuses on trends and issues in elementary and middle school language arts. Current theories, relevant research and practical applications are considered in relation to reading, writing, listening, and speaking.

CI 561 Theory Practicum in Child Composition credit: 4 Hours.

Focuses on theory and practice of children's written composition from preschool through middle school. Includes development of understanding of texts, pedagogy, motivation and classroom practices that facilitate writing. Students learn about their own writing, participate in peer writing conferences, and produce research or curricular projects for use in classrooms. Prerequisite: CI 475 and CI 476, or course in writing, or consent of instructor.

CI 562 Linguistics and the School Curriculum credit: 4 Hours.

Analyzes linguistics for the school curriculum including dialect diversities, use of language in social contexts, and variations in oral and written forms of language. Gives attention to classroom discourse in US and international settings, and ethnography of communication. Prerequisite: Admission to a doctoral program.

CI 563 Writing Studies credit: 4 Hours.

Same as ENGL 505. See ENGL 505.

CI 565 Topics in Research and Writing credit: 4 Hours.

Same as ENGL 582. See ENGL 582.

CI 566 Topics in Writing Pedagogy & Design credit: 4 Hours.

Same as ENGL 583. See ENGL 583.

CI 567 Child Literature in the School Curriculum credit: 4 Hours.

Investigates trends and issues related to teaching literature in the school; focuses attention upon the organization and planning of a balanced literature curriculum (fictional and informational). 4 graduate hours. No professional credit. Prerequisite: CI 467 or LIS 404 or consent of instructor.

CI 568 Contemporary Classics in Children's Literature credit: 4 Hours.

Critically examines children's books that have received major national and international awards and prizes and the requirements for that distinction; gives particular attention to the most recent publications so honored and their implications for use in the classroom. Prerequisite: CI 467 or CI 567, or LIS 404; and ENGL 106, or equivalent; or consent of instructor.

CI 569 Topics in Discourse and Writing credit: 4 Hours.

Same as ENGL 584. See ENGL 584.

CI 570 Issues & Trends in Reading credit: 4 Hours.

The timing of beginning reading, the influence of certain linguistic findings on methodology and terminology in instructional materials, and the influence of research on methodology are addressed in a way that provides a historical perspective for evaluating the merit of emerging issues and trends. Prerequisite: CI 475 and CI 476 or equivalent, or consent of instructor.

CI 573 Early/Elementary Reading Instruction credit: 4 Hours.

Planning and evaluating reading instruction and materials in nursery school through Grade Three. Prerequisite: CI 475 or CI 471, or equivalent; or consent of instructor.

CI 575 Assessment in Reading credit: 4 Hours.

Nature, causes, and diagnosis of reading difficulties; translation of diagnostic information into instructional practice. Prerequisite: CI 475 or CI 471, or equivalent.

CI 576 Assessment-Based Reading Instruction credit: 4 Hours.

Supervised experiences; special attention to evaluative and interpretative techniques in cases of severe reading disabilities based on the analysis of specific reading needs. May be repeated to a maximum of 8 hours. Prerequisite: CI 575.

CI 577 Clinical Practicum in Reading credit: 4 Hours.

Diagnostic procedures and individual instruction with small groups of children who have reading difficulties. Prerequisite: CI 575 and CI 576.

CI 578 Bilingual Development of Young Children credit: 4 Hours.

Helps students understand the language and literacy development of young bilinguals. Students will develop an understanding of the issues in biliteracy research, explore the diversity of research topics and perspectives in biliteracy research, and learn to think and write critically about research on early biliteracy development.

CI 580 Qualitative Research in Language & Literature Education credit: 4 Hours.

Focuses on the goals and nature of qualitative, observational study of life in educational settings, with an emphasis on oral and written languages. Adopts interpretive and critical perspectives on research and includes key readings on the ethnography of oral and written communication in schools, given a socioculturally and linguistically diverse society. All students will conduct a small scale study in an education site. Prerequisite: At least one semester of graduate course work.

CI 581 Aesthetics and Curriculum credit: 4 Hours.

Provides a synthesis of theoretical and autobiographical perspectives on aesthetic issues and their ramifications for the development and the critique of arts curricula. Drawing on art as an important source of knowledge and communication, the course reviews ideas from aesthetics and arts education (e.g., music, poetry, literature, visual arts, theater and dance education). Identifies principles common to all art forms but manifested differently in each of them to develop tools and skills for the design of, evaluation of, and research on arts curricula. Same as DANC 581. Prerequisite: Graduate standing, and background with one of the arts, or consent of instructor.

CI 582 Rdg and Wrtg Across the Curr credit: 4 Hours.

Designed for elementary and middle school educators, this course focuses on theory and practice related to both intradisciplinary integration (across the language arts) and interdisciplinary integration (across the content areas). Specific methods and strategies for fostering effective integrated literacy instruction are explored. Prerequisite: CI 475 and CI 476, or equivalent methods course in reading and language arts.

CI 584 Theories in SLA credit: 4 Hours.

Same as EALC 584, EPSY 563, FR 584, GER 584, ITAL 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

CI 585 Informational Children's Lit credit: 4 Hours.

Intended for elementary and middle school teachers, this course is an introduction to informational, or nonfiction children's literature. Students will explore the importance of including informational literature in the curriculum, how to select informational children's literature, and methods for teaching with informational text and for helping children learn from informational text. Prerequisite: CI 467, or equivalent children's literature course; CI 475 and CI 476, or equivalent methods course in reading and language arts.

CI 586 Topics in Digital Studies credit: 4 Hours.

Same as ENGL 586. See ENGL 586.

CI 587 Multicultural Literature K-12 credit: 4 Hours.

This course focuses on the meaning, function, and value of multicultural/multiethnic literature in teaching and learning. Through readings, dialogue, and research, students will focus on rewards of teaching and reading multiculturally that make it worth any effort involved. Blending multicultural theory and research, literary study, and educational practice, this course is appropriate for graduate students in education, library science, and English literature and for any other graduate student interested in the role of literature in our culturally diverse society. Prerequisite: A college literature course taken as part of an approved teacher certification program, college literature course in English literature, or consent of instructor.

CI 590 Sem for Adv Stu of Education credit: 0 to 8 Hours.

Approved for both letter and S/U grading. Prerequisite: Admission to doctoral study.

CI 591 Field Study & Thesis Seminar credit: 4 to 8 Hours.

Assists doctoral candidates in planning field studies and thesis problems. Students are expected to present their studies at each of four stages: (1) the inception, delimitation, tentative design stage; (2) the proposed design stage; (3) the revised design stage; and (4) the final design stage. Students are expected to analyze critically all presentations. Prerequisite: Admission to doctoral study.

CI 592 Ed.D. Proseminar credit: 2 Hours.

Course covers various topics related to research in practice and critical reading of research in the field of curriculum and instruction. May be repeated to a maximum of 6 hours in separate terms. Prerequisite: Ed.D. students.

CI 595 Independent Study credit: 2 or 4 Hours.

Offers opportunity and challenge of self-directive, independent study; develops the individual's ability as an independent student, and enables the student to pursue needed study in a field in which appropriate courses are not being offered during a given term. May be repeated to a maximum of 8 hours with approval. Prerequisite: Approval of study outline by adviser and the department chairperson prior to enrollment.

CI 599 Thesis Research credit: 0 to 16 Hours.

Individual direction of research and thesis writing. Approved for S/U grading only. May be repeated.

Czech (CZCH)

CZCH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/CZCH>)

Courses

CZCH 101 Elementary Czech I credit: 4 Hours.

Develops basic proficiency in Czech in listening, speaking, reading, and writing.

CZCH 102 Elementary Czech II credit: 4 Hours.

Continuation of CZCH 101. Prerequisite: CZCH 101.

CZCH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

CZCH 201 Second-year Czech I credit: 4 Hours.

Develops intermediate-level proficiency in Czech in listening, speaking, reading, and writing. Prerequisite: CZCH 102 or equivalent.

CZCH 202 Second-year Czech II credit: 4 Hours.

Continuation of CZCH 201. Prerequisite: CZCH 201 or equivalent.

CZCH 484 Readings in Czech credit: 3 or 4 Hours.

Reading and analysis of selected texts. 3 undergraduate hours. 4 graduate hours. Prerequisite: CZCH 202 or consent of instructor.

Dance (DANC)

DANC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/DANC>)

Courses

DANC 100 Intro to Contemporary Dance credit: 3 Hours.

Overview of major works, figures, and trends responsible for shaping dance as an evolving contemporary art form. The course will have lecture, viewing, discussion and experiential (studio participation) components. For non-dance majors.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

DANC 101 Modern Dance I credit: 2 Hours.

Introduction to basic dance technique and movement improvisation; the study of motion as an art, group relationships in improvisation, and discussion of choreographic ideas. For non-dance majors. May be repeated to a maximum of 8 hours.

DANC 102 Modern Dance II credit: 2 Hours.

Intermediate dance technique and improvisation. For non-dance majors. May be repeated to a maximum of 8 hours. Prerequisite: DANC 101 or consent of instructor.

DANC 103 Contact Improvisation credit: 2 Hours.

Introduction to basic elements of Contact Improvisation through learning skills such as weight sharing, falling, rolling, responding to touch, momentum, gravity and disorientations. Course work will include dancing, dance making, viewing dance, in-class discussions and short writing assignments. Concert attendance is required. May be repeated to a maximum of 8 hours. Prerequisite: For Non-dance majors.

DANC 104 Making Dances credit: 2 Hours.

Introduction to basic choreographic elements. Course work will include dancing, dance making, viewing dance, in-class discussions and short writing assignments. Concert attendance is required. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 105 Jazz Dance I credit: 2 Hours.

Introduction to basic dance technique and stylistic work in the jazz idiom. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 106 Jazz Dance II credit: 2 Hours.

Progressive development of the concepts and skills in DANC 105. May be repeated to a maximum of 8 hours. Prerequisite: DANC 105 or equivalent; or consent of instructor. For non-dance majors.

DANC 107 Ballet I credit: 2 Hours.

Introduction to ballet for nondance majors. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 108 Ballet II credit: 2 Hours.

Progressive development of the concepts and skills in DANC 107; for the non-dance major. May be repeated to a maximum of 8 hours. Prerequisite: Two semesters of DANC 107 or equivalent or consent of instructor. For non-dance majors.

DANC 109 Ballet III credit: 2 Hours.

Intermediate level of Ballet technique for non-dance majors. Course is a continuation and development of the skills in DANC 108. May be repeated to a maximum of 8 hours. Prerequisite: Two semesters of DANC 108 or equivalent or consent of instructor. For non-dance majors.

DANC 111 Cultural Dance Forms credit: 2 Hours.

Provides students with the physical study of various world dance forms. Topics reflect specializations of faculty, such as Capoeira, African dance, Balinese dance, and Chinese forms. May be repeated to a maximum of 4 hours in the same term and 8 hours in separate terms.

DANC 112 Hip Hop credit: 2 Hours.

Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. May be repeated in separate terms up to 8 hours.

DANC 120 Tap Dance I credit: 2 Hours.

Introduction to basic tap technique for non-dance majors. Emphasis is on a conceptual understanding of tap style and the development of the specific skills needed for performance. May be repeated to a maximum of 8 hours. Prerequisite: For non-dance majors.

DANC 121 Tap Dance II credit: 2 Hours.

Intermediate level of tap dance technique for non-dance majors. Course is a continuation of DANC 120, emphasizing a progression in movement vocabulary, style, rhythm, and performance quality. May be repeated to a maximum of 8 hours. Prerequisite: DANC 120 or equivalent, or consent of instructor.

DANC 131 Production Practicum I credit: 1 or 2 Hours.

Practical experience in the production of dance concerts mounted in the Krannert Center for the Performing Arts. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term).

DANC 150 Orientation to Dance credit: 2 Hours.

Survey of the field including dance as a theatre art, careers, injury prevention and nutrition. Also serves to orient incoming students to the faculty, programs, and policies of the Department of Dance, and the production and performing resources in the Krannert Center for the Performing Arts. Prerequisite: Major standing in Dance or consent of instructor.

DANC 160 Beg Contemp Modern Tech Core credit: 1 to 3 Hours.

Elementary technique for majors with emphasis on a conceptual understanding of movement principles and the development of technical skill and performance sensitivity. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 166 Beginning Ballet Tech Core credit: 1 or 2 Hours.

Elementary ballet for dance majors; emphasizes placement, refinement of adagio, pirouette, jumps, and connecting steps. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 167 Beginning Ballet Tech Elect credit: 1 or 2 Hours.

Elementary ballet for dance majors; emphasizes placement, refinement of adagio, pirouette, jumps, and connecting steps. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 9 hours.

DANC 200 Explore Music through Dance credit: 3 Hours.

In-depth study of musical form, history, culture, and styles, taught from a physical learning, i.e., dance, perspective. Musical and dance forms will be studied across cultures and time periods, from both a technical and a cross-cultural perspective. Content will be delivered as a series of video lectures and performances, and online readings. Students will create movement studies that mirror the musical forms being analyzed, produce video documentation of these works, engage in peer review of other students' performance work, and complete exams that cover the cultural and historical aspects of the examples studied. This course satisfies the General Education Criteria for: Humanities - Lit Arts

DANC 209 Lyric Theatre Dance credit: 2 Hours.

Designed for Lyric Theatre Students, this course will introduce a broad variety of movement techniques used in the collaborative singing-acting industry. Through integrative cognitive and physical instruction, students will learn to optimize kinesthetic awareness, expressiveness, breath control, and governance of the singing actors' physical instrument. Classes will include: physical exercises and improvisations, group collaborations, and analysis of movement choices in theatrical performances. Dance styles ranging from Baroque opera and ballroom dance forms to contemporary musical theatre will be covered within this course. May be repeated once in separate semesters. Prerequisite: For Dance or Lyric Theater majors only or by consent of the instructor.

DANC 210 Int Jazz Technique credit: 1 Hour.

Introduction to basic dance techniques and stylistic work in the jazz idiom for experienced dancers. Emphasis on a conceptual understanding of jazz style (as related to America's own cultural diversity) and the development of the specific skills necessary for performance and teaching. May be repeated to a maximum of 2 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 211 Int Hip Hop Technique credit: 1 Hour.

Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. May be repeated in separate terms for a maximum of 8 hours. Prerequisite: For majors only.

DANC 212 Musical Theater Dance credit: 1 Hour.

Introduction to basic dance techniques and stylistic work in the Musical Theater idiom for experienced dancers. Emphasis is on a physical and conceptual understanding of a variety of Musical Theater styles as related to America's own cultural diversity and the development of the specific skills necessary for performance and teaching. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Audition required. Primarily for Dance and Music Majors with a Concentration in Lyric Theater. Students with sufficient skills from other majors may be accepted with approval from instructor.

DANC 215 Int Tap Dance Technique credit: 1 Hour.

Introduction to basic tap technique for experienced dancers. Emphasis on a conceptual understanding of tap style and the development of the specific skills necessary for performance and teaching. May be repeated to a maximum of 2 hours. Prerequisite: Major standing in Dance, or consent of instructor.

DANC 220 Perf Pract Student Works I credit: .5 to 2 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision. Approved for S/U grading only. May be repeated to a maximum of 16 hours, in separate terms. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 221 Performance in Grad Thesis I credit: .5 to 3 Hours.

Performance laboratory involving the rehearsal and performance of student works under faculty supervision performed in MFA Thesis concert. May be repeated to a maximum of 16 hours, in separate terms. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 222 Perf Pract November I credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in November Dance. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 223 Perf Pract February I credit: 1 to 3 Hours.

Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in February Dance. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor. A maximum of 16 hours of performance credit may be counted toward degree requirements.

DANC 231 Production Practicum II credit: 1 or 2 Hours.

Practical experience in the production of dance concerts mounted in the Krannert Center for the Performing Arts. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term).

DANC 232 Repertory Company credit: 2 Hours.

Provides dance majors with diverse performing experiences in the community. Venues will include area schools, nursing homes, and special populations. Students will participate in the creation of lecture-demonstrations which may include improvisation and choreography. Participation in all performances is a requirement. May be repeated to a maximum of 6 hours. Prerequisite: Major standing in Dance or consent of instructor.

DANC 240 Dance History credit: 3 Hours.

Introduction to major artistic movements in dance history from ancient Greece through the 20th century. Goal of the course is to gain a broad understanding of dance in relation to socio-political ideologies of gender, race, sexuality, and national identities. Prerequisite: Major standing in Dance or consent of instructor.

DANC 245 Introduction to Somatics credit: 1 Hour.

Introduction to the basic concepts and principles of somatic practices, or body-mind disciplines, as related to dance. Through reading, writing, and experiential work, students will learn basic tenets of a number of somatic practices such as Ideokinesis and Imagery, Body-Mind Centering, The Alexander Technique, Bartenieff Fundamentals, and the Feldenkrais Method. Exploration of the ways in which somatics has helped to shape current dance training practices by looking at common themes and distinguishing features of these modalities.

DANC 259 Contact Improv for Act/Mus/Dan credit: 1 Hour.

In this interdisciplinary course, performing arts students learn physical skills necessary for the practice of the contact improvisation (CI) partnering dance form as well as improvisational and performance skills. Encourages contemplation of the broader philosophical implications inherent in the form: community building and accepting difference. Content includes visits to lectures and events outside the Dance Department. May be repeated in separate terms to a maximum of 4 hours.

DANC 260 Int Contemp Modern Tech Core credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 160 and DANC 161, with emphasis on the qualitative and definitive performance of a variety of technical styles. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 160; or consent of instructor.

DANC 261 Int Contemp Modern Tech Elect credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 160 and DANC 161, with emphasis on the qualitative and definitive performance of a variety of technical styles. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 160; or consent of instructor.

DANC 262 Choreographic Process I credit: 2 Hours.

Theory and practice in principles of dance composition; emphasis on solo creative work using various approaches to composition. Prerequisite: DANC 259 or consent of instructor. Limited to dance majors.

DANC 266 Intermediate Ballet Tech Core credit: 1 or 2 Hours.

Intermediate ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 166 and DANC 167, with emphasis on technical development and extended movement combinations. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 166 or DANC 167; or consent of instructor.

DANC 267 Intermediate Ballet Tech Elect credit: 1 or 2 Hours.

Intermediate ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 166 and DANC 167, with emphasis on technical development and extended movement combinations. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in Dance and successful completion of two semesters of DANC 166 or DANC 167; or consent of instructor.

DANC 268 Music Theory for Dancers credit: 3 Hours.

Introduction to basic music theory with a concentration on rhythm. The first half of the term will concentrate on 1) learning, understanding, and being conversant in basic music parameters; 2) analytical listening; 3) notation; 4) transcripts; 5) reading notation/following a score; 6) performance of simple rhythm patterns. The second half will deal with form and formal analysis as it relates to choreography, as well as more advanced parameters of music theory. Prerequisite: Major standing in Dance or consent of instructor.

DANC 301 Yoga Practicum for Dancers credit: 1 Hour.

Introduces basic yoga asanas (postures) and brief overview of the 8-limb system of yoga. Focus will be on understanding correct alignment and developing inner awareness. Weekly home practice, journal, and discussions about yoga philosophy are required. May be repeated in separate terms to a maximum of 8 hours.

DANC 310 World Dance Forms credit: 1 Hour.

Provides students with the physical study of various world dance forms. Topics reflect specializations of faculty, such as Capoeira, African dance, Balinese dance, and Chinese forms. May be repeated in the same term to a maximum of 2 hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

DANC 330 Dance Documentation credit: 1 Hour.

This is a hands-on course for students interested in exploring the relationship between dance and camera and the fundamentals of dance documentation. Using critical and experiential approach, we will explore the technical and artistic capabilities of mini-DV cameras and film-editing software to create dance performance documentation. Students will learn to execute clear and effective camerawork in relationship to dance performance, and to utilize editing software to most clearly display the artistic intent of the choreographers and directors. May be repeated up to 8 hours in separate terms. Prerequisite: For majors only, or by instructor approval.

DANC 331 Production Practicum III credit: 1 or 2 Hours.

Practical experience in all aspects of the production of dance concerts mounted in the Krannert Center for the Performing Arts and within the Department of Dance. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term). Prerequisite: DANC 131, DANC 231 or equivalent, and consent of instructor.

DANC 340 Dancing Black Popular Culture credit: 3 Hours.

Introduces students to black dance aesthetics and its interconnectedness with American popular culture. By exploring its cultural, political and historical roots, coupled with theoretical concepts of "the popular" and ties to the vernacular, the course will be organized around significant markers that have shaped black dance's development. Same as AFRO 340.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

DANC 345 Dance Anatomy and Kinesiology credit: 3 Hours.

The study of human anatomy and kinesiology, specifically as applied to dance. The human musculoskeletal system, movement analysis, and conditioning principles are covered both theoretically and practically.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

DANC 350 Creative Dance for Children credit: 3 Hours.

Through lecture, discussion and practice, students develop skills to teach elements and concepts of dance to children ages 4-10. Course includes strategies for behavior and time management, spatial transitions, and how to organize and communicate creative concepts clearly and effectively. Students will observe master teaching and apply teaching techniques, acquire lesson plans that form the basis for a creative dance curriculum and the skills to implement them, and participate in all phases of a creative dance curriculum, including informal performance. Same as ARTE 350 and HDFS 361. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

DANC 360 Int/Adv Contemp Mod Tech Core credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 260 and DANC 261, with emphasis on virtuosity and versatility. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor; departmental placement.

DANC 361 Int/Adv Contemp Mod Tech Elect credit: 1 to 3 Hours.

Progressive development of the concepts in DANC 260 and DANC 261, with emphasis on virtuosity and versatility. May be repeated to a maximum of 18 hours. Prerequisite: Major standing in Dance or consent of instructor; departmental placement.

DANC 362 Choreographic Process II credit: 2 Hours.

Choreography for the experienced student; includes performance of at least one original work. May be repeated in separate terms to a maximum of 10 hours. Prerequisite: DANC 262 or consent of instructor.

DANC 363 Advanced Improvisation credit: 1 Hour.

Exploration of the physical skills and philosophical concepts at the base of improvisation practice. Students will develop individual and collective approaches to improvisatory structures, systems and performance contexts as well as look at the historical ways that improvisation has been used in contemporary performance. The course will culminate in performance in various public and private contexts. May be repeated in separate terms to a maximum of 4 credit hours.

DANC 366 Int/Adv Ballet Tech Core credit: 1 or 2 Hours.

Intermediate/Advanced ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 266 and DANC 267. For dancers of advanced technical level with the ability to execute the ballet vocabulary. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in dance or consent of instructor; or Departmental placement.

DANC 367 Int/Adv Ballet Tech Elect credit: 1 or 2 Hours.

Intermediate/Advanced ballet for dance majors; a progressive development of movement concepts and vocabulary in DANC 266 and DANC 267. For dancers of advanced technical level with the ability to execute the ballet vocabulary. May be repeated to a maximum of 8 hours. Prerequisite: Major standing in dance or consent of instructor; or Departmental placement.

DANC 375 Production in Dance credit: 1 Hour.

Examines the theoretical and practical aspects of dance production. Includes lighting, costumes, scenery, props, audio, make-up, and management. Commitment outside of scheduled class includes participation in the production of the annual Senior Concert.

DANC 400 Viewing Dance credit: 1 Hour.

Overview of contemporary dance from the United States, Canada, and Europe focusing on the current works of significant emerging and established choreographers working in the field today. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated to a maximum of 4 hours.

DANC 401 Alexander Tech for Dancers credit: 1 Hour.

Introduces the Alexander Technique: a practical method for changing habitual movement patterns which interfere with coordination, ease, and efficiency of movement. The course focuses on learning the principles through hands-on work, readings, discussions, and application to dance. 1-3 individual lessons outside of class required per term. 1 undergraduate hour. 1 graduate hour. Prerequisite: Major standing in Dance or consent of instructor.

DANC 402 Alexander Technique Practicum credit: 1 or 3 Hours.
Facilitates conscious and reasoned control of the human organism as a psychophysical whole. Helps students recognize habits that constitute their daily activities and discard, through conscious control, those that impede open-minded enquiry and self-reliance. Through one-on-one work with certified teachers and trainees, students will learn to change habitual patterns of coordination. 1 undergraduate hour. 3 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours or 6 graduate hours.

DANC 410 Advanced Jazz Technique credit: 1 Hour.
Continuation of DANC 110, emphasizing the conceptual understanding of the jazz style and development of specific skills necessary for this idiom. No undergraduate credit. 1 graduate hour. May be repeated to a maximum of 4 hours. Prerequisite: Major standing in Dance or DANC 110 or equivalent and consent of instructor.

DANC 411 Adv Hip Hop Technique credit: 1 Hour.
Advanced Level Hip Hop Class. Hip-Hop dance technique will consist of the study and practice of Urban dance forms grounded in hip-hop culture. Students will explore the multiple dimensions of hip-hop dance as they train in the fundamentals of each form, learn its respective historical context, and access ways of incorporating individual ideas and lived experiences into their dancing. No undergraduate credit. 1 graduate credit. May be repeated in separate terms up to 8 hours. Prerequisite: For majors only.

DANC 420 Perf Pract Student Works II credit: .5 to 2 Hours.
Performance laboratory involving the rehearsal and performance of student works under faculty supervision. 0.5 to 2 undergraduate hours. 0.5 to 2 graduate hours. Approved for S/U grading only. May be repeated to a maximum of 16 hours in separate terms.

DANC 421 Performance in Grad Thesis II credit: .5 to 3 Hours.
Performance laboratory involving the rehearsal and performance of student works under faculty supervision performed in MFA Thesis concert. 0.5 to 3 undergraduate hours. 0.5 to 3 graduate hours. May be repeated to a maximum of 16 hours.

DANC 422 Perf Pract November II credit: 1 to 3 Hours.
Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in November Dance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

DANC 423 Perf Pract February II credit: 1 to 3 Hours.
Performance laboratory involving the rehearsal and performance of works by faculty and visiting artists performed in February Dance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

DANC 424 Collaborative Performance credit: 1 or 2 Hours.
COLAB is an interdisciplinary class fusing improvisation, composition and collaborative projects for students in the departments of Music, Dance and Engineering. The class will be run along the lines of a professional performance company. Work in class will include sharing and adapting the principles and elements from each of these disciplines with a focus on producing material that will be presented in numerous public performances throughout the semester. 1 undergraduate hour. 2 graduate hours. May be repeated to a maximum of 3 undergraduate hours or 6 graduate hours in separate terms. Prerequisite: DANC 162 or DANC 259 or consent of instructor.

DANC 425 Dance Internship credit: 1 to 4 Hours.
Supervised field experience in community and/or professional organizations in a variety of danced-related areas. Provides students with work experience and exposure to professional situations. Written and/or video documentation and department presentation of internship activities required. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for S/U grading only. May be repeated to a maximum of 6 hours. Prerequisite: Major standing in Dance and consent of instructor.

DANC 431 Production Practicum IV credit: 1 or 2 Hours.
Practical experience in all aspects of the production of dance concerts mounted in the Krannert Center for the Performing Arts and within the Department of Dance. 1 or 2 undergraduate hours. 1 or 2 graduate hours. May be repeated to a maximum of 6 hours. (1 hour credit per concert up to 2 hours per term). Prerequisite: DANC 131 or DANC 231, or equivalent and consent of instructor.

DANC 441 Dance History Seminar credit: 3 Hours.
Survey of critical approaches in dance studies including feminist theory, poststructural, and postcolonial theory, historiography, and ethnographic research methods. Course topics will cover a variety of theatrical, popular, and social dance practices. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 9 graduate hours. Prerequisite: DANC 240 or consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

DANC 445 Dance Kinesiology and Somatics credit: 4 Hours.
Introduction to human anatomy and kinesiology, specifically as applied to dance; introduction to the field of Somatics; approaches to improving the use of the body; exploration of the connections between the body, the mind, and movement. 4 undergraduate hours. 4 graduate hours. Prerequisite: Major standing in dance or consent of instructor.

DANC 450 Teaching Workshop credit: 3 Hours.
Methods and approaches to the teaching of dance technique in the modern, ballet, and jazz idioms. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing in Dance or consent of the instructor.

DANC 451 Ind Study and Special Topics credit: 1 to 4 Hours.
Special projects in research or creative investigation taught on an individual or class basis. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing in Dance and consent of instructor.

DANC 455 Supervised Teaching credit: 1 to 4 Hours.
Practical teaching experience under the supervision of a faculty member; weekly conference devoted to evaluation and planning. Teaching areas include major and non-major university courses and classes for community adults and children. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours with approval.

DANC 459 Contact Improv Act/Mus/Dan II credit: 1 or 2 Hours.
An interdisciplinary course in which performing arts students learn physical skills necessary for the practice of the contact improvisation (CI) partnering dance form as well as improvisational and performance skills. Encourages contemplation of the broader philosophical implications inherent in the form: community building and accepting difference. Content includes visits to lectures and events outside the dance department. 1 or 2 undergraduate hours. 1 or 2 graduate hours. May be repeated in separate terms to a maximum of 4 undergraduate hours or 6 graduate hours if topics vary.

DANC 460 Adv Contemp Modern Tech Core credit: 1 to 3 Hours.

Modern technique for advanced graduate students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor; or departmental placement.

DANC 461 Adv Contemp Modern Tech Elect credit: 1 to 3 Hours.

Modern technique for advanced graduate students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor; or departmental placement.

DANC 462 Composition Workshop credit: 2 Hours.

Structured creative utilization of formal choreographic elements in the creation, rehearsal, staging, and performance of original dance works. 2 undergraduate hours. 2 graduate hours. Approved for S/U grading only. Prerequisite: Graduate standing in dance or consent of instructor.

DANC 464 Composer-Chor Workshop credit: 2 Hours.

For experienced composers and choreographers; explores the many relationships between musical composition and choreography. Same as MUS 471. 2 undergraduate hours. 2 graduate hours. Prerequisite: For dance majors, DANC 263 or consent of instructor; for music majors, MUS 106 or equivalent, other compositional experience, and consent of instructor.

DANC 465 Screendance credit: 3 Hours.

Provides a comprehensive approach, from camera use to editing techniques, leading to a practical ability to develop and produce video projects on a basic level. Course focuses on developing choreographic projects designed specifically for the video/film format. 3 undergraduate hours. 3 graduate hours. Prerequisite: DANC 330. Non-dance majors admitted by audition on a space-available basis.

DANC 466 Advanced Ballet Tech Core credit: 1 to 3 Hours.

Ballet for advanced students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor or departmental placement.

DANC 467 Advanced Ballet Tech Elect credit: 1 to 3 Hours.

Ballet for advanced students. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Major standing in dance or consent of instructor or departmental placement.

DANC 495 Senior Career Seminar credit: 1 Hour.

Addresses survival strategies and the transition from academe to the profession. Course content includes research and discussion of career possibilities in performance, choreography, teaching, community dance work, therapy, and the dance-related fields of health/fitness/recreation. Students will research individualized projects in an area of interest. 1 undergraduate hour. No graduate credit. Prerequisite: Senior standing in Dance.

DANC 497 BA Capstone Project credit: 3 Hours.

The BA Capstone Project is a synthesis of dance studies with the student's selected focused area of study (focused electives, dual major, or minor), which results in a culminating presentation, performance, and/or written project. 3 undergraduate hours. No graduate credit. Approved for S/U grading only. Prerequisite: BA in Dance majors only, senior standing required.

DANC 498 Senior Thesis Production credit: 1 or 2 Hours.

The planning, design, and production of the Senior Capstone Project (DANC 499) for public performance. Students will work as a team to plan the Senior Concerts including designing and producing promotional materials and managing technical rehearsals and performances. 1 or 2 undergraduate hours. No graduate credit. May be repeated in separate terms. Prerequisites: DANC 375. Concurrent enrollment in DANC 499 is required.

DANC 499 Senior Thesis Project credit: 1 to 2 Hours.

The creation of a culminating choreographic/performance project. 1 to 2 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: DANC 362 and senior standing in Dance. Concurrent enrollment in DANC 498 is required.

DANC 510 Grad Seminar/Special Topics credit: 4 Hours.

Survey of professional organizations, publications, scholarly resources and trends culminating in student presentation of projects examining current issues in the field. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in Dance.

DANC 520 Synthesis Laboratory credit: 4 Hours.

Required laboratory course focused on the practice of synthesizing expertise in choreography, physical practice, teaching, written and oral communication, and creative career planning. Critical theory and inquiry will be intertwined with rigorous examination of performance and construction of dance-making. Issues of sustaining practice, testing and conveying one's mission and vision, and elaborating on one's individual research in relationship to the field will be emphasized. May be repeated up to 8 hours in separate terms. Spring and Fall terms, even years. Prerequisite: Graduate standing in Dance required.

DANC 530 Somatics in Dance Training credit: 3 Hours.

Addresses current issues and trends in the teaching of dance technique, with a focus on the incorporation of dance science and somatics into dance training. Course includes reading, writing, discussion, teaching observation, and experiential work. Prerequisite: Completion of DANC 445 and DANC 450, or consent of instructor.

DANC 531 MFA Prof Practice Seminar credit: 1 Hour.

A course examining current field practices and trends including curatorial practices, and interdisciplinary practices. Includes preparation of practical materials for career presentation and examination of resources. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Graduate standing in dance.

DANC 532 Digital Media for Dancers credit: 2 Hours.

Survey of the manipulation of digital images, video, and audio, with an emphasis on how these technologies are valuable to the dancer as both creative and marketing tools. Prerequisite: Graduate standing in Dance or consent of instructor.

DANC 541 Contemporary Directions I credit: 2 Hours.

A critical approach to 20th century dance with emphasis on the evolution of ideas that have influenced and shaped the dance of today. Prerequisite: Graduate standing in dance or consent of instructor.

DANC 542 Contemporary Directions II credit: 2 Hours.

Continuation of Dance 541 Contemporary Directions I emphasizing viewing, discussing, analyzing, and writing about the work of current significant contemporary choreographers worldwide with special attention toward contextualizing student research. May be repeated in separate terms up to 4 hours. Prerequisite: DANC 541 or consent of instructor. For graduate students only except by permission of instructor.

DANC 550 Advanced Research in Dance credit: 1 to 4 Hours.

Advanced Independent Research in an opportunity for exceptional returning level professional MFA candidates in Dance to design and implement an in-depth examination of a creative, historical, contemporary, philosophical, technological, or educational facet of dance under the guidance of a faculty advisor. May be repeated for a maximum of 12 graduate hours. Prerequisite: Consent of instructor, advisor, and graduate program director.

DANC 560 Advanced Physical Practice credit: 1 to 4 Hours.

MFA candidates are required to maintain a demonstrated level of technical proficiency through a consistent graduate level physical practice. The physical practice of each candidate is determined through advisement and may include ballet technique, modern technique, Alexander Technique, yoga, or additional somatic practices offered in the department. Approved for S/U grading only. May be repeated to a maximum of 24 hours. Prerequisite: MFA candidate in dance.

DANC 562 Graduate Composition II credit: 2 Hours.

Includes reading, writing, and discussion. Students will examine the creative process, the conventions that form choreographers' works, and the historical situations from which specific dance works spring. Students will produce works in specific contexts outside the standard theatre setting. They will be responsible for all promotional and production aspects of a project that will be presented to the public. Prerequisite: Dance 462.

DANC 581 Aesthetics and Curriculum credit: 4 Hours.

Same as CI 581. See CI 581.

DANC 598 Creative Thesis Project credit: 4 Hours.

The design, implementation, and completion of a culminating creative project in choreography and/or performance. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: 28 hours of graduate work in dance, including 4 hours in choreography.

E. Asian Languages & Cultures (EALC)

EALC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EALC>)

Courses

EALC 114 Introduction to East Asian Art credit: 4 Hours.

Same as ARTH 114. See ARTH 114.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

EALC 120 East Asian Civilizations credit: 3 Hours.

Same as HIST 120. See HIST 120.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 122 History East Asian Religions credit: 3 Hours.

Introduction to East Asian religious traditions; emphasizes the ideas of Confucianism, Taoism, and Buddhism in China and their historical interactions. Same as REL 122.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 130 The Chinese Language credit: 3 Hours.

An introduction to the scientific study of the Chinese language. We will explore where the Chinese language came from, its similarities to and differences from Japanese and Korean, and how the Chinese character writing system was invented, plus what it is like now. We will explore differences among Chinese dialects (e.g., Cantonese, Mandarin, Taiwanese and Shanghai) and learn where in China these are spoken, and also explore how the Chinese language operates in the brain. Finally, we will investigate how children in China learn to speak, read, and write, how adults learn to speak Chinese as a foreign language, and how Chinese can be used by different social groups in different settings in order to influence social power and distance. Approved for Letter and S/U grading. This course does not fulfill the campus foreign language requirement.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

EALC 132 Zen credit: 3 Hours.

Same as REL 132. See REL 132.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

EALC 220 Traditional China credit: 3 Hours.

Same as HIST 220. See HIST 220.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 221 Modern China credit: 3 Hours.

Same as HIST 221. See HIST 221.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

EALC 222 Chinese Thought Confucius to Mao credit: 3 Hours.

Examination of China's principal philosophical, religious, and political schools of thought - such as Confucianism, Taoism, Zen Buddhism, and Maoism - as ways of understanding one of the world's major civilizations; the period of the classical philosophers, the glory years of empire, and the troubled era of Western contact receive approximately equal attention.

Same as HIST 222 and REL 224.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 226 Premodern Japanese History credit: 3 Hours.

Same as HIST 226. See HIST 226.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 227 Modern Japanese History credit: 3 Hours.

Same as HIST 227. See HIST 227.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 240 Chinese Civilization credit: 3 Hours.

Introduction to the historical development of Chinese civilization. Emphasis will be on broad themes and the connections among cultural values, social institutions, political structures, and contacts with outsiders. Visual and literary evidence will be stressed. This course satisfies the General Education Criteria for: Cultural Studies - Non-West

EALC 250 Intro to Japanese Culture credit: 3 Hours.

Topical introduction to Japanese cultural and aesthetic life with attention to cultural and aesthetic patterns as they are reflected in literature, language, and the arts.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

EALC 275 Masterpieces of East Asian Lit credit: 3 Hours.

Study of major works in the literary traditions of China and Japan, including haiku, noh, Tale of Genji, kabuki, Tang poetry, Ming theater, and the colloquial tale. Same as CWL 275. No knowledge of Chinese or Japanese language required.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 276 Asian Film Genres credit: 3 Hours.

Same as CWL 276 and ENGL 276. See ENGL 276.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 285 Intro to Korea Through Film credit: 3 Hours.

Course uses film, literary, and ethnographic works to explore the impact of Post-Colonial (1945-present) socioeconomic and cultural transformation on the personal and collective South Korean experience. Same as ANTH 285.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

EALC 287 Introduction to Buddhism credit: 3 Hours.

Same as REL 287. See REL 287.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 288 Contemporary East Asia credit: 3 Hours.

Introduction to aspects of daily life in East Asia in relation to local and extra-local political and economic structures and transformations. Same as ANTH 287.

EALC 305 Japan Lit in Translation I credit: 3 Hours.

Survey of Japanese literature from earliest times to 1600; readings in prose, poetry, and drama in English translation. Same as CWL 311.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 306 Japan Lit in Translation II credit: 3 Hours.

Survey of Japanese literature from 1600 to recent times; readings in prose, poetry, and drama in English translation; and lectures and papers. Same as CWL 312.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 307 Classical Chinese Lit credit: 3 Hours.

Surveys Chinese literary works from the classical tradition (history, philosophy, poetry, literary criticism) with attention to intellectual and artistic values. Same as CWL 307. No knowledge of Chinese is required. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 308 Chinese Popular Lit credit: 3 Hours.

Surveys Chinese popular literary works written in the vernacular language (short story, novel, and drama), with attention to cultural and artistic values. Same as CWL 308. No knowledge of Chinese is required.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

EALC 333 Language in Japanese Society credit: 3 Hours.

Examines aspects of language use in contemporary Japanese society, including cross-cultural communication, social/regional variations, and problems surrounding linguistic/ethnic minorities in Japanese society. Prerequisite: Completion of JAPN 202 or equivalent.

EALC 343 Gov & Pol of China credit: 3 Hours.

Same as PS 343. See PS 343.

EALC 361 Women in East Asia credit: 3 Hours.

Interdisciplinary inquiry into the cultural and social patterns that have shaped women's lives in China, Japan, and Korea. Same as GWS 361.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

EALC 365 Contemporary Korean Society credit: 3 Hours.

Introduces contemporary Korean society: the twentieth century struggle of Korea for an individual identity; the Korean road to modernization and its significance for the United States and the developing world. Same as SOC 365.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

EALC 367 History of Korea credit: 3 Hours.

Historical examination of the Korean experience, from the earliest times to the present day: basic political, social, economic patterns; examination of the cultural and intellectual tradition; Korea's historical role in Asia; the Korean colonial experience; Korea in the modern world. Same as HIST 325.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

EALC 390 Individual Study credit: 2 to 4 Hours.

Directed readings in the languages and literatures of East Asia. The area selected depends on the student's interest. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

EALC 391 Honors Tutorial credit: 2 to 4 Hours.

Tutorial in the civilizations of East Asia. The country and discipline depend on student interests. All students submit a substantial paper. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

EALC 398 Colloquium in EALC credit: 3 Hours.

See online schedule for current topics. May be repeated in the same or separate terms to a maximum of 12 hours if topics vary. Prerequisite: Junior standing.

EALC 402 Ways of Seeing in Edo Japan credit: 3 or 4 Hours.

Same as ARTH 402. See ARTH 402.

EALC 403 Word and Image in Chinese Art credit: 3 or 4 Hours.

Same as ARTH 403. See ARTH 403.

EALC 411 The Chinese Novel credit: 3 or 4 Hours.

Reading and analysis of representative pieces of Chinese fiction from the fourth century B.C. to 1900 with emphasis on the development of Chinese fiction, its place in the literary tradition, and its role in society. Same as CWL 411. 3 undergraduate hours. 4 graduate hours. No knowledge of Chinese is required.

EALC 412 Mod Chinese Lit in Translation credit: 3 or 4 Hours.

Reading and analysis of representative selections from Chinese literature since the May 4 Movement (early 20th century), with special attention to the relationship between literature and ideology in twentieth-century China. Same as CWL 412. 3 undergraduate hours. 4 graduate hours. No knowledge of Chinese is required.

EALC 413 Premodern Chinese Drama credit: 3 or 4 Hours.

Survey of Chinese drama from the 12th century through the early 20th century. Students will read major works of Chinese drama in English translation, as well as works on stagecraft, performance styles, the social functions of drama and the social role of actors. Videotaped contemporary performances of traditional drama will be viewed. Same as CWL 416 and THEA 488. 3 undergraduate hours. 4 graduate hours.

EALC 415 Mod Japan Lit in Translation credit: 2 to 4 Hours.

Critical study of selected 20th century writers with an emphasis on cultural background, world view, human relationships, aesthetic theories, Japanese and Western traditions, and universal literary issues. Same as CWL 415. 3 undergraduate hours. 2 or 4 graduate hours. Requires no knowledge of Japanese; readings and films. Prerequisite: Junior standing or consent of instructor.

EALC 420 China Under the Qing Dynasty credit: 2 to 4 Hours.

Same as HIST 420. See HIST 420.

EALC 421 Soc-Econ Hist Modern China credit: 2 to 4 Hours.

Same as HIST 422. See HIST 422.

EALC 425 Chinese Poetry and Translation credit: 3 Hours.

A critical introduction to major Chinese poetic genres and an in depth examination of various translation strategies used in the translation of Chinese poetry. The poetry component acquaints students with essential aspects of Chinese language and poetry and thus enables them to evaluate the translated texts from the perspectives of both an insider and outsider. The translation component entails both the evaluation of existing translations and practice by the students. Same as TRST 430. 3 undergraduate hours. 3 graduate hours.

EALC 426 Early Modern Japan credit: 3 or 4 Hours.

Same as HIST 426. See HIST 426.

EALC 427 Twentieth-Century Japan credit: 3 or 4 Hours.

Same as HIST 427. See HIST 427.

EALC 428 Japan at War and Peace credit: 3 or 4 Hours.

Examination of the changing ways the Japanese have imagined war and peace in the twentieth century as documented in novels, memoirs, essays, plays, films, journalism, and other works. Same as CWL 428. 3 undergraduate hours. 3 or 4 graduate hours. Graduate students taking this course for 4 hours credit will be expected to write the same papers as undergraduates. In addition, graduate students will be expected to produce a term paper that will be due at the time of the final exam. Prerequisite: Junior standing or consent of instructor.

EALC 430 Intro to East Asian Ling credit: 3 or 4 Hours.

Same as LING 430. See LING 430.

EALC 466 Japanese Cinema credit: 3 or 4 Hours.

Same as MACS 466. See MACS 466.

EALC 469 The Ethnography of Korea credit: 3 or 4 Hours.

Survey of the English-language anthropological study and representation of Korea, situating this literature topically, historically, theoretically, and methodologically. Same as ANTH 489. 3 undergraduate hours. 4 graduate hours. Prerequisite: ANTH 103 or ANTH 230, or EALC 285 or EALC 365 or EALC 367, or consent of instructor.

EALC 475 Discourse&Grammar in EA Langs credit: 3 or 4 Hours.

Examines how the regularities in language use that we think of as 'grammar' emerge from communicative needs in discourse. Focuses on analysis of grammatical phenomena in East Asian languages. Requires advanced knowledge of Chinese, Japanese, or Korean. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 430; junior standing or consent of instructor.

EALC 476 Classical Chinese Thought credit: 3 or 4 Hours.

Inquiry into the major schools of Chinese thought in the Classical Period through the Han (206 B.C. - A.D. 220): Confucianism, Taoism and Legalism. Topics such as the concept of history, military thought and logic will be covered. Readings are in English. Same as CWL 478 and HIST 425. 3 undergraduate hours. 4 graduate hours. Prerequisite: One 200 or 300-level course on Chinese culture or consent of instructor.

EALC 484 Buddhist Meditation credit: 3 Hours.

Same as REL 484. See REL 484.

EALC 488 History of Chinese Buddhism credit: 3 or 4 Hours.

Survey of the history of Chinese Buddhism since its introduction; analysis of Buddhological trends and styles; and the sociocultural milieu of Chinese Buddhism and its place in the total history of ideas and lifestyles. Same as REL 488. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: REL 287 or consent of instructor.

EALC 490 Individual Study credit: 2 to 12 Hours.

Supervised individualized study of a topic not covered by regular course offerings. The topic must be approved by the instructor. 3 to 12 undergraduate hours. 2 to 12 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

EALC 495 Topics in Asian Religions credit: 3 or 4 Hours.

Same as REL 495. See REL 495.

EALC 500 Proseminar in EALC credit: 4 Hours.

Interdisciplinary introduction for first-term East Asian Languages and Cultures graduate students to western-language writings on East Asia that have been important to modern scholarship on the region. The proseminar will cover the three cultures of the region in an interdisciplinary fashion, focusing on the methods of various disciplines in their treatment of East Asia. Method refers both to the kinds of materials studies, and the theory and tools used in research.

EALC 501 Seminar in Chinese Art credit: 4 Hours.

Same as ARTH 501. See ARTH 501.

EALC 520 Problems in Chinese History credit: 4 Hours.

Same as HIST 520. See HIST 520.

EALC 521 Seminar in Chinese Literature credit: 4 Hours.

Examination of Chinese literature from a variety of genres and historical periods intended to prepare students for independent work in literary criticism and analysis. Readings include both primary texts and important works of secondary scholarship. Students will produce a term paper based on independent research. May be repeated to a maximum of 8 hours with approval.

EALC 522 Seminar in Chinese History credit: 4 Hours.

Same as HIST 521. See HIST 521.

EALC 526 Problems in Japanese History credit: 4 Hours.

Same as HIST 526. See HIST 526.

EALC 527 Seminar in Japanese History credit: 4 Hours.

Same as HIST 527. See HIST 527.

EALC 531 Seminar in Japanese Lit credit: 4 Hours.

Examination of Japanese literature from a variety of genres and historical periods designed to prepare advanced students for independent work in literary criticism and analysis. Texts in the vernacular are read and discussed from a variety of critical perspectives. Students produce a term paper based on current scholarship in the field of Japanese literary studies. May be repeated in same or subsequent terms as topics vary to a maximum of 12 hours. Prerequisite: A reading knowledge of Japanese.

EALC 550 Seminar in EALC credit: 4 Hours.

Seminar on selected topics. Topic varies with instructor. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

EALC 560 East Asian Language Pedagogy credit: 4 Hours.

Course is for teachers of Japan, Chinese, or Korean language who wish to improve their teaching skills and learn more about second and foreign language acquisition specific to the East Asian Language context. Besides reviewing research on language teaching methodology and curriculum development, students will observe each other conduct practice classes and analyze videotapes of class sessions. Undergraduates may enroll with consent of instructor and the Graduate College. Prerequisite: Native or near-native fluency in Japan, Chinese, or Korean.

EALC 567 Popular Religion in East Asia credit: 4 Hours.

Same as REL 568. See REL 568.

EALC 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EPSY 563, FR 584, GER 584, ITAL 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

EALC 588 Sem Second Lang Learn credit: 4 Hours.

Same as FR 588, GER 588, ITAL 588, LING 588, PORT 588, and SPAN 588. See SPAN 588.

EALC 590 Individual Study and Research credit: 2 to 12 Hours.

Supervised individual investigation or study of a topic not covered by regular course offerings. The topic selected by the student and the proposed plan of study must be approved by the adviser and the instructor. May be repeated. Prerequisite: Consent of instructor.

EALC 599 Thesis Research credit: 0 to 16 Hours.

Research and guidance in writing theses for advanced degrees. Approved for S/U grading only. May be repeated to a maximum of 16 hours. Prerequisite: Satisfactory completion of the preliminary examinations.

Earth, Society, & Environment (ESE)

ESE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ESE>)

Courses

ESE 103 Earth's Physical Systems credit: 4 Hours.

Same as GEOG 103. See GEOG 103.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 104 Geology of the National Parks credit: 3 Hours.

Same as GEOL 104. See GEOL 104.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 106 Geographies of Globalization credit: 3 Hours.

Same as GEOG 106. See GEOG 106.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

ESE 111 Emergence of Life credit: 3 Hours.

Same as GEOL 111. See GEOL 111.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ESE 117 The Oceans credit: 3 Hours.

Same as GEOL 117. See GEOL 117.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 118 Natural Disasters credit: 3 Hours.

Same as GEOL 118 and GLOB 118. See GEOL 118.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 120 Severe and Hazardous Weather credit: 3 Hours.

Same as ATMS 120. See ATMS 120.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ESE 140 Climate and Global Change credit: 3 Hours.

Same as ATMS 140. See ATMS 140.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 143 History of Life credit: 3 Hours.

Same as GEOL 143. See GEOL 143.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

ESE 170 Nature Religion credit: 3 Hours.

Same as REL 170. See REL 170.

ESE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics in Earth, Society, and the Environment; content is variable. May be repeated if topics vary.

ESE 200 Earth Systems credit: 3 Hours.

Interdisciplinary lecture class intended to introduce Earth Systems studies, which focuses on integrating social and natural science approaches to studying the Earth and its environments.

ESE 202 American Environmental History credit: 3 Hours.

Same as HIST 202 and NRES 202. See HIST 202.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

ESE 208 History of the Earth System credit: 4 Hours.

Same as GEOL 208. See GEOL 208.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

ESE 210 Social & Environmental Issues credit: 3 Hours.

Same as GEOG 210. See GEOG 210.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ESE 215 Resource Conflicts credit: 3 Hours.

Same as GEOG 215 and GLOBL 215. See GEOG 215.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ESE 222 Big Rivers of the World credit: 3 Hours.

Same as GEOG 222. See GEOG 222.

ESE 254 American People, Places, & Environments credit: 3 Hours.

Same as GEOG 254. See GEOG 254.

ESE 287 Environment and Society credit: 3 Hours.

Same as GEOG 287, NRES 287 and PS 273. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

ESE 289 Environment & Sustainability Field Study credit: 1 Hour.

Group expedition to study environment and sustainability issues at a nearby field site. Includes in-class meetings, student-led presentation, and a field trip that may be short as part of a day or as long as several days. Field trip and field trip fee required. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated in separate terms if topics vary. Prerequisite: For ESE majors, minors, and Sustainability Living Learning Community students. Non majors can apply to the waitlist.

ESE 293 The Anthropocene credit: 3 Hours.

Same as ENGL 293. See ENGL 293.

ESE 311 Environmental Issues Today credit: 3 Hours.

Seminar exposing students in the Environmental Fellows Program to different disciplinary perspectives on specific environmental issues, as revealed in the scholarly literature. Specific problems will vary from term to term. This seminar helps students make the transition from disciplinary to interdisciplinary thinking. Team-taught. Same as ATMS 311. Prerequisite: Admission to Environmental Fellows Program or consent of advisor.

ESE 320 Water Planet, Water Crisis credit: 3 Hours.

Study of the science of water on planet earth, the developing water crisis, and some possible solutions to it. Topics include water's unique physical and chemical properties; how it profoundly shapes the earth/ocean/atmosphere system; dynamics of oceans, atmosphere, lakes, rivers, groundwater, and ice masses; current fresh water supplies and their distribution on earth relative to population; current and future water crises and the compounding effects of droughts, floods, and global change; and prospects for some technological and economic approaches to easing the crisis. Same as GEOG 370 and GEOL 370.

ESE 333 Earth Materials and the Env credit: 4 Hours.

Same as GEOL 333. See GEOL 333.

ESE 350 Sustainability and the City credit: 3 Hours.

Same as GEOG 350. See GEOG 350.

ESE 360 Environmental Writing credit: 3 Hours.

Equips students to write about the environment for various audiences, with a focus on specific current efforts to promote sustainability on the Urbana-Champaign campus. We will practice effective techniques for each stage of the writing process—from defining topics, to gathering information, to crafting active, engaging prose. Readings will include models of effective environmental writing and "how to" pieces by experts. Research will include visits to campus sites and student-conducted interviews with subjects. Same as ENGL 360. Prerequisite: Completion of campus Composition I general education requirement. This course satisfies the General Education Criteria for:
Advanced Composition

ESE 379 Intro to GIS Systems credit: 4 Hours.

Same as GEOG 379. See GEOG 379.

ESE 380 GIS II: Spatial Prob Solving credit: 4 Hours.

Same as GEOG 380. See GEOG 380.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

ESE 381 Environmental Perspectives credit: 3 Hours.

Same as GEOG 381. See GEOG 381.

ESE 386 Arctic Environmt & Society credit: 6 Hours.

Same as GLOBL 386 and SCAN 386. See GLOBL 386.

ESE 389 Environment and Sustainability Field Expedition credit: 3 Hours.

Group expedition to study environment and sustainability issues at a field site. Includes in-class meetings, student-led presentation, and field trip; expeditions run during spring break, winter break, in mid-May or in intercession; dates depend on location. Field Trip and field trip fee required. Additional fees may apply. See Class Schedule. May be repeated up to 12 hours in separate terms if topics vary.

ESE 401 ESE Capstone credit: 3 Hours.

Capstone experience for majors in Earth, Society, and Environment Sustainability. 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading.

ESE 410 Green Development credit: 4 Hours.

Same as GEOG 410. See GEOG 410.

ESE 411 Geomorphology credit: 4 Hours.

Same as GEOL 401. See GEOL 401.

ESE 421 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, GEOG 421, GEOL 481 and NRES 422. See ATMS 421.

ESE 439 Biogeography credit: 3 Hours.

Same as ANTH 436, GEOG 436, IB 439, and NRES 441. See IB 439.

ESE 445 Earth Resources Sustainability credit: 3 Hours.

Introduces the physical (energy, mineral, and soil) resources of the Earth, the environmental consequences of producing and using resources, the controls on resource supplies, and the alternatives to traditional supplies. Focuses on the geological origin and context of resources, the means of exploration and production, the history of production, and sustainability issues related to consumption and depletion. Provides an understanding of why resources can be scarce and expensive, why many are not renewable, and why their use impacts the Earth System. May include field trips. 3 undergraduate hours. 3 graduate hours. Credit is not given for both ESE 445 and GEOL 380. Prerequisite: Junior standing or higher.

ESE 452 Ecosystem Ecology credit: 3 Hours.

Same as IB 452 and NRES 462. See IB 452.

ESE 462 Ecological Criticism credit: 3 or 4 Hours.

Same as CWL 460 and REL 462. See REL 462.

ESE 465 Transp and Sustainability credit: 3 or 4 Hours.

Same as GEOG 465. See GEOG 465.

This course satisfies the General Education Criteria for:
Advanced Composition

ESE 466 Environmental Policy credit: 3 or 4 Hours.

Same as GEOG 466. See GEOG 466.

ESE 470 Introduction to Hydrogeology credit: 4 Hours.

Same as GEOL 470. See GEOL 470.

ESE 477 Advanced Environmental Writing credit: 3 Hours.

Same as ENGL 477. See ENGL 477.

ESE 481 Intl Environ Cooperation credit: 3 Hours.

Same as GEOG 481. See GEOG 481.

ESE 482 Challenges of Sustainability credit: 3 Hours.

An interdisciplinary approach to investigating the meaning and practice of sustainability in the contemporary Earth system. As a consequence, students explore the sustainability of crucial resources - water, soil, energy, mineral and the biota - in the context of the social and environmental systems in which these resources are used, including the moral, physical, ecological, political and economic. Same as GEOG 482 and GEOL 483. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior or senior standing, or consent of instructor.

ESE 497 Special Topics in ESE credit: 1 to 4 Hours.

Advanced topics course, consisting of seminar or lectures in subjects not covered by regular course offerings; for advanced undergraduates and graduate students. Possible field study in a prominent geological locality; includes in-class meetings, student-led presentations, and field trip; trips run during spring break, winter break, in mid-end May; dates depend on location. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 undergraduate hours or 8 graduate hours. Prerequisite: Consent of instructor.

ESE 498 Environmental Writing for Publication credit: 3 Hours.

Provides students with both the experience of the real-world editorial process and with a research product (the published essay) that showcases their professional development as well-informed and persuasive writers on environmental issues. Same as ENGL 498. 3 undergraduate hours. No graduate credit. Prerequisite: Consent of instructor.

Economics (ECON)

ECON Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ECON>)

Courses

ECON 101 Introduction to Economics credit: 4 Hours.

General survey of the operation of the economic system; emphasizes the determination of the level of national income, the pricing and allocation of products, and factors of production under existing conditions in the United States. This is an honors course limited to students currently enrolled in the Chancellor's Scholar Program. Credit is not given for ECON 101 if credit has been earned in both ECON 102 and ECON 103. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ECON 102 Microeconomic Principles credit: 3 Hours.

Introduction to the functions of individual decision-makers, both consumers and producers, within the larger economic system. Primary emphasis on the nature and functions of product markets, the theory of the firm under varying conditions of competition and monopoly, and the role of government in prompting efficiency in the economy. Credit is not given for ECON 102 and ACE 100.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ECON 103 Macroeconomic Principles credit: 3 Hours.

Introduction to the theory of determination of total or aggregate income, employment, output, price levels, and the role of money in the economy. Primary emphasis on monetary and fiscal policy, inflation, unemployment, economic growth, and international economics.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ECON 198 Economics at Illinois credit: 1 Hour.

An introductory course intended to help students explore the various fields of economics. Presents brief introductions to various faculty members within the Department of Economics at Illinois and an overview of their respective fields. Enrollment limited to undergraduate Economics majors only. Approved for S/U grading only.

ECON 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

ECON 202 Economic Statistics I credit: 3 Hours.

Introduction of basic concepts in statistics including the presentation of data, descriptive statistics, probability theory, discrete and continuous distributions, sampling distributions, estimation, and hypothesis testing. The approach of the class includes both learning the concepts behind basic statistics and also how to apply these concepts in "real-life" situations. Utilizes a practical project format. To complete the Business Statistics sequence, students must also complete ECON 203. Credit is not given for ECON 202 if credit for a college-level introductory statistics course such as PSYC 235, SOC 280, or STAT 100 has been earned. Prerequisite: Credit or registration in one of MATH 220, MATH 221, MATH 234.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

ECON 203 Economic Statistics II credit: 3 Hours.

Continuation of ECON 202. Builds upon point and interval estimation as well as hypothesis testing skills first introduced in ECON 202. Utilizes a practical project format to extend the student skill set to include simple and multiple linear regression and time series techniques. Prerequisite: ECON 202; one of MATH 220, MATH 221, MATH 234.

ECON 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ENVS 210, NRES 210, and UP 210. See ACE 210. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ECON 220 Intl Economic Principles credit: 3 Hours.

Principles-level course in international economics for non-majors. The first half of course, international trade, covers such topics as comparative advantage, protectionism (tariff and nontariff), impact on income distribution, and industrial policies. The second half, international finance, covers topics such as balance of payments, exchange-rate determination, currency crises, dollarization, and macroeconomic policy in an open economy. Issues relating to globalization will be covered in both halves. Prerequisite: ECON 101; or ECON 102 (or ACE 100) and ECON 103. Credit in ECON 220 is not applicable toward graduation in the Economics Major.

ECON 302 Inter Microeconomic Theory credit: 3 Hours.

Microeconomic analysis including value and distribution theory; analysis of the pricing of the factors of production integrated in a micro-general equilibrium context which builds towards explaining the resource allocation process. Prerequisite: ECON 102 or equivalent. MATH 220, MATH 221, MATH 234 or equivalent.

ECON 303 Inter Macroeconomic Theory credit: 3 Hours.

The modern theory of the determination of the level and rate of growth of income, employment, output, and the price level; discusses alternate fiscal and monetary policies to facilitate full employment and economic growth. Prerequisite: ECON 102, ECON 103. Recommended: MATH 125; one of MATH 220, MATH 221, MATH 234.

ECON 397 Senior Research I credit: 2 to 4 Hours.

Research and readings course for students majoring in economics; may be taken by students in the college honors program in partial fulfillment of the honors requirements. Prerequisite: Cumulative grade-point average of 3.0 or honors in the junior year, or consent of instructor; senior standing.

ECON 398 Senior Research II credit: 2 to 4 Hours.

Research and readings course for students majoring in economics; may be taken by students in the college honors program in partial fulfillment of the honors requirements. Prerequisite: Cumulative grade-point average of 3.0 or honors in the junior year; senior standing.

ECON 399 Undergraduate Open Seminar credit: 0 to 9 Hours.

Independent study course covering topics not treated by regular course offerings. This class does not satisfy departmental graduation requirements. Approved for both letter and S/U grading. May be repeated. Prerequisite: Junior or senior standing. ECON 101 or equivalent is recommended. ECON 102 or equivalent is recommended.

ECON 411 Public Sector Economics credit: 2 to 4 Hours.

Economic analysis of government tax and expenditure policies; topics include public good and externality theory, public choice theory, income distribution, cost-benefit analysis, principles of taxation, tax incidence, economic effects and optimal structures of major taxes, and taxation in developing economies. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ECON 414 Urban Economics credit: 3 or 4 Hours.

Analyzes the urban economy. Topics include: economic reasons for the existence of cities; the theory of urban spatial structure; the effects of taxation on housing decisions; the economics of freeway congestion; economics analysis of local public goods and services; economic analysis of rent control, slum policies and land-use controls. Same as FIN 414. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302.

ECON 420 International Economics credit: 2 to 4 Hours.

Introduction to the theory of international trade and finance with selected application to current problems of trade policy, balance of payments adjustment, the international monetary system, and globalization issues. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent, or consent of instructor; ECON 303 is recommended.

ECON 440 Economics of Labor Markets credit: 2 to 4 Hours.

Studies the microeconomic determinants of labor demand and supply, economic effects of unions, and macroeconomic labor market problems. Same as LER 440. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ECON 450 Development Economics credit: 2 to 4 Hours.

Analyzes the economic problems associated with newly developing nations; emphasizes their economic structures, their factor scarcities, and their programs for development. Not open for graduate credit to graduate candidates in economics. 3 undergraduate hours. 2 or 4 graduate hours. Graduate credit is not given for both ECON 450 and ECON 550 or ECON 551. Prerequisite: ECON 102 and ECON 103 or equivalent. ECON 302 strongly recommended.

ECON 451 Program Evaluation in Developing Economies credit: 3 or 4 Hours.

Advanced economics course on microeconomic issues in developing countries with particular attention to empirical analyses and methodologies to address fundamental theoretical and policy relevant questions. Focus is on topics within health and education, although papers may cover other topics. An original empirical research paper is required, applying ideas and concepts covered in class. Class alternates between lectures (discussing new ideas or concepts and assigned readings) and lab (applying concepts to actual data using Stata). 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 203 and ECON 302 or equivalents; for undergraduate students only: Completion of campus Composition I general education requirement. Junior Standing Required. Priority registration provided to Economics Majors. This course satisfies the General Education Criteria for: Advanced Composition

ECON 452 The Latin American Economies credit: 2 to 4 Hours.

Focuses on the economic history of the region, the recent industrialization process and its impact, the role of the state and foreign capital, the impact of the recent privatization processes, inflation and stabilization policies, and issues surrounding the distribution of income. Same as ACE 452. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 102 or ECON 103. ECON 302 or ECON 303 strongly recommended.

ECON 462 Macroeconomic Policy credit: 2 or 3 Hours.

Analyzes current macroeconomic policy issues, problems, and techniques; discusses various policy techniques including monetary, fiscal, incomes, and exchange rate policies, and their effectiveness for treating inflation, unemployment, productivity, resource and exchange rate problems. May emphasize current issues in developed economies or in emerging market economies. 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: ECON 303 or equivalent.

ECON 465 Mathematical Economics credit: 2 to 4 Hours.

Introduction to game theory with applications to economics; emphasizes the analysis of static and dynamic games with or without complete information. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of MATH 125, MATH 225, MATH 415; MATH 241 or equivalent; ECON 302.

ECON 469 Economics of Risk credit: 3 or 4 Hours.

Exploration of economic decisions under uncertainty. Includes expected utility theory and non-expected utility theory; applications to individual decision problems in investment and insurance; general equilibrium in markets under uncertainty, including problems generated by asymmetric information; measurement of risk; the value of information obtained before a decision. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ECON 302 or equivalent; one of MATH 220 or MATH 221 or equivalent.

ECON 471 Intro to Applied Econometrics credit: 2 to 4 Hours.

Introduction to specification, estimation, prediction and evaluation of econometric models, emphasizing the interplay between statistical theory and economic applications. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 203 or equivalent; ECON 302 or ECON 303.

ECON 480 Industrial Comp and Monopoly credit: 2 to 4 Hours.

Analyzes the ways firms and markets are organized, how they interact, outcomes of various types of firm behavior and performance of markets, and causes and types of market failure. Particular emphasis on the contribution of game theory as the equilibrium concept in oligopoly settings. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302.

ECON 481 Govt Reg of Economic Activity credit: 2 to 4 Hours.

Analysis of economic bases, policies, and consequences of government regulation of economic activity. Reasons for government intervention in market behavior, methods of government intervention, and outcomes are studied. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ECON 482 Health Economics credit: 3 or 4 Hours.

Economic analysis of the health care industry to explain the demand for and supply of medical care. Includes analysis of behavior of consumers, producers, and insurers; and public policies to regulate the industry and to provide services for the poor and elderly. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECON 302 is recommended.

ECON 483 Econ of Innovation and Tech credit: 2 to 4 Hours.

Examines the economic factors shaping innovation and technical change since the industrial revolution with emphasis on the economic relationship between science and technology and the role of government in technical change. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 102 or equivalent; ECON 302 or consent of instructor.

ECON 484 Law and Economics credit: 2 to 4 Hours.

Applications of economic theory to problems and issues in both civil and criminal law and the effect of legal rules on the allocation of resources; includes property rights, liability and negligence assignment, the use of administrative and common law to mitigate market failure, and the logic of private versus public law enforcement. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: ECON 302 or equivalent.

ECON 490 Topics in Economics credit: 3 or 4 Hours.

Treatment of special topics in economics. 3 undergraduate hours. 4 graduate hours. May be repeated in the same term to a maximum of 6 undergraduate hours or 8 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate hours or 8 graduate hours. Prerequisite: ECON 302 or consent of instructor.

ECON 500 Microeconomics credit: 4 Hours.

Emphasizes microeconomic theory; principal topics include a review of value and distribution theory, the theory of choice by households and firms, general microeconomic theory, and theoretical developments of current interest. Credit is not given for both ECON 500 and ECON 528. Graduate credit for both ECON 302 and ECON 500 is given only upon recommendation of the student's adviser and approval by the Department of Economics. Prerequisite: ECON 102 or equivalent. MSPE Graduate Student Standing.

ECON 501 Macroeconomics credit: 4 Hours.

Emphasis on macroeconomic theory; principal topics include a review of Keynesian macroeconomic theory, formal growth theory, and selected business cycle theory. Credit is not given for both ECON 501 and ECON 529. Graduate credit for both ECON 303 and ECON 501 is given only upon recommendation of the student's adviser and approval by the Department of Economics. Prerequisite: ECON 102 and ECON 103 or equivalent. MSPE Graduate Student Standing.

ECON 502 Economic Statistics credit: 4 Hours.

Classical statistics and regression analysis; descriptive statistics, probability and point and interval estimation; decision theory; variance analysis; and linear regression and least-squares estimates. Prerequisite: A course in statistics or consent of instructor. MSPE Graduate Student Standing.

ECON 503 Econometrics credit: 4 Hours.

Develops a general methodological basis for searching for quantitative economic knowledge; integrates and gives operational content to the topics of economic, statistical, and econometric theory. Prerequisite: ECON 502, or equivalent. MSPE Graduate Student Standing.

ECON 504 Time Series Analysis in Econ credit: 4 Hours.

Modern time series analysis techniques for handling economic data which arises in a happenstance fashion through time and their application to specific economic problems. Prerequisite: ECON 503 or STAT 578, or equivalent. MSPE Graduate Student Standing.

ECON 505 Introduction to Game Theory credit: 4 Hours.

Applications of game theory. Introduction to basic static games and dynamic games with particular attention to applying these games to real world situations. Prerequisite: MATH 415; ECON 500 and ECON 501, or equivalent. MSPE Graduate Student Standing.

ECON 507 Computable G E Modeling credit: 4 Hours.

Discusses problems and methods of building social accounting matrices and computable general equilibrium (CGE) models; provides hands-on experience with CGE models with a series of PC-based exercises. The exercises demonstrate a number of techniques for constructing CGE models and show applications of these models to a variety of economic policy problems in developing countries such as food subsidies, international trade restrictions, foreign debt, and sectoral investment priorities. Prerequisite: ECON 500 and ECON 501 or equivalent; MATH 220 or MATH 221, or equivalent. MSPE Graduate Student Standing.

ECON 510 Economics of Taxation credit: 4 Hours.

Theoretical and empirical analysis of the impact of taxation on the economic system; topics include tax equity and excess burden, incentive effects of taxation, tax incidence, structure of major types of taxes (income, consumption, and wealth), normative tax analysis, and taxation in developing economies. Prerequisite: ECON 302 or equivalent. MSPE Graduate Student Standing.

ECON 511 Public Goods Theory credit: 4 Hours.

In-depth analysis of the theory of public goods; includes public goods and externality theory, public choice, theory of cost-benefit analysis, optimal income redistribution, and fiscal federalism. Prerequisite: ECON 302 or equivalent. MSPE Graduate Student Standing.

ECON 513 International Trade credit: 4 Hours.

The pure theory of international trade, general equilibrium income and welfare, tariffs, the theory of policy ranking, strategic trade policy, customs unions, international trade law and the WTO. Prerequisite: ECON 302 and ECON 303, or equivalent. MSPE Graduate Student Standing.

ECON 514 International Financial credit: 4 Hours.

Examines the balance of payments, exchange rate, capital flows and international monetary system; fiscal and monetary policy in open economies. Prerequisite: ECON 302 and ECON 303, or equivalent. MSPE Graduate Student Standing.

ECON 516 Monetary Theory credit: 4 Hours.

Micro- and macroeconomic theories of the supply of and demand for money; money substitutes and their significance; review of current empirical research; money in closed economy, macroeconomic, and static general equilibrium models; and analysis of inflation and unemployment. Prerequisite: Consent of instructor. MSPE Graduate Student Standing.

ECON 517 Monetary Policy credit: 4 Hours.

Theories of money; money in dynamic models; money in open economy macroeconomic models; stabilization policy; and international aspects of monetary theory. Prerequisite: Consent of instructor. MSPE Graduate Student Standing.

ECON 519 Development and Growth Policy credit: 4 Hours.

Review and analysis of the theories and patterns of growth in developed and underdeveloped economies; the process and impact of import substitution industrialization; trade and economic development; the role of the state and privatization in the development process; agricultural stagnation and modernization. Prerequisite: ECON 500 and ECON 501 or consent of instructor. MSPE Graduate Student Standing.

ECON 527 Business International Econ credit: 4 Hours.

Provides the business student with a working knowledge of the principles of international economics, issues in the current international business environment, U. S. and international trade law, and current policy issues and debates. Considers the basic causes and consequences of international trade, the foreign exchange market and theory of exchange rate determination, the U. S. trade deficit, the international monetary system, and antidumping and countervailing duty law, copyright and patent infringement law, the General Agreement on Tariffs and Trade, the rudiments of strategic trade theory, and selected policy issues varying by year. Prerequisite: Familiarity with intermediate microeconomics at the level of ECON 302.

ECON 528 Microeconomics for Business credit: 4 Hours.

Microeconomics for professional business students. Shows relevance of value and distribution theories for business managers. Includes demand and supply theory, consumer choice, production and cost theory, industrial structure, and wage and capital theory. Intended for students in the Master of Business Administration program. Credit is not given for both ECON 528 and either ECON 302 or ECON 500. Prerequisite: Enrollment is often restricted to students in specialized programs.

ECON 529 Macroeconomics for Business credit: 4 Hours.

Development of short run macroeconomic models. Analysis of private sector behavior functions, and government policy alternatives. Extensions for open economy models and growth models. Intended for students in the Master of Business Administration program. Credit is not given for both ECON 529 and either ECON 303 or ECON 501. Prerequisite: Enrollment is often restricted to students in specialized programs.

ECON 530 Microeconomic Theory I credit: 4 Hours.

Emphasizes microeconomic theory particularly theory of the consumer, theory of the firm, general equilibrium analysis and welfare analysis. Also, covers uncertainty in general equilibrium and informational economics. Prerequisite: ECON 302 and ECON 303 or equivalent.

ECON 531 Macroeconomic Theory I credit: 4 Hours.

Introduces students to a variety of dynamic general equilibrium models that currently dominate the study of growth and economic fluctuations. These models include: neoclassical growth models, overlapping generations models, CAPM models, search models, and endogenous growth models. In covering these models, the course also seeks to develop a set of techniques for students to use. These techniques include discrete time optimization, continuous time optimization, dynamic programming and model calibration. Prerequisite: ECON 302 and ECON 303, or equivalent; calculus.

ECON 532 Econometric Analysis I credit: 4 Hours.

Theoretical treatment of economic statistics. Covers probability theory, set theory, asymptotic theory, estimation and hypothesis testing. Prerequisite: A course in statistics or consent of instructor.

ECON 533 Microeconomic Theory II credit: 4 Hours.

Focuses on information and incentives in economic problems. Topics include non-cooperative games, dynamic games, mechanism design, auctions, matching and networks. Prerequisite: ECON 530, or equivalent; calculus.

ECON 534 Macroeconomic Theory II credit: 4 Hours.

Development of modern macroeconomic theory, including disequilibrium theory, optimal short-term stabilization measures, and monetary, fiscal, incomes, and exchange rate policies; large-scale econometric models; linear and neoclassical growth models; aggregate distribution theory; money, capital movements, trade, and growth; optimal growth models; and exhaustible resources and growth. Prerequisite: ECON 531.

ECON 535 Econometric Analysis II credit: 4 Hours.

Part 1: The construction of econometric models; characteristics of models and choice of estimating methods; and estimates of parameters by various methods. Part 2: Bayesian statistics and decision theory. Prerequisite: ECON 532 or equivalent.

ECON 536 Applied Econometrics credit: 4 Hours.

Focus on specification, estimation, prediction and evaluation of econometric models. Covers instrumental variable estimation, simultaneous equation models, non-linear models, discrete choice models and quantile regression methods. Prerequisite: ECON 532 and ECON 535.

ECON 540 Labor Economics I credit: 4 Hours.

Survey of recent trends in the labor force, of real and money earnings, and of the distribution of national income used as the basis for a critical economic analysis of contemporary English and American wage theory. Same as LER 540. Prerequisite: ECON 302 and ECON 303.

ECON 541 Labor Economics II credit: 4 Hours.

Economic issues and implications involved in hours of work, employment and unemployment, and trade union institutionalism (the impact of the trade union upon the basic institution of a free enterprise economy); emphasis in all cases on the development of appropriate public policy. Same as LER 541. Prerequisite: ECON 302 and ECON 303.

ECON 542 Collective Bargaining credit: 4 Hours.

Same as LER 542. See LER 542.

ECON 543 Workplace Dispute Resolution credit: 3 or 4 Hours.

Same as LAW 665 and LER 543. See LER 543.

ECON 545 Econ of Ed, Hlth & Hum Capital credit: 4 Hours.

Same as EOL 518. See EOL 518.

ECON 546 Gen Equ Env Tax Policy credit: 4 Hours.

Same as FIN 519. See FIN 519.

ECON 547 Urban Economics credit: 4 Hours.

Examines the microeconomic theory of urban land-use and spatial structure (static and dynamic models); analyzes externalities caused by traffic congestion; normative and positive analysis of the provision of local public goods; and public policy issues (i.e., slums and urban decline, pollution). Prerequisite: ECON 530 and ECON 533.

ECON 548 Adv Natural Resource Economics credit: 4 Hours.

Same as ACE 510, ENVS 510, and NRES 510. See ACE 510.

ECON 549 Environmental Economics credit: 4 Hours.

Examines both theory and policy applications in the environmental area; selectively reviews the literature to provide a framework for understanding the relevant economic relationships and the criteria appropriate for policy assessment; emphasizes the characteristics of major environmental problems and policy choices; and considers the valuation of environmental amenities and the conflict between environmental quality and growth. Same as ACE 516. Prerequisite: ECON 302 or consent of instructor.

ECON 550 Econ of Development and Growth credit: 4 Hours.

Theories of economic development and growth. Covers the role of agriculture, trade, manufacturing, human capital, genetics, geography and culture in growth. Prerequisite: ECON 533 and ECON 534, or equivalent.

ECON 551 Topics in Development Econ credit: 4 Hours.

Analyzes the newly developing economies, with emphasis on institutional factors affecting development and economic policy relating to development. Prerequisite: ECON 535 or equivalent.

ECON 553 Demand/Supply/Firms/Households credit: 4 Hours.

Same as ACE 502. See ACE 502.

ECON 555 Topics in Microeconomics I credit: 4 Hours.

Study at an advanced level of one or more of the following possible topics: economics of externalities, advanced aggregate economic theory, theory of central planning, investment theory, consumer behavior theory, capital theory, welfare economics, inflation theory, income distribution theory, or other topics. May be repeated. Prerequisite: ECON 533 and ECON 534, or consent of instructor.

ECON 556 Topics in Microeconomics II credit: 4 Hours.

Studies quantitative techniques useful in economic analysis and decision making; single and systems of difference and differential equations; dynamic programming; Pontryagin maximum principle; interaction of multiplier and accelerator; von Neumann model; Turnpike theorem; growth models; and control systems. Prerequisite: MATH 415; ECON 533 and ECON 534, or equivalent.

ECON 557 Topics in Microeconomics III credit: 4 Hours.

Studies bounded rationality and learning in economics. Topics include evolutionary learning in models. Prerequisite: MATH 415, ECON 533 and ECON 534 or equivalent.

ECON 562 Topics in Macroeconomics I credit: 4 Hours.

Study at an advanced level of one or more of the following possible topics: economics of externalities, advanced aggregate economic theory, theory of central planning, investment theory, consumer behavior theory, capital theory, welfare economics, inflation theory, income distribution theory, or other topics. May be repeated. Prerequisite: ECON 533 and ECON 534, or consent of instructor.

ECON 572 Political Economy credit: 4 Hours.

Microeconomic analysis of political decision making processes. Includes social choice, models of political competition, game-theoretic analysis of political institutions and lobbying. Same as PS 548. Prerequisite: ECON 530 or equivalent, or instructor's consent.

ECON 574 Econometrics I credit: 4 Hours.

Estimation of parameters for single-equation models; tests of hypotheses and confidence regions for regression models; large-sample theory in single-equation models; and Bayesian statistics in regression models. Prerequisite: MATH 415 and STAT 400.

ECON 575 Econometrics II credit: 4 Hours.

Considers the specification of models with systems of simultaneous equations; identification problem, distributed lag models, K-class estimators, maximum likelihood estimators, three-stage least-squares, and effects of specification errors. Prerequisite: ECON 574.

ECON 576 Time Series credit: 4 Hours.

Models and techniques used in the analysis of time series data. Covers univariate and multivariate time series, non-stationary time series, cointegration and error correction, structural breaks and non-linear time series models. Prerequisite: ECON 535 or STAT 578, or equivalent.

ECON 577 Topics in Econometrics credit: 4 Hours.

Examines some standard econometric problems from the Bayesian perspective and compares Bayesian and classical inference. Prerequisite: ECON 574.

ECON 578 Large Sample Theory credit: 4 Hours.

Same as STAT 575. See STAT 575.

ECON 580 Industrial Organization credit: 4 Hours.

Theory of the organization of markets and firms, behavior of firms, functioning of competitive systems, and performance of markets.

ECON 581 Govt Regulation of Industry credit: 4 Hours.

Microeconomic and econometric analyses of market failure and government response in selected industries; topics include economic effect of regulation, bureaucratic behavior, optimal policy, and strategies for regulatory reform. Prerequisite: ECON 530; ECON 580; or consent of Instructor.

ECON 582 Empirical Ind Organization credit: 4 Hours.

Empirical Methods in Industrial Organization. Topics include: detection of anticompetitive behavior; estimation techniques that allow for product differentiation, endogenous entry and intertemporal decision-making; estimation and testing of auctions and other asymmetric information models.

ECON 585 Topics in International Econ credit: 4 Hours.

Frontier advanced topics in international economics; subject matter varies. May not be repeated for credit. Prerequisite: ECON 533 and ECON 534, or consent of instructor.

ECON 590 Individual Study and Research credit: 0 to 4 Hours.

Directed reading and research. Approved for both letter and S/U grading. May be repeated.

ECON 598 Workshop and Research Seminar credit: 2 Hours.

Workshops are offered in all areas of specialization in which graduate students are writing Ph.D. dissertations. The specific format varies, but in general workshop sessions include presentations by graduate students of thesis research, by faculty members of their current research, and by occasional outside speakers. Approved for S/U grading only. May be repeated. A minimum of 4 hours of ECON 598 is required of all students in the Ph.D. program. Prerequisite: Admission to the Department of Economics Ph.D. program.

ECON 599 Thesis Research credit: 0 to 16 Hours.

Preparation of thesis required of all students writing master's or doctoral theses in economics. Approved for S/U grading only. May be repeated.

Ed Policy, Org & Leadership (EPOL)

EPOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EPOL>)

Courses

EPOL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Various special topics. See class schedule for offerings. Approved for Letter and S/U grading. May be repeated in the same or separate terms as topics vary.

EPOL 350 Social Learning and Knowledge credit: 3 Hours.

This course explores how we access and generate knowledge. In formal education, the legacy classroom is also being augmented with technology or replaced entirely with online learning. Across a wide range of domains of knowledge, the traditional separations between knowledge producers (experts or teachers) and knowledge consumers (everyday citizens or students) are undergoing transformation. In this course you will be exposed to the changing landscape of knowledge and learning through a hands-on experience of collaborative knowledge production and learning. Issues and concepts to be addressed include Web 2.0, participatory media, peer-to-peer knowledge networks, 'the commons', informal online learning, and the dynamics of formal e-learning ecologies.

This course satisfies the General Education Criteria for:

Advanced Composition

Social Beh Sci - Soc Sci

EPOL 550 Methods of Educational Inquiry credit: 4 Hours.

Same as CI 550, EPSY 573, and SPED 550. See CI 550.

EPOL 585 Ethnographic Methods in Educ credit: 4 Hours.

This course focuses on goals, nature, and methodological means of ethnographic research in educational settings broadly defined. Such research aims to describe and, moreover, to understand the ways of living of teachers, students, administrators, parents, and other participants in relevant social spaces. The class will be grounded in the disciplinary perspectives of cultural anthropology, linguistic anthropology, and cultural studies. We will have an ongoing discussion of how one conducts ethnographic research, and all members of the class will conduct their own mini-study. 4 graduate hours. No professional credit.

EPOL 591 Thesis Seminar credit: 4 Hours.

Designed to take students through the entire process of proposal development, this course is intended for masters or doctoral students who are ready to prepare a thesis or dissertation proposal. Students will learn to use a systematic and comprehensive approach to develop the research proposal and how each step in the research process is related. 4 graduate hours. No professional credit.

EPOL 595 Independent Study credit: 1 to 4 Hours.

Offers opportunity and challenge of self-directive, independent study; develops the individual's ability as an independent student and enables the student to pursue needed study in a field in which appropriate courses are not being offered during a given term. 1 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated with approval.

EPOL 599 Thesis Research credit: 0 to 16 Hours.

Individual direction of research and thesis writing. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated with approval.

Educ Organization & Leadership (EOL)

EOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EOL>)

Courses

EOL 440 Prof Issues for Teachers credit: 1 or 3 Hours.

Provides the basic common understanding of schools as social organizations and the professional role of teachers in public schools; analyzes selected legal issues relating to student rights, employment and teacher rights, and collective bargaining in schools; and serves as an introduction to instructional supervision, teacher evaluation, and continuing professional development of teachers. 3 undergraduate hours. 1 graduate hour. Prerequisite: Admission into a teacher preparation program. 1 hour section requires concurrent enrollment in EDPR 432 or EDPR 442.

EOL 518 Econ of Ed, Hlth & Hum Capital credit: 4 Hours.

Basic economic analysis of human capital and the value of human time, with applications to the economics of education and health; theory and analysis of consumer investment in human and physical capital over the life cycle; the returns to education and health, and their effects on growth; the theory of nonmarket time; public finance of education and health; and implications for the analysis of the distribution of income. Same as ECON 545. Prerequisite: A course in microeconomic theory and a course in statistics, or consent of instructor.

EOL 540 Intro to Educational Leadership credit: 4 Hours.

Multiple perspectives for understanding theory and practice in the governance and operation of complex organizations in P-12 school systems. Focuses on leadership development and the changing role of the school leader in leading learning-focused schools dedicated to significant and continuous growth for every student. Prerequisite: Graduate standing in the College of Education or consent of instructor.

EOL 541 Supervision of Learning Envir credit: 4 Hours.

Methods, theories, and research applying to the supervision and evaluation of classroom practices in learning-centered schools; includes analysis and application of research in effective teaching practices, formative assessment and summative evaluation, data collection techniques, and professional development. Prerequisite: EOL 540 or consent of instructor.

EOL 542 Leading Learning-Centrd Schls credit: 4 Hours.

Provides an overview and analysis of the administrative, supervisory, and leadership functions of building-level administrators; emphasizes the design and implementation of effective educational programs on a school-wide basis; analyzes administrative tasks and processes that focus on learning-centered schools. Prerequisite: EOL 540 or consent of instructor.

EOL 543 Leading School Improvement credit: 4 Hours.

Study of major ideas on school improvement, past and present, and of emerging research on the condition of public education in the United States. In-depth examination of reform proposals for changing the organization of schools, the instructional program, and the roles of students, teachers, and school administrators. Prerequisite: Graduate standing in the College of Education or consent of instructor.

EOL 544 Leading Improvement and Innovation credit: 4 Hours.

In-depth examination of leadership competencies and skills required for the public school superintendent to successfully lead, innovate, and manage complex educational organizations. Analysis of research and evidenced-based practices that focus on learning, building organizational capacity, strategic design, and ensuring equity and excellence for all learners. Emphasis placed on preparing individuals to effectively lead socially just organizations that ensure high quality learning. 4 graduate hours. No professional credit. Prerequisite: Students must be admitted to the EOL Superintendent Endorsement program or consent of instructor.

EOL 546 Public School Finance credit: 4 Hours.

Study of financing public education systems in the United States; focuses on the social, economic, political, legal, and technical dimensions of developing school finance policy for federal, state, and local governments; relates theory and research in public school finance to administrative practice in budgeting and financial administration. Prerequisite: Graduate standing in the College of Education or consent of instructor.

EOL 547 Education Law credit: 4 Hours.

Examines the range of federal and state constitutional and statutory sources that apply to the constituents (pupils, parents, teachers, administrators, and board members) engaged in public schools. Emphasizes development of legal analytical skills. Prerequisite: Graduate standing in the College of Education or consent of instructor.

EOL 548 Poli & Cultural Context of Ed credit: 4 Hours.

The political and social environment of public education in the United States; analysis of the power structure and its influence on educational policy making at the district level; examination of the evolving roles of state and federal agencies, the courts, private organizations, and interest groups in school governance. Studies the tension between the ideal of a democratically controlled public school system and the growing power of educational experts. Prerequisite: Graduate standing in the College of Education or consent of instructor.

EOL 549 Organizational Theory for Educational Leaders credit: 4 Hours.

Study of theoretical perspectives and empirical research drawn from the social sciences relating to educational organizations and administrative leadership with an emphasis on application of theory to practice. Prerequisite: Student must be admitted to the EOL Superintendent Endorsement program or consent of instructor.

EOL 550 Ed Ldrshp & Prof Development credit: 4 Hours.

Study of major issues on educational leadership and professional development. Examination of research, theories, and practices pertaining to: professional development purposes, content, context, policies, and processes; fostering and sustaining quality professional development; and the roles of teachers, school administrators and policy analysts. Prerequisite: EOL 540 or consent of instructor.

EOL 560 Clinical Experience Admin credit: 0 to 12 Hours.

Direct experience in the study of educational problems of concern to administrators; features an action component whereby the student is provided with opportunities for assuming responsibility for decision making in a live or simulated setting; each student works under the supervision of a professor, and where possible and appropriate, a practicing administrator. Approved for S/U grading only. May be repeated to a maximum of 12 hours; no more than 4 hours earned at the master's level. Prerequisite: Students must be admitted to the EOL General Administrative or Superintendent Endorsement program and must have completed at least four EOL required courses, or consent of instructor.

EOL 561 Ed Politics and Policies credit: 4 Hours.

Examines the legislative and political processes in the formulation of current federal and state educational policies, together with the evaluation of policy and the formulation of policy alternatives. Prerequisite: EOL 548 or consent of instructor.

EOL 562 Law and School District Leader credit: 4 Hours.

Advanced study of public school law, addressing legal and fiscal policy issues related to effective management of public school districts. In-depth analysis of federal and state statutes, with an emphasis on recent court decisions and legal trends; emphasizes development of legal analytical skills. 4 graduate hours. No professional credit. Prerequisite: EOL 547 or consent of instructor.

EOL 563 The School Superintendency credit: 4 Hours.

Course examines the legal and fiscal responsibilities of school superintendents, the relationship of superintendents with school boards and employee groups, the importance of public relations and partnerships with community stakeholders, the process for selecting superintendents, and the effect of the position on individuals. Prerequisite: Students must be admitted to the EOL Superintendent Endorsement program or consent of instructor.

EOL 564 District Change for Equity and Social Justice credit: 4 Hours.

Critical examination of democratic principles of education, especially as it pertains to equity and social justice. Addresses the fundamental question of "Who gets access to the fundamental right of education and how?" Application of theories and concepts to the role of district leaders in implementing socially just educational settings. 4 graduate hours. No professional credit. Prerequisite: EOL 548 or consent of instructor.

EOL 565 Human Resource Management credit: 4 Hours.

Principles, problems, and trends in the administration of professional public school personnel; organization of personnel; the legal framework of the personnel function; selection, evaluation and development of staff; collective bargaining, contract administration and personnel policy; and the personnel administrator's role as a catalyst for school improvement. Prerequisite: EOL 547 or consent of instructor.

EOL 566 School District Financial Management credit: 4 Hours.

Analysis of how public schools are managed, including the theory and managerial practices necessary to oversee the functioning of a school district; study of the integration of managerial issues with attendant conditions of school board functioning, priority and educational goal-setting, taxation, capital outlay, debt management, and contractual implementation. Emphasis placed on principles and practices relating to public school financial management, including budgeting and accounting systems. 4 graduate hours. No professional credit. Prerequisite: EOL 546 or consent of instructor.

EOL 567 Program Planning & Evaluation credit: 4 Hours.

Prerequisite: EOL 540 or equivalent or consent of instructor. Open only to persons who have been admitted to doctoral study in the Department of Educational Organization and Leadership.

EOL 568 Diversity, Leadership & Policy credit: 4 Hours.

This course is intended to provide students with an opportunity to study both historical and contemporary perspectives on leadership and policy in diverse contexts and to prompt reflection on their own practice. As students read, discuss, reflect on, and critique a variety of perspectives and topics such as race, class, power, cultural leadership, policy, change, diversity, and building community, they will consider how the literature informs the development of a personal philosophy of education leadership, takes into consideration moral and ethical issues, the implementation of educational policy, the purposes and nature of the task, and the complexity and diversity of educational contexts.

EOL 570 Organization of Higher Ed credit: 4 Hours.

Examination of American higher education both as a system and as a field of study. Includes consideration of organizational patterns, stakeholders, governance, and the purposes of higher education.

EOL 571 Foundation of Higher Edu credit: 4 Hours.

Examination of the development of American higher education, including the evolution of its forms, purposes, practices, leadership, and constituents.

EOL 572 The College Student credit: 4 Hours.

Study of the characteristics and development of college students, the institutional contexts in which they operate, and the interaction of students with the college environment.

EOL 573 The Community College credit: 4 Hours.

Community and technical colleges; their purposes, function, and objectives; social forces related to their development and evaluation; characteristics and needs of students; educational programs and teaching strategies; and organization, control, and financing. Same as HRD 501.

EOL 574 Diversity in Higher Education credit: 4 Hours.

Explores critical topics and issues related to diversity in higher education, including race/ethnicity, class, and gender. Covers current research that explores diversity in higher education, institutional diversity policies and organizational behaviors, campus constituents, and the role of external groups. The course consists of reading, in-class discussion, group exercise, and completing a research project that is of interest to the student.

EOL 576 Higher Education Finance credit: 4 Hours.

Explores the foundations of higher education finance by analyzing key theories, structures, and challenges of college and university financing. Students will examine readings, present papers and actively participate in class discussions, so as to better comprehend the financial complexities dictating current institutional policies and practices. Prerequisite: EOL 571.

EOL 577 Public Policy in Higher Ed credit: 4 Hours.

Intended primarily for doctoral students in higher education, this course will enable students to analyze contemporary public policy issues confronting American higher education. Selected policy issues will be probed in depth, drawing upon scholarly sources and public reports. Students will comprehend the interaction and tension among higher education leaders, and local, state, and federal policymakers. Prerequisite: EOL 571 or consent of instructor.

EOL 578 Higher Education Law credit: 4 Hours.

Provides graduate students with core knowledge of the law affecting the administration of colleges and universities. Students become versed in legal issues to enhance administrative effectiveness and to address legal issues that confront the administrator in the operation of an institution of higher education. Importantly, the course does not aspire to invest the student with legal knowledge sufficient to operate without advice of professional legal counsel. Prerequisite: EOL 571.

EOL 579 Access to Higher Education credit: 4 Hours.

Same as EPS 579. See EPS 579.

EOL 580 Critical Issues in Higher Ed credit: 4 Hours.

The examination of critical trends that impact higher education from various perspectives, including legal, organizational, and political. May be repeated to a maximum of 8 hours.

EOL 582 College Student Development credit: 4 Hours.

Provides students with an understanding of theories and research involving the cognitive, intrapersonal and interpersonal development of college students. Special attention is paid to the application of student development research in educational settings and the intentional creation of educational environments along developmental principles. Prerequisite: EOL 572 or consent of instructor.

EOL 583 Student Affairs Admin credit: 4 Hours.

Theory, research, and practice of student affairs administration, including philosophical foundations, management, professional development and organizational issues.

EOL 584 Administration in Higher Ed credit: 4 Hours.

Designed for students to gain a greater understanding of administrative leadership in higher education. Provides current and future administrators an opportunity to explore foundational theories of academic organization and leadership; investigate contemporary leadership issues within various contexts; and develop analytical skills which connect theoretical frameworks to leadership practice and research.

EOL 585 College Teaching credit: 4 Hours.

Scholarly approach to curriculum and pedagogy at the college level: instructional methods, active and cooperative learning, technology-enhanced teaching, evaluation and assessment, faculty roles and responsibilities. 4 graduate hours. No professional credit.

EOL 586 Changing College Curriculum credit: 4 Hours.

Examines the historical roots, contemporary controversies, current trends, and possible futures of the curriculum in American postsecondary education. It is a graduate seminar built on small group discussions and conversations about important literature on the changing college curriculum. Increases student understanding of historical and contemporary curricular issues in higher education with the additional goal of fostering the consideration of the possibilities of challenges to enacting curricular change. Prerequisite: EOL 571 or consent of instructor.

EOL 587 Quality Process Improvement credit: 4 Hours.

Same as HRD 531. See HRD 531.

EOL 588 Capstone Experience I & II credit: 2 Hours.

Part I is the design of a research study (capstone project) that integrates literature covered in the degree program leading to a research question to be explored empirically. It includes literature review, problem statement, research design, methodology, identifying participants, IRB review and a final proposal paper. Students are expected to collect data for their study (project) between Parts I and II. Part II topics include data analysis, interpretation, discussion, implications, dissemination of findings, and future research. Leads to a final research (capstone) paper that synthesizes work from Part I and adds to it through data analysis, discussion of findings, implications, and ways to disseminate findings to relevant audiences. Approved for both letter and S/U grading. May be repeated in separate terms to a maximum of 4 hours.

EOL 589 Internship in Higher Ed credit: 2 or 4 Hours.

Supervised direct experience in the administration of higher education. With the aid of the faculty, students select the internship relevant to their career goals. 2 or 4 graduate hours. No professional credit. Approved for S/U grading only. May be repeated to a maximum of 8 hours; no more than 8 hours may be earned toward an advanced degree. Prerequisite: Consent of instructor.

EOL 590 Advanced Seminar credit: 0 to 8 Hours.

Open only to persons who have been admitted for doctoral study in the Department of Educational Organization and Leadership. Prerequisite: Consent of instructor.

EOL 598 Thesis Seminar credit: 4 to 8 Hours.

Assists doctoral candidates in planning field studies and thesis problems; students are expected to present their studies at each of four stages: (1) the inception, delimitation, tentative design stage; (2) the proposed design stage; (3) the revised design stage; and (4) the final design stage. Students are expected to analyze all presentations critically. Approved for S/U grading only. Prerequisite: Consent of instructor.

Education (EDUC)

EDUC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EDUC>)

Courses

EDUC 101 Education Orientation Seminar credit: 1 Hour.

Informational orientation seminar for Education majors to enhance their understanding of college life and the field of education as a profession.

EDUC 102 Freshman Honors Seminar credit: 1 Hour.

Provides an introduction to critical issues in education with focus on selected contemporary issues in the field; emphasis is on critical analysis and reflection on relationships between teachers, schools, and society.

EDUC 201 Identity and Difference in Edu credit: 3 Hours.

Focuses on the role of identity in schooling and the way in which identity is socially constructed. Examine how power and privilege impact equity and opportunities based on socially constructed identities such as race, social class, gender, sexual identity, language, (dis)ability, and nationalism. Explore asset-based frameworks that are identity affirming and counter deficit-based perspectives. This course is designed for students interested in reflecting on their own experiences as learners by critically examining their socially constructed identities and "ways of knowing" and the societal implications of these experiences. It is also for those considering careers in teaching, and anyone interested in reflecting on how issues of inclusion, exclusion, power, and privilege play out in education. (Graduate candidates may take this course or approved graduate-level College of Education Educational Policy Studies Foundations Requirement course; undergraduates may take this or program-approved equivalent coursework).

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

EDUC 202 Social Justice Sch & Society credit: 3 Hours.

Examines the nature of justice and the dynamics of a pluralistic society to derive a conception of social justice. Working with this conception, it asks how schools function to perpetuate and/or remediate social injustice. The course will consider the history and nature of schooling, issues of access and tracking, and notions of the public and the common. The course is designed for students interested in reflecting on their own educational histories, for those considering careers in teaching, and for all future parents and citizens needing to be able to reflect critically on justice, school, and society. (Graduate candidates may take this course or approved graduate-level College of Education Educational Policy Studies Foundation Requirement course; undergraduates may take this or program-approved equivalent coursework).

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

EDUC 499 Education Abroad credit: 0 to 4 Hours.

This course will serve as a foundation for your education abroad experience. The class will center on the experience of travel as it relates to education - your own education, the education systems and policies you encounter, as well as your prospective role as a future educator. This course will introduce comparative education inquiry and provide space to consider the cultural, political, and ethical implications of engaging in education travel and research in cross-cultural, global contexts. 0 to 3 undergraduate hours. 0 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated if topics vary.

Educational Policy Studies (EPS)

EPS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EPS>)

Courses

EPS 201 Foundations of Education credit: 3 Hours.

Studies some of the problems of formulating and justifying aims and policies in American education, of designing and systematizing the curriculum, of organization and social context of the public school system, and of the teaching-learning process; examined in terms of perspectives provided by social philosophy, history, sociology, and philosophy of education.

EPS 202 Foundations of Education-ACP credit: 4 Hours.

Course is identical to EPS 201 except for the additional writing component. Credit is not given for both EPS 202 and EPS 201. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

EPS 310 Race and Cultural Diversity credit: 4 Hours.

Study of race and cultural diversity from Colonial era to present; the evolution of racial ideology in an ethnically heterogeneous society; the impact of race on the structures and operations of fundamental social institutions; the role of race in contemporary politics and popular culture. Same as AAS 310, AFRO 310, and LLS 310. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - US Minority

EPS 325 Social Media and Global Change credit: 3 Hours.

Social media is a new frontier of politics, religion, commerce, courtship, and education. It has altered an array of social relations from statecraft to sex. The course draws on case studies from across the globe to explore the wide-ranging transformation taking place, from how people organize mass uprisings, to ways the manage the most intimate details of their lives. Examples will be taken from the Middle East, East Asia, Africa, Latin America, the US and Europe. Same as AFST 325, ASST 325, EURO 325, INFO 325, LAST 325, REES 325, and SAME 325.

EPS 380 Education and Social Justice credit: 3 Hours.

This class will introduce students to key definitions, theories, and practices of justice in education. Using a combination of philosophical and political theory-based analyses of the features of justice: fairness, equity, representation, responsibility, and difference, among others, readings invite students to consider how education and schooling can help to nurture democratic ties and equity.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

EPS 390 Undergraduate Advanced Seminar credit: 0 to 9 Hours.

Advanced undergraduate seminar that builds upon introductory work in EPS 410 and includes historical, philosophical, legal, and social science perspectives on education. Requests for activation of this course may come from students or faculty. Approved for letter and S/U grading. May be repeated.

EPS 391 Thesis credit: 2 Hours.

Prerequisite: Senior standing.

EPS 395 Independent Study credit: 2 Hours.

Designed for students who wish to do advanced readings and research in greater depth and to investigate further ideas and themes that have been explored in EPS 199 and EPS 201. Prerequisite: EPS 201; and consent of adviser and staff member who supervises the work.

EPS 399 Education and Social Justice credit: 3 Hours.

This class will introduce student to key definitions, theories, and practices of justice in education. Using a combination of philosophical and political theory-based analyses of the features of justice: fairness, equity, representation, responsibility, and difference, among others, readings invite students to consider how education and schooling can help to nurture democratic ties and equity.

EPS 400 History of American Education credit: 2 to 4 Hours.

Development of American education in relation to political, social, and cultural developments; attention to the influence of movements in the cultural environment upon evolving conceptions of educational theory and practice. 3 undergraduate hours. 2 or 4 graduate hours.

EPS 401 History of Educational Ideas credit: 2 to 4 Hours.

Studies selected educational theorists and intellectual movements; provides familiarity with the major educational ideas of the past and historical perspectives on current issues and problems in education; and critical readings of such authors as Aristotle, Plato, Quintilian, St. Augustine, Loyola, Comenius, Rousseau, Pestalozzi, Froebel, Herbart, and Dewey. 3 undergraduate hours. 2 or 4 graduate hours.

EPS 402 Asian American Education credit: 4 Hours.

Examination and analysis of Asian American education from the late 1800's to the present. Same as AAS 402. 4 undergraduate hours. 4 graduate hours.

This course satisfies the General Education Criteria for:

Advanced Composition
Cultural Studies - US Minority

EPS 403 European Education to 1600 credit: 2 to 4 Hours.

Cultural history of western European educational practice with special focus on Classical Greece, the Hellenistic world, Rome, early Christianity, the middle ages, the twelfth century renaissance, scholasticism and the fourteenth century renaissance. Same as HIST 444 and MDVL 403. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

EPS 404 European Education since 1600 credit: 2 to 4 Hours.

Cultural history of western European educational practice with special focus on the fifteenth century renaissance, the Reformation and Counter-reformation, Enlightenment, and 19th century national schooling systems in Germany, France, and England. Same as HIST 457. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

EPS 405 Historical & Social Barriers credit: 3 or 4 Hours.

Examines the relationship between ability, race, class, and gender to citizenship and schooling. Particular emphasis is placed on how the construction of "citizenship" has been used as a tool to further deny equal participation in the public sphere such as schools. To that end, an application of historical understanding of social barriers to educational access is analyzed from the Colonial period to the present. 3 undergraduate hours. 4 graduate hours. May be repeated for 4 graduate hours.

EPS 410 Professional Ethics in Education credit: 3 or 4 Hours.

Philosophical examination of selected educational issues; conveys a grasp of the complexities of the issues and some philosophical methods for dealing with them. 3 undergraduate hours. 4 graduate hours.

EPS 411 School and Society credit: 2 to 4 Hours.

Analyzes normative and conceptual aspects of the interrelationship of school and society, and of reciprocal influences between schools and major social trends and forces. 2 to 4 undergraduate hours. 2 to 4 graduate hours. 3 credit hour section is approved for B.S. in Learning and Education Studies.

EPS 412 Critical Thinking for Teachers credit: 2 to 4 Hours.

Examination of critical thinking dispositions and abilities as an approach to the foundations of knowledge and structure of thinking in subject-matter areas. 2 to 4 undergraduate hours. 2 to 4 graduate hours.

EPS 413 Aesthetic Education credit: 3 or 4 Hours.

Theoretical introduction to the problems involved in teaching critical appreciation of the arts; examines materials from aesthetics, art history, and criticism for their relevance to the problems of aims, curriculum, organization, and teaching-learning. 3 undergraduate hours. 4 graduate hours.

EPS 415 Technology & Educational Reform credit: 3 or 4 Hours.

Examines the normative and policy issues raised by the use of new information and communication technologies in education. The course is interdisciplinary, drawing from social and historical as well as philosophical perspectives on these issues. 3 undergraduate hours. 4 graduate hours.

EPS 420 Sociology of Education credit: 2 to 4 Hours.

Education as a social process in various cultures and historical periods, emphasizing current systems in Westernized countries. Same as SOC 420. 3 undergraduate hours. 2 or 4 graduate hours. Differential credit will be based on additional assignments and requirements as specified by instructor. Prerequisite: SOC 100; or six hours of anthropology, social geography, political science, or sociology.

EPS 421 Racial and Ethnic Families credit: 2 to 4 Hours.

Graduate-level sociological examination of how gender, race, ethnicity, cultural diversity and class function in the development of diverse American families, which are important foundations of education. Primary attention will be given to African American and Hispanic families. Secondary attention will be given to Asian American, Native American and other racial and ethnic family groups. Same as AFRO 421, HDFS 424, and SOC 421. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: SOC 100, a 200-level SOC course, or consent of instructor.

EPS 422 Race, Educational Policy, and Sociology credit: 3 or 4 Hours.

Same as SOC 426. See SOC 426.

EPS 423 Politics of Education credit: 3 or 4 Hours.

Overview of the political structure and processes through which many of the major issues in education are treated; analyzes nature of the policymaking process in education and discusses the roles of principal participants in the process of educational decision making, but focuses on fundamental recurring issues in education and the ways these issues have been resolved or not resolved by the overall system. Particular attention to the role that both the federal and state judiciary as well as legislative authority have had in shaping educational policy. 3 undergraduate hours. 4 graduate hours.

EPS 424 Economics of Education credit: 2 to 4 Hours.

Introduction to economic concepts and their application to education, including investment and consumption theories of education and the role of human capital in economic growth and development; cost-benefit analyses in education, education and the distribution of income, and manpower and educational planning. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Consent of instructor.

EPS 425 Anthropology of Education credit: 2 or 4 Hours.

This seminar considers how sociocultural anthropology has approached the study of education. Readings include ethnographies of schooling as well as works which consider how schooling is implicated in modernist projects of social improvement, the politics of cultural pluralism in nation states, and the spread of neoliberalism. Same as ANTH 425 and EPSY 466. 2 or 4 undergraduate hours. 2 or 4 graduate hours.

EPS 426 Comparative Education credit: 2 to 4 Hours.

Introduction to the cross-cultural, cross-national study of educational institutions and their relationship to society. Topics may vary. 3 undergraduate hours. 2 or 4 graduate hours.

EPS 427 Philosophy of Middle School credit: 2 Hours.

This course is intended as an introduction to the philosophical, social, and cultural foundations of middle level education. 2 undergraduate hours. 2 graduate hours.

EPS 431 New Learning credit: 3 or 4 Hours.

Education is in a state of flux - transitioning from traditional architectures and practices to new ecologies of teaching and learning influenced by the tremendous social and technological change of our times. What changes are afoot today in workplaces, civic life and everyday community life? What are their implications for education? What are the possible impacts of contemporary social transformations on teaching and learning - including in the areas of technology, media, globalization, diversity, changing forms of work in the "knowledge society", and, in these contexts, changing learner needs and sensibilities? This course explores three pedagogical paradigms: "didactic", "authentic" and "transformative" learning. It takes a historical perspective in order to define the contemporary dimensions of what we term "new learning". It prepares participants to make purposeful choices and link particular theories/instructional approaches to individual and group learning goals. 3 undergraduate hours. 4 graduate hours. Prerequisite: For graduate credit only, acceptance into the Master of Education with an emphasis on New Learning and New Literacies program is required.

EPS 481 History of Amer Indian Educ credit: 3 or 4 Hours.

Same as AIS 481. See AIS 481.

EPS 500 Topics in Educational Policy credit: 2 to 4 Hours.

Seminar on topics not treated by regularly scheduled courses; requests for initiation may be made by students or faculty members. May be repeated to a maximum of 8 hours.

EPS 501 History of U.S. Ed Thought credit: 4 Hours.

Studies the evolution of educational theories and philosophies since the eighteenth century; particular reference to their impact upon educational developments in the United States; a broad view of the general growth of American educational thought; and attention to selected major educational theorists, or schools of thought, exploration of their fundamental ideas, and the relation of these ideas to significant intellectual currents in American culture. Prerequisite: Consent of instructor.

EPS 502 Education in the 20th Century credit: 4 Hours.

Historical study of significant educational trends during the past sixty years, with special reference to their influence on American education; an analytical examination of the principal transition movements in the last decade of the nineteenth century and of efforts to solve the problems since 1900.

EPS 503 Seminar in the History of Ed credit: 4 Hours.

Intensive group study of a small number of selected problems to assist individual students to develop an understanding of and the ability to use the techniques of historical research in furthering such study; problems studied are selected in the light of the interests and previous training of the group of students enrolled. Prerequisite: Two courses in the history of education or consent of instructor.

EPS 506 Ubiquitous Learning credit: 4 Hours.

This course explores the dynamics of learning using mobile computing devices, broadly defined to range from mobile phones, tablets and laptops to interesting new possibilities raised by emerging technologies such as wearable devices and a potentially pervasive "internet of things". Our journey will take us through museums, galleries and parks - real and virtual. We will visit new media and gaming spaces in which either incidental or explicit learning is taking place. We will look at sites of informal as well as formal learning - extraordinary classrooms offering blended learning opportunities, as well as new forms and modes of out-of-school and self-directed learning. 4 graduate hours. No professional credit.

EPS 508 Uses/Abuses of Educ Research credit: 4 Hours.

This course aims at comprehensive research literacy by considering educational research in historical, philosophical, policy and political context. Through close reading and quantitative, qualitative, and humanistic studies, the discussion of interdisciplinary perspectives on the research process, students learn to engage intelligently with multiple modes of research and deal critically with policies claiming an evidentiary warrant. Specific topics include: the relationship between research, policy, and practice; the nature of theory and method, argument and evidence in the humanities and social sciences; the tensions between advocacy and research.

EPS 510 Traditions in Philosophy of Ed credit: 4 Hours.

Analyzes major trends and primary sources in philosophy of education, drawing mainly from the 20th century. Movements covered will include pragmatism, concept analysis, phenomenology, feminism, and Marxism/Critical theory. This course is required of all Philosophy of Education graduate students. Prerequisite: An appropriate 300- and 400-level coursework in philosophy, philosophy of education, or consent of the instructor.

EPS 511 Contemporary Philosophy of Ed credit: 4 Hours.

Analyzes exemplary current work in the field, covering a range of contrasting philosophical issues and approaches. The course goal is to provide familiarity with notable contemporary authors from a variety of perspectives. Prerequisite: Coursework in philosophy or philosophy of education, or consent of instructor.

EPS 512 Advanced Topics in Philosophy of Education credit: 4 Hours.

Reading and group discussion of a limited number of the most important writings in educational philosophy which have had a profound influence on the progress of educational thought and practice. 4 graduate hours. No professional credit. Prerequisite: EPS 401 or equivalent; consent of instructor.

EPS 515 Philosophy and Ed Research credit: 4 Hours.

Examines some crucial assumptions and concepts of contemporary research in education from the point of view both of the consumer and the practitioner of educational research. Topics include paradigm conflicts, causal attributions in social science, assessment, ethical problems in the conduct of research, and the assumptions of quantitative research. Prerequisite: Coursework in philosophy or philosophy of education, or consent of instructor.

EPS 516 Social Theories and Education credit: 4 Hours.

Examines philosophical issues in social and political theory as they pertain to educational problems. The course includes topics such as autonomy, democratic education, educational reform, and social change. Prerequisite: Coursework in philosophy or philosophy of education, or consent of instructor.

EPS 517 Case Studies Professional Ethics & Education credit: 4 Hours.

Examines issues in moral philosophy as they pertain to education. Topics include current theories of moral education, ethical problems in teaching, or topics of moral dispute in educational policy. 4 graduate hours. No professional credit. Prerequisite: Coursework in philosophy or philosophy of education, or consent of instructor.

EPS 518 Philosophical Issues in Technology and Education credit: 4 Hours.

Examines philosophical issues in the construction, justification and transmission of knowledge, as they pertain to educational processes. 4 graduate hours. No professional credit. Prerequisite: Coursework in philosophy or philosophy of education, or consent of instructor.

EPS 520 Foundations of Aesthetic Ed credit: 4 Hours.

Philosophical approach to the problems of teaching for appreciation in formal education; appraisal of the status of aesthetic education, its nature and function, and its relation to other types of education. Prerequisite: EPS 413 or equivalent.

EPS 522 Ethical Dimensions in Educational Leadership credit: 4 Hours.

Designed to prepare students to analyze ethical issues involved in educational policy making, policy administration, and policy evaluation; includes topics such as educational equity, privacy, due process, and compliance; draws upon multiple disciplines to analyze issues developed out of practice. 4 graduate hours. No professional credit. Prerequisite: Open to students who have fulfilled their social foundations requirements and other students with consent of instructor.

EPS 525 Pedagogy and Equity credit: 4 Hours.

This course examines the link between equity and pedagogies, analyzing intersectional pedagogies, such as feminist, critical, multicultural, race, and queer approaches, and their implications for practices of learning, teaching, community, understanding, and other key concepts. In addition to engagement with theories aimed at education equity, this course involves practical examination of pedagogical techniques and strategies. Students will develop pedagogical projects using the insights from theory and collaborate in critiques of those projects. 4 graduate hours. No professional credit. Prerequisite: For majors only.

EPS 529 Education and Human Rights credit: 4 Hours.

Introduces students to varieties of definitions of citizenship - ranging from nation-specific practices and obligations to human rights-based global citizenship - and their relationship to globalized education and public problem solving. Readings include canonical texts on political organization and responsibilities as well as contemporary theories discussing transnational, global, and cosmopolitan citizenship. Also covers the challenges and promises of diversity, statelessness and non-citizenship participation, particularly in educational concerns but also more broadly. 4 graduate hours. No professional credit.

EPS 530 Education and Globalization credit: 4 Hours.

Analyses of the role and functions of education in social, political, and economic development, with particular reference to the new and the developing countries. Prerequisite: Consent of instructor.

EPS 531 Critical Race Theory & Educ credit: 4 Hours.

Focuses on critical race theory as a critique of racism and the law in U.S. society and discusses its current applications to education policy and research in K-12 schooling and higher education. Also looks at how critical race theory can be used as a methodological lens for policy analysis and educational research.

EPS 532 Knowledge, Learning & Pedagogy credit: 4 Hours.

Investigates a variety of pedagogical paradigms, including didactic, authentic and transformative pedagogies. Develops the concept of a pedagogical repertoire, as a way of interpreting the ways in which learners engage in a variety of "knowledge processes" or task types. The course introduces major philosophies or theories of knowledge. As a counterpoint, it also reflects on the practicalities of learning knowledge-making in informal as well as consciously designed learning environments. Prerequisite: Acceptance into the Master of Education with an emphasis on New Learning and New Literacies program.

EPS 533 Global Youth & Citizenship credit: 4 Hours.

Discusses youth and citizenship in a global context. Covers the social construction of children and youth, the sociology of global generations, education and social media, and new youth movements in the digital age. Draws on a diversity of case studies from North America, the Middle East and North Africa, sub-Saharan Africa, Europe and Latin America.

EPS 534 Ed. & Power in Middle East credit: 4 Hours.

Survey of education in Middle East and North Africa from the nineteenth century to the present. Course deals with education in relation to colonialism, nationalism, economic development, imperialism, war and geopolitics, youth politics, Islam, and Arab uprisings. Takes a multidisciplinary perspective that draws on social history, anthropology, sociology, political economy, gender studies and international development.

EPS 535 Assessment for Learning credit: 4 Hours.

For several decades now, assessment has become an increasingly pressing education priority. Teacher and school accountability systems have come to be based on analysis of large-scale, standardized summative assessments. As a consequence, assessment now dominates most conversations about reform, particularly as a measure of teacher and school accountability for learner performance. Behind the often heated and at times ideologically gridlocked debates is a genuine challenge to address gaps in achievement between different demographically identifiable groups of students. There is an urgent need to lift whole communities and cohorts of students out of cycles of underachievement. For better or for worse, testing and public reporting of achievement is seen to be one of the few tools capable of clearly informing public policy makers and communities alike about how their resources are being used to expand the life opportunities for their children. This course is an overview of current debates about testing, and analyzes the strengths and weaknesses of a variety of approaches to assessment. 5 graduate hours. No professional credit.

EPS 536 Race, Gender & Sexuality Issue credit: 4 Hours.

Examines contemporary theories of race, gender, class, and sexuality, as well as analyzing how their dynamics play out in U.S. public schooling and history. In an attempt to discuss a range of disciplinary and theoretical approaches to diversity, we will shift among historical, sociological, political, theoretical and pedagogical issues. Traces the place of diversity in forming notions of citizenship, community, identity, and political affiliation/alliance. While two extended examples will focus on the interplay of race, class, and gender in the school-based issues of drop out rates and gendered interactions in the classroom and playground, we will also consider contemporary theories of diversity in local and global contexts. Prerequisite: Acceptance into the Master of Education with an emphasis on Diversity and Equity in Education Program or instructor approval.

EPS 537 Globalizing Educational Policy credit: 4 Hours.

Dynamics associated with globalization are now fully articulated to modern schooling and the social and cultural environments in which both school youth and educators operate. This course will reconsider the boundaries of educational policy and practice beyond the mainstream emphasis on subject matter specialization, as educators more fully engage with the complex range of experiences, images, and practices that now compel modern school youth and affect their articulation of needs, interests and desires. Prerequisite: For majors only.

EPS 538 Globalization of Higher Ed credit: 4 Hours.

This course will focus on the rapid changes happening in the Higher Education around the world. Using case studies, we will examine a variety of issues that have come about as the Higher Education system responds to rapid changes in the global economy. These include issues of access and equity; accountability; finance; privatization and for-profit institutions; curricular responses to the changing realities of knowledge and knowledge production; and issues of internationalization within these changing contexts. We will also look at future trends in higher education within the US and internationally.

EPS 539 Youth, Culture and Society credit: 4 Hours.

Same as AAS 539 and HDFS 539. See HDFS 539.

EPS 540 Intersectional Pedagogies credit: 4 Hours.

Same as GWS 540. See GWS 540.

EPS 545 Sexualities and Education credit: 4 Hours.

Examines policy, curricula, and research on sexuality in education, including the resurgence of virginity and chastity, HIV/AIDS education, education for pregnant teens, sexual orientation and gender identity-related non-discrimination policies and speech codes in public schools, queer youth, and the relationship among sexuality, race, class, disability, and gender. Considers the term "education" broadly, examining school policies, public health education, and the educational projects of political and social movements. Readings concentrate on a U.S. context, though AIDS and sex education information from international sources will also be included. Same as GWS 545.

EPS 550 Global Issues in Learning credit: 4 Hours.

Investigates how culture has been taken up in theories that try to explain differences in educational outcomes between nations, within classrooms, and across schools. Through readings drawn from cultural psychology, but also including sociology, anthropology, and education, students will examine how globalization has shaped the discourse about the relationships between culture, learning, and academic achievement. Same as EPSY 550. 4 graduate hours. No professional credit. Prerequisite: For majors only.

EPS 554 New Media and Literacies credit: 4 Hours.

This course is designed to address issues of language and literacy, not only for language arts teachers, but all educators in all disciplines and at all levels, where students are required to represent their knowledge in writing as well as other media. It will introduce the 'Multiliteracies' theory of literacy learning which recognizes that the contemporary communications environment is increasingly multimodal. Written language today is more closely connected with oral, visual, gestural, tactile and spatial modes. To remain relevant, effective pedagogy needs to connect with the new communications media, and to explore their underlying processes. The course will focus on current trends in literacy instruction, not only in language arts or composition classes, but academic literacies across all curriculum areas. The course will also investigate the implications of new media of language and literacy and explore the implications of developments in the contemporary media, particularly the new, digital media. 4 graduate hours. No professional credit.

EPS 570 Postcolonial Theory & Methodology credit: 4 Hours.

Since the 1990s, scholarship focusing on center-periphery relations has grown considerably. This scholarship is often identified with postcolonial theories of education and society. The purpose of this course is to acquaint students with this body of literature that addresses the way in which post-independent states are currently engaged in massive institutional transformations in light of globalization. Ultimately, we will explore the theoretical and methodological traditions foregrounded in postcolonial research and their implications for educational policy. 4 graduate hours. No professional credit.

EPS 575 Cultural Studies and Critical Interpretation credit: 4 Hours.

Explores the history, applications and limitations of various theoretical and methodological approaches to the study of contemporary culture and popular media. Examines debates and issues within cultural studies and with other schools of thought. The impact of cultural studies across the disciplines. Same as MDIA 575. 4 graduate hours. No professional credit. Prerequisite: Consent of instructor.

EPS 576 Intro to Diversity & Equity credit: 4 Hours.

Same as SPED 513. See SPED 513.

EPS 579 Access to Higher Education credit: 4 Hours.

Explores current practices, conditions, and policies shaping access to college at the undergraduate level. The course is based in a sociological approach to understanding conditions of access to higher education. Provides an opportunity to examine and discuss current research on class, race, gender, institutional policy, and individual factors that are known to impact participation in higher education. Particular attention is given to stratification in higher education including but not limited to: the historical and legal context of access; points of access; pathways to higher education; and the effects of various policies and programs. Same as EOL 579. Prerequisite: EOL 570 and EOL 571, or equivalent; or consent of instructor.

EPS 580 Researching Global Education credit: 4 Hours.

The course will introduce education research methodology and consider the cultural, political and ethical implications of engaging in education research in cross-cultural, global contexts. Students will learn to select an appropriate topic for research, effectively navigate and use an academic research library, conduct a literature review, and craft a literature review portion of a larger research project. 4 graduate hours. No professional credit.

EPS 590 Advanced Graduate Seminar credit: 4 Hours.

Seminar in educational policy studies; sections offered in the following fields: (a) history of education; (b) philosophy of education; (c) comparative education; (d) social foundations of education; (e) philosophy of educational research; and (f) historical methods in education. May be repeated. Prerequisite: Consent of instructor.

Educational Practice (EDPR)

EDPR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EDPR>)

Courses

EDPR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for S/U grading only. May be repeated.

EDPR 250 School & Community Experiences credit: 0 to 4 Hours.

Early field experiences in teacher education, including observation and laboratory experiences in public schools: designed to provide opportunities for career exploration, professional orientation, the development of insight into the interrelationship of theory and practice, and the place of the student in the educational process. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

EDPR 420 Ed Prac Students with Sp Needs credit: 2 to 12 Hours.

Course in practice teaching which provides teaching experience with exceptional children. 2 to 12 undergraduate hours. 2 to 12 graduate hours. Approved for S/U grading only. May be repeated for 18 hours, 12 of which may be taken in the same term. Prerequisite: Satisfactory completion of all requirements of the Council on Teacher Education Undergraduate or Graduate Common Assessment Plan for Initial Certification (<http://www.cote.uiuc.edu>).

EDPR 432 Ed Prac in EC & ELED credit: 2 to 12 Hours.

Course in practice teaching to meet licensure requirements for teaching in the elementary school. 2 to 12 undergraduate hours. 2 to 12 graduate hours. Approved for S/U grading only. Prerequisite: CI 420 or CI 406 as required by the student's curriculum; Satisfactory completion of all requirements of the Council on Teacher Education Undergraduate or Graduate Common Assessment Plan for Initial Certification (<http://cote.illinois.edu/>).

EDPR 438 Educational Practice in Special Fields credit: 2 to 12 Hours.

Course in student teaching to meet requirements for licensure in special fields. 2 to 12 undergraduate hours. 2 to 12 graduate hours. Approved for S/U grading only. Prerequisite: All professional education coursework, except those requiring concurrent enrollment with student teaching, must be completed prior to student teaching. Satisfactory completion of all requirements of the Council on Teacher Education Undergraduate or Graduate Common Assessment Plan for Initial Licensure (www.cote.illinois.edu).

EDPR 442 Educational Practice in Secondary Education credit: 2 to 12 Hours.

Course in practice teaching to meet licensure requirements for teaching in the secondary schools. 2 to 12 undergraduate hours. 2 to 12 graduate hours. Approved for S/U grading only. Prerequisite: All professional education coursework, except those requiring concurrent enrollment with student teaching, must be completed prior to student teaching. Satisfactory completion of all requirements of the Council on Teacher Education Undergraduate or Graduate Common Assessment Plan for Initial Licensure (www.cote.illinois.edu).

EDPR 550 School and Community Experience credit: 0 to 4 Hours.

Early field experiences in teacher education, including observation and laboratory experiences in schools: Designed to provide opportunities for career exploration, professional orientation, the development of insight into the relationships of theory and practice, and the place of the student in the educational process. 0 to 4 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. Prerequisite: Must be admitted to an educator preparation program.

Educational Psychology (EPSY)

EPSY Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EPSY>)

Courses

EPSY 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

EPSY 200 Honors Symposium in Education credit: 1 Hour.

Course affords students an opportunity to consider important topics impacting current educational practices. Students select six scholarly presentations from an approved list. The presentations are delivered by outstanding visiting and resident scholars in education and related disciplines. Three times during the term, students gather to consider the issues raised by the presentations. Course expectations include: attending six presentations, attending the three course discussion meetings, reading the course text and selected publications, and developing written reflections based on presentations attended. May be repeated to a maximum of 8 hours.

EPSY 201 Educational Psychology credit: 3 Hours.

Explores fundamental issues of development, learning, instruction, and assessment. This course articulates how people learn, how they are influenced by cultural and social contexts, how to assess learning and its outcomes, and how best to teach and motivate people to achieve. Educational psychologists improve learning in a broad range of settings: homes, classrooms, work environments, and communities. Prerequisite: PSYC 100.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

EPSY 202 Exploring Cultural Diversity credit: 3 Hours.

Introduction to cultural diversity and social justice issues through interdisciplinary readings, discussion, and experiential activities. The course involves a 1-hour lecture and 2-hour lab/discussion section each week. The lecture focus is on raising awareness of key issues, concerns and concepts, providing accurate information on diverse groups, and relating theories and models to critical incidents of social oppression in everyday life. The lab/discussion sections follow a group dialogue and experiential activity format, and focus on relating the readings and lecture material to personal experiences and active learning activities.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

EPSY 203 Social Issues Group Dialogues credit: 1 Hour.

Provides students with opportunities to converse on specific diversity and social justice topic areas offered as separate sections under the course heading. Each section uses a structured dialogue format to explore intergroup and intragroup differences and similarities within historical and contemporary contexts. Specific focus will be on participants sharing their experiences and perspectives related to the specific dialogue topic. The dialogue format uses active learning exercises in addition to weekly readings, journal assignments, and topic based dialogues. May be repeated in the same term to a maximum of 2 hours. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of the instructor.

EPSY 204 Learning in a Digital World credit: 3 Hours.

Addresses the fundamental use of information and information technology in knowledge creation and learning, with a specific focus on the use of computers, new media, and related digital technologies within formal and informal learning environments. The paramount goal is the reconceptualization of learning practices and environments and how these will impact students, teachers, schools, and society at large. Major areas of interest covered include new learning theories, educational informatics, ubiquitous learning, collective intelligence and social networking, creativity, and universal design for knowledge creation. Applicable to any student interested in the principles of learning, knowledge, and education. Students will need access to a laptop computer.

EPSY 220 Career Theory and Practice credit: 3 Hours.

Various behavioral science theories will be covered (e.g., person-environment interaction, decision-making, group dynamics, stereotype threat, personality traits). Discussions of research findings to applied career practices will also be included. Students will develop a working-knowledge of these theories through interactive lectures, guided class discussions, case-based readings, and group activities that require them to think critically and flexibly about theory in order to generate solutions for real-world problems. Additional fees may apply. See Class Schedule. On request, students will be required to participate in a total of 6 hours of experiments outside of class.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

EPSY 222 Language & Culture of Deaf Communities credit: 3 Hours.

Same as SHS 222. See SHS 222.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

EPSY 236 Child Dev in Education credit: 3 Hours.

Study of child growth and development designed particularly for those preparing to teach in the elementary school; special emphasis on the significance of the developmental process for educational programs and procedures; and systematic experience in studying and evaluating children's behavior and in supporting their learning and development. Includes limited voluntary participation as a subject in experiments. Credit is not given for both EPSY 236 and PSYC 216. Prerequisite: PSYC 100.

EPSY 280 Elements of Statistics credit: 4 Hours.

Course content includes descriptive statistics, correlation, regression, the normal curve, statistical inference, and the presentation of statistics. The course does not require calculus, and makes use of examples drawn from education, medicine, social science, business, and the popular media. Designed for professional training of students whose major interests are not in math or science. Credit is not given for both EPSY 280 and any of ACE 261, CPSC 440, ECON 202, ECON 203, EPSY 480, PSYC 235, SOC 280, STAT 100. Prerequisite: MATH 112.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

EPSY 330 Development and Relationships credit: 3 Hours.

Same as PSYC 326. See PSYC 326.

EPSY 395 Independent Study credit: 1 to 4 Hours.

Study of problems not considered in other courses; designed for students who excel in self-direction and intellectual curiosity. May be repeated. Prerequisite: Minimum GPA of 3.5; demonstrated writing and research potential as evaluated by advisor, and consent of advisor and consent of staff member who supervises the work.

EPSY 398 Thesis credit: 2 or 3 Hours.

Prerequisite: Senior standing.

EPSY 399 Thesis credit: 2 Hours.

Prerequisite: Senior standing.

EPSY 400 Psyc of Learning in Education credit: 2 to 4 Hours.

Study of the psychology of human learning as it applies to instruction, educational issues, and educational problems. 3 undergraduate hours. 2 or 4 graduate hours. Taking 4 credit hours requires consent of the instructor and the completion of a substantive scholarly project. Undergraduate and graduate work load will be commensurate with the requirements. 2 hours for Latin and Spanish Certification, Elementary Edm Music and GSLIS. Prerequisite: EPSY 201 or equivalent.

EPSY 401 Child Language and Education credit: 2 to 4 Hours.

Provides an overview of current knowledge about children's acquisition of linguistic and communicative competence together with a consideration of the educational import of this developmental process. 3 undergraduate hours. 2 or 4 graduate hours. Taking 4 hours of credit requires consent of the instructor and completion of a substantive scholarly project. Undergraduate and graduate work load will be commensurate with the requirements. 3 hours of ECE Undergraduate certification and 2 hours for ECE graduate certification, Elementary Ed, Music certification and GSLIS. Prerequisite: EPSY 201 or EPSY 236; or equivalent.

EPSY 402 Sociocultural Infl on Learning credit: 2 to 4 Hours.

Provides a general overview of the relationship of language, culture, and society to the teaching-learning process; gives broad exposure to research and theory concerned with the effects of sociocultural factors on cognition, perception, and motivation; also considers the effects of such factors on classroom interaction. 3 undergraduate hours. 2 or 4 graduate hours. Taking 4 hours of credit requires consent of the instructor and the completion of a substantive scholarly project. 2 hours for Elementary Education and Music certification. Prerequisite: EPSY 201 or EPSY 236; or equivalent.

EPSY 403 Res Methods in Learning Scienc credit: 3 or 4 Hours.

This course is an introduction to conducting research in the learning sciences, including how to use theory as a guide to conducting literature reviews and formulating research questions. The course introduces quantitative and qualitative research design, data collection and analysis, and other aspects of research relevant to learning, teaching, and other topics relevant to education. A secondary goal is to better understand research reported in the primary literature as well as in the news media. Assignments will include evaluating research papers and writing a research proposal. 3 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 280 or EPSY 480 or PSYC 235 or PSYC 301.

EPSY 404 Adjustment in School Settings credit: 3 or 4 Hours.

Examines theories of adjustment, factors that influence adjustment, and common adjustment problems of children and adolescents in school context. 3 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 201 or equivalent.

EPSY 405 Personality and Soc Dev credit: 3 or 4 Hours.

Same as PSYC 465. See PSYC 465.

EPSY 406 Psyc of Classroom Management credit: 2 to 4 Hours.

General overview of theories related to analyzing student behaviors in the classroom; the incidence and etiology of conduct problems and behavior disorders in the classroom, with emphasis upon preventive strategies and guiding principles for maintaining classroom discipline. 3 undergraduate hours. 2 or 4 graduate hours. Taking 4 hours of credit requires consent of the instructor and the completion of a substantive scholarly project. Undergraduate and Graduate work load will be commensurate with the requirements. 2 hours for Elementary Education and Music certification and GSLIS. Prerequisite: EPSY 201 or EPSY 236, or equivalent.

EPSY 407 Adult Learning and Development credit: 3 or 4 Hours.

Theory of and research on adult learning and development; includes societal context, performance, physiology and health, personality, and learning; and considers stability and change during young adulthood, middle age, and old age. Meets both foundational requirements for EPSY. 3 undergraduate hours. 4 graduate hours. Assignments and work load will commensurate with credit. Prerequisite: EPSY 201, or equivalent, or consent of instructor.

EPSY 408 Learning & Hum Dev w/ EdTech credit: 3 or 4 Hours.

Sets out to provide an understanding of theories of learning and development and how these theories relate to educational technology. It has two components. The first is theoretical, in which we attempt to develop an overall frame of reference, locating approaches to the psychology of learning in terms of large paradigm shifts, from 'behaviorism' to 'brain developmentalism' to 'social cognitivism'. The second component is practical, in which we will use these theoretical concepts to 'parse' a technology-mediated learning environment for its underlying presuppositions. 3 undergraduate hours. 4 graduate hours.

EPSY 413 Intelligence Assess and Theory credit: 3 or 4 Hours.

Study of fundamental concepts relevant to the general problem of the individual testing of learning aptitude; acquisition of psychometric competence in the use of the Binet and the Wechsler tests; acquaintance and limited practice in the administration, scoring, and interpretation of results obtained by performance scales and other devices appropriate for use with individuals having sensory, associative, and/or motor impairments. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor and 6 hours of psychology courses, including SPED 424 or PSYC 490.

EPSY 419 Counseling Pre-Practicum credit: 2 to 4 Hours.

Study of basic helping skills and professional ethics in professional psychology. The course links theory with practice, as students engage in the exploration of new helping skills and learn to analyze their developing counseling style and performance; includes an examination of relevant ethical standards and counseling theories, and their application in a multicultural context. Discussion and experiential activities are supplemented by films, videotapes, and case studies. Primarily for counseling psychology graduate students, though other students in programs with a mental health focus may be admitted with the consent of the instructor if space is available. Same as REHB 419. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing.

EPSY 420 Theories of Psychotherapy credit: 4 Hours.

Study of counseling and psychotherapeutic processes and theories. Coverage of major models and theories as well as current trends and a review of counseling skills will be included. Same as PSYC 420. 4 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 238 or equivalent.

EPSY 421 Sex Role Theory in Counseling credit: 4 Hours.

Reviews research on sex role socialization related to career, family, and personal roles for both sexes; discusses counseling strategies aimed at freeing persons from attitudes and behaviors that limit their freedom to choose; and reviews strategies for change at policy, agency and individual levels. Same as GWS 421. 4 undergraduate hours. 4 graduate hours.

EPSY 427 Learning from Text credit: 2 to 4 Hours.

This course will survey the range of topics related to how we learn from text, i.e., from reading. The course will focus on reading in education settings and approaches to improving reading comprehension. Students will read secondary and primary literature and have opportunities to critique, discuss, and present the findings of this research. Topics discussed will include: eye movements during reading, grammatical structures and discourse conventions of texts that support comprehension, and how comprehension and memory for text can be measured. Assignments will include written reviews of texts and topics. Students taking the course for 4 graduate hours will also plan and present a proposed empirical study related to some topic within the course. 3 undergraduate hours. 2 or 4 graduate hours. Credit is not given for EPSY 427 if credit has been received for either PSYC 425 or LING 425.

EPSY 430 Early Adolescent Development credit: 3 or 4 Hours.

Examines early adolescent development, covering biological, cognitive, and social transitions. Topics include identity, autonomy, peer and family relationships and the role of schooling and the media. 3 undergraduate hours. 3 or 4 graduate hours.

EPSY 431 Cognitive Dev in Educ Context credit: 3 or 4 Hours.

The purpose of this course is to cover basic issues in cognitive development, review relevant research findings, and to situate these and understand these in educational contexts. Most of our attention will focus on child and adolescent development. We will address questions such as: How do children learn new concepts? How do changes in children's thinking occur? How can we use what we know to produce positive impacts on children's learning and well-being? 3 undergraduate hours. 4 graduate hours.

EPSY 456 Human Performance and Cognition in Context credit: 3 or 4 Hours.

Theories and findings from cognitive science and related disciplines concerning human information processing mechanisms and capacities are covered, with an emphasis on how understanding people's perceptual and cognitive strengths and limitations can inform decisions about teaching/training strategies and designing technological environments to suit people's needs and abilities. Same as IE 445 and PSYC 456. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 100 or PSYC 103 or consent of instructor.

EPSY 457 Teachers and Tech Integration credit: 3 or 4 Hours.

Designed to help enhance the understanding of computers in the schools. This course looks at computers in the broadest sense and considers a variety of aspects of technologies and digital media that impact pedagogy, curriculum, and student learning. The course considers the context of computing by exploring the history of computing, what is currently occurring in the schools, and how technologies and student expectations are encouraging teachers to redefine the classroom experience. The main goal of this course is to enable students to develop a flexible and working knowledge of computers as educational resources in order to better reach students - students of the 21st century. 3 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 480 or equivalent, or consent of instructor.

EPSY 466 Anthropology of Education credit: 2 or 4 Hours.

Same as ANTH 425 and EPS 425. See EPS 425.

EPSY 470 Intro to Evaluation Theory credit: 4 Hours.

Introduction to the major conceptual constructs and theories of evaluation; emphasis on the critical defining components of evaluation, particularly its role in program and policy development, and on critical distinctions among evaluation theories; provides grounding for further study of both evaluation theory and methods. 4 undergraduate hours. 4 graduate hours.

EPSY 471 Intro to Evaluation Methods credit: 4 Hours.

Introduces the methodology of educational and social program evaluation, including the design of an evaluation, the data collection and analysis, and reporting; emphasis on negotiating the unique facets of evaluative practice, notably evaluator role, working with clients and other stakeholders, the political dynamics of evaluation contexts, and utilization of evaluative results. Students collectively conduct a field-based evaluation project. 4 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 480.

EPSY 474 Evaluating Learning Technology credit: 4 Hours.

In this course, students will learn to conduct a variety of evaluations related to learning technologies including needs assessments, consumer-driven evaluations, outcome or impact assessments, comparative or quasi-experimental studies and case studies. As one means of measuring need, growth, or impact, students will also create assessment instruments and strategies related to particular learning technologies. These might include electronic portfolios, web-based surveys, computer adapted tests or performance rubrics. Course requirements include a final evaluation project in which students (individuals or pre-approved small groups) plan and conduct actual evaluations of learning technologies. The course includes both face-to-face and asynchronous and synchronous on-line meetings. Same as HRD 474. 4 undergraduate hours. 4 graduate hours.

EPSY 480 Educational Statistics credit: 4 Hours.

Designed for terminal value for professional training of students not intending to pursue advanced graduate work, and for introductory value for students continuing graduate study in education; descriptive statistics, introduction to correlation and regression, the normal curve, statistical inference, and the presentation and interpretation of statistical data in educational literature. 4 undergraduate hours. 4 graduate hours.

EPSY 485 Assessing Student Performance credit: 3 or 4 Hours.

Designed especially for secondary education students, this course introduces basic concepts and practices of assessment, measurement, and evaluation as they are used in school settings. The course covers current trends and issues in assessment including large scale standardized testing practices and cultural issues in assessment. Students become familiar with using assessment and evaluation data to inform instructional decisions. Same as CI 485. 3 undergraduate hours. 4 graduate hours. Prerequisite: Students should be concurrently enrolled in CI 403. Admission to the secondary teacher education program.

EPSY 486 Principles of Measurement credit: 3 or 4 Hours.

Study of the selection, preparation, administration, and interpretation of psychological and educational tests and diagnostic devices; emphasis on theory at a beginning level, with application to hypothetical school situations as a teaching device; and consideration of the sources of standard tests, criteria for their evaluation, methods of scoring, interpretation, and general and special areas. 3 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 201 or EPSY 236.

EPSY 487 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, FR 460, GER 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

EPSY 490 Developments in Educ Psyc credit: 2 to 4 Hours.

Foundational theories and practices of educational psychology, including learning and development. 2 or 3 undergraduate hours. 2 or 4 graduate hours. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours. Undergraduate and graduate work load will be commensurate with the requirements.

EPSY 491 Educ Psyc Field Instruction credit: 4 to 16 Hours.

Individual instruction designed to help the advanced student apply basic principles of education or psychology in institutional settings. Each student is assigned to a school, community agency, or other applied settings for a supervised field experience in some aspect of educational psychology. 4 to 16 undergraduate hours. 4 to 16 graduate hours. Approved for letter and S/U grading. May be repeated to a maximum of 16 hours if topics vary; no more than 8 hours may be taken in any given term. Prerequisite: Master's degree in educational psychology or equivalent, and consent of instructor.

EPSY 492 History and Systems of Psych credit: 4 Hours.

A seminar on the history of psychology within a social and cultural context and its theoretical systems, and their relations to contemporary psychology. An awareness of the roots and context of one's own views as well as understanding and appreciation of others' views will be fostered. There will be some focus on encouraging self-study of the history of one's own theoretical orientation. 4 undergraduate hours. 4 graduate hours. Prerequisite: EPSY 420, or equivalent.

EPSY 501 Evaluation in Society credit: 4 Hours.

Examines evaluation as a social practice, explains various approaches to evaluation both nationally and internationally, and explores how evaluation is linked to policy and decision making. Students will read about and discuss both foundational and contemporary issues in evaluation practice and theory as they relate to the use of evaluation in improving both practice and policy decisions. For graduate students in education, public policy, social work, community health, and other related fields.

EPSY 505 Data, Evidence, & Decisions credit: 4 Hours.

Examines how practitioners and policy makers come to interpret sources of evidence; how the use of data, information, and evidence are shaped by organizational structures, routines, and cultures; how technical infrastructures have emerged to enable the collection, distribution, consolidation, and use of data, information, and evidence; the political economy of generated and using evidence (e.g., university research, think tanks, advocacy organizations, etc.). This multidisciplinary course is situated against the broad backdrop of the social science literature on social scientific knowledge production and use, and the relationship between science and society.

EPSY 507 Econ Analysis & Ed Policy credit: 4 Hours.

Introduces key economic principles and applies them to the analysis of current education policy issues. Concepts covered include supply and demand, competitive markets, human capital acquisition, efficiency, equity and the role of government intervention, among others. Focuses on applications within the context of policy making in education. Designed for students without prior coursework in economics, but with a working basic knowledge of statistics (e.g., regression). Prerequisite: EPSY 480.

EPSY 508 Display/Interpretation of Data credit: 4 Hours.

Provides instruction in representing and communicating data accurately and clearly using visual displays (e.g., graphs, tables and figures). Examines the most appropriate ways to visually display the results of data analyses so that they are clear, accurate and unambiguous. Drawing on both contemporary techniques and publication standards, it will address topics including audience, context, precision, visual metaphor, data display tools and best practices.

EPSY 510 Counseling Psych/Ethics ProSem credit: 4 Hours.

Introduction to and critical examination of applied issues within the discipline of counseling psychology. A review of (a) the historical development of counseling psychology, (b) psychologists' professional code of ethics, and (c) major psychotherapy theories and interventions. Issues of race, class, gender, and diversity more broadly are integrated throughout the course.

EPSY 511 Voc Psych Theories and Assess credit: 2 or 4 Hours.

Study of vocational psychology theories, assessment, decision-making, and the job search process; includes an historical overview of the development field. The course links theory with practice, as students engage in the interpretation of vocational assessments, examine relevant ethical standards, and discuss their application. 2 hours credit is for work on either the vocational theories or vocational assessment parts of the course (this must be negotiated). For 4 hours credit, a student must do both aspects. Prerequisite: Admission to the graduate program in counseling psychology or consent of instructor.

EPSY 513 Resrch Meth in Coun Psych II credit: 4 Hours.

This course is the second course sequence for Counseling Psychology graduate students. This course builds on the previous course (EPSY 512) in that students continue work on refining their thesis proposal in the area of Counseling Psychology. They also explore advanced research designs as applied to Counseling Psychology literature. This course may not be repeated for credit. Prerequisite: EPSY 512 or consent of instructor.

EPSY 515 Multicultural Counseling credit: 4 Hours.

Overview of multicultural counseling theory, empirical research, and practice; includes didactic as well as experiential learning components. The goal of the course is to enhance students' multicultural counseling competencies, with regard to developing: (a) appropriate knowledge of specific cultural groups and sociopolitical issues, (b) cultural self-awareness, and (c) multiculturally relevant intervention skills. May not be repeated for credit.

EPSY 520 Counseling Psych Practicum credit: 2 to 8 Hours.

Intensive supervised experiences in applied educational psychology; use of a wide variety of diagnostic and observational techniques and treatment. Students may take more than one section. Approved for letter and S/U grading. Prerequisite: Master's degree in educational psychology or equivalent; consent of instructor.

EPSY 521 Group Counseling credit: 4 Hours.

Study of the principles of group process and their application in institutional and other settings; includes a review of the historical development of group processes and study of pertinent research; discussion and experiential activities are supplemented by films, videotapes, and case studies. Prerequisite: EPSY 510 or consent of instructor.

EPSY 530 Social Development credit: 4 Hours.

This seminar is an advanced, doctoral-level survey of social development from infancy to adolescence. The range of topics includes attachment, temperament, genes and developmental process, social contexts of cognitive development gender development, moral reasoning and prosocial behavior, aggressive behavior, and the development of ethnic identity and discrimination. Family, peer, community, and cultural ecologies of children and adolescents receive extensive consideration. Developmental theory, methodology, and relations to social policy and intervention are continuing concerns. Same as PSYC 540.

EPSY 531 Cognitive Dev and Socializatn credit: 4 Hours.

Addresses basic issues in cognitive development, with special attention to how social interactions impact cognitive development. Two major foci: theories, especially in terms of the role that socialization plays in these theories; and effects of domains of socialization (e.g., peers, school) on cognitive development. Primary age span: preschool thru adolescence. Prerequisite: Consent of instructor.

EPSY 540 Networks for Learning credit: 4 Hours.

In this course students engage in hands on activities through which they come to understand the intricacies of building substantial and sustainable networks for learning environments, in particular network planning for school districts. Studies read and discuss literature that relates to the building of network systems. Students will explore various tools and techniques that best serve the network environment. Students will complete a major project in which they design (or modify) their own network and discuss the means by which they come to understand critical factors associated with maintaining and growing such an environment. Prerequisite: Enrollment in the Educational Technology for Teaching, Learning, and Leadership concentration in the Educational Psychology on-line CTER Program.

EPSY 546 Human Factors in HCES credit: 4 Hours.

Provides an overview of research that applies theories and methods from human factors and cognitive science to analyze the sources of these problems and to develop and evaluate design and training interventions to help providers and patients successfully navigate health care systems. An introduction to problems and accidents in health care related to human factors is followed by an overview of concepts and methods from the fields of human factors and cognitive science. Same as IE 546. 4 graduate hours. No professional credit. Prerequisite: Priority will be given to students enrolled in the Healthcare Engineering Systems Concentration of M.Eng. degree program.

EPSY 550 Global Issues in Learning credit: 4 Hours.

Same as EPS 550. See EPS 550.

EPSY 551 Seminar in Cognitive Science credit: 2 or 4 Hours.

Same as PSYC 514, ANTH 514, CS 549, LING 570, and PHIL 514. See PSYC 514.

EPSY 552 Classroom Learning credit: 4 Hours.

Provides a broad picture of the nature and conditions of classroom learning. Considers analysis of knowledge; institutional constraints on teachers; characteristics of instruction and instructional materials for reading, social studies, and science; social context of learning; motivation and interest; questioning and discussion; and learning strategies and study skills. Intended for doctoral students with a special interest in research leading to the improvement of classroom teaching and learning. Same as PSYC 554. Prerequisite: Consent of instructor required.

EPSY 554 Virtual Worlds in Education credit: 4 Hours.

Examines the history, theory, and practice of pedagogy in virtual environments. Students will read research literature, participate in online discussions through the Moodle course management system, and engage in real-time activities in several types of virtual worlds. The project component requires students to develop educational artifacts in virtual worlds and perform peer review of artifacts developed by other students. Projects will support some aspect of learning or teaching in the students' own workplace, and will incorporate multimedia, web, and other network-based resources. Students are expected to have access to computers that meet the hardware and networking requirements. Same as CI 545. Prerequisite: Students must be enrolled in the Educational Technology for Teaching, Learning, and Leadership concentration in the Educational Psychology on-line CTER Program.

EPSY 556 Analysis of Educational Tech credit: 4 Hours.

This course will analyze currently available technologies for learning. Areas addressed include: learning management systems, intelligent tutors, computer adaptive testing, gamification, simulations, learning in and through social media and peer interaction, universal design for learning, differentiated instruction systems, big data and learning analytics, attention monitoring, and affect-aware systems. Participants will explore the processes for selection and implementation of suitable technologies, the design of electronic learning resources, design and application of digital media in teaching and learning, familiarization with web usability and accessibility, and critical analysis of the benefits of technologies in education. 4 graduate hours. No professional credit.

EPSY 559 Advanced Learning Technologies credit: 4 Hours.

In this course students identify, select, and justify the implementation of advanced learning technologies in the overall learning environment. Students will consider how advanced technologies influence the design process and how the design process may be enhanced through the use of advanced learning technologies. The goal of this course is to have students create a vision in which instructional system design models, existing advanced learning technologies, and the learning environment create a synergy by which individuals are able to solve organizational problems. Prerequisite: Enrollment in the Educational Technology for Teaching, Learning, and Leadership concentration in the Educational Psychology on-line CTER Program.

EPSY 560 Tech & Educational Change credit: 4 Hours.

An in-depth look at research on educational reform and its links to technology in the United States. Major topics include reforming the organization of schools and the instructional program, and the roles students, teachers, and school administrators play when integrating technology and school improvement. Prerequisite: Enrollment in the Educational Technology for Teaching, Learning, and Leadership concentration in the Educational Psychology on-line CTER Program.

EPSY 563 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, FR 584, GER 584, ITAL 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

EPSY 566 Adv Psycholinguistics credit: 2 or 4 Hours.

Same as PSYC 526. See PSYC 526.

EPSY 567 Personality Assessment credit: 4 Hours.

Same as PSYC 567. See PSYC 567.

EPSY 570 Adv Theories of Ed Evaluation credit: 4 Hours.

This topical seminar is designed for advanced graduate students with a significant interest in the evaluation of educational and social policies and programs. The seminar will engage in some depth an issue of contemporary currency and controversy in evaluation theory and practice. Readings, discussions, guest speakers, and the occasional field trip will frame the seminar. Each student in this seminar will be expected to develop a scholarly paper for conference presentation and/or publication. Prerequisite: EPSY 470, EPSY 471, and coursework in research methods.

EPSY 572 Evaluation of Edu Programs credit: 4 Hours.

Same as CI 518. See CI 518.

EPSY 573 Methods of Educational Inquiry credit: 4 Hours.

Same as CI 550, EPOL 550, and SPED 550. See CI 550.

EPSY 574 Quasi-Experimental Design credit: 4 Hours.

Intermediate course for graduate students in education and related fields. Goal is to prepare students to design and conduct quasi-experimental studies and critique the work of others in an informed, systematic way. Students will read and discuss foundational and contemporary issues in design, validity, sampling and loss, regression artifacts, analysis and causal inferences. Prerequisite: EPSY 580 or equivalent.

EPSY 575 Mixed Method Inquiry credit: 4 Hours.

This advanced course addresses the theory and practice of mixing inquiry methodologies in program evaluation and applied research. Topics include selected roots of mixed inquiry, various stances on mixing philosophical traditions while mixing methods, conceptualizations of mixed method design and analysis, and challenges of mixed method practice. Students should have basic familiarity with experimental or survey (quantitative) with and constructivist or interpretivist (qualitative) social science. Familiarity with other social science frameworks (e.g., critical theory, feminism, action science) is also highly desirable. Approved for letter and S/U grading. Prerequisite: EPSY 574 or EPSY 580; EPSY 577 or EPSY 578; or equivalents; or consent of instructor.

EPSY 577 Foundations of Qual Methods credit: 4 Hours.

Introduction to epistemological, methodological, ethical, and political issues characterizing the broad field of qualitative inquiry. Topics covered include an overview of logical positivism and logical empiricism; the Continental philosophers' critique of scientism and the emergence of hermeneutics; sociological theories of Verstehen; interpretive anthropology; feminist qualitative inquiry; social constructionism; contemporary crises of ethics, representation, and justification.

EPSY 578 Qualitative Inquiry Methods credit: 4 Hours.

Introductory course addressing the practice of qualitative inquiry. Topics include developing inquiry questions appropriate for qualitative studies; designing qualitative studies; generating data via interviews, observations, document analyses; analyzing and interpreting qualitative data; judging the quality of inquiry; representing and reporting qualitative inquiry; addressing ethical and political issues in the conduct of qualitative inquiry.

EPSY 580 Statistical Inference in Educ credit: 4 Hours.

Intermediate statistical methods in education; includes probability theory, distribution theory, interval estimation, hypothesis testing, regression and correlational analysis, and analysis of variance. Prerequisite: EPSY 480 or equivalent.

EPSY 581 Applied Regression Analysis credit: 4 Hours.

Emphasis on educational research applications of regression with special emphasis placed on application and interpretation of techniques. Topics covered include rudimentary linear algebra, the general linear model, different coding schemes, regression diagnostics, and extensions to binary data and nested data structures. Same as PSYC 581. Prerequisite: EPSY 580 or equivalent; consent of instructor.

EPSY 582 Advanced Statistical Methods credit: 4 Hours.

Advanced topics in analyses of variance and covariance, and principles of experimental design; brief introduction to multivariate analysis, including rudiments of matrix algebra. Prerequisite: EPSY 580, PSYC 407, or equivalent.

EPSY 583 Single Case Experimentl Design credit: 4 Hours.

Same as SPED 583. See SPED 583.

EPSY 584 Multivar Anlys in Psych and Ed credit: 4 Hours.

Same as PSYC 594 and SOC 584. See PSYC 594.

EPSY 585 Theories of Measurement I credit: 4 Hours.

Provides a conceptual framework of classical test theory (e.g., true scores, error of measurement, composite measures) and alternatives to the classical model (e.g., generalizability theory, latent trait theory). Students will learn the techniques and theory of classical test theory and apply the methods to educational and psychological assessments. Topics covered include reliability, validity, generalizability, dichotomous Item Response Theory (IRT), test construction and design, item bias and fairness, Differential Item Functioning (DIF), scaling, linking, and equating. Same as PSYC 595. Prerequisite: EPSY 581 and EPSY 582; PSYC 406 and PSYC 407; or equivalents.

EPSY 586 Theories of Measurement II credit: 4 Hours.

Provides a conceptual framework of Item Response Theory (IRT) and its applications. Students will learn the techniques and theory of IRT and apply the methods to educational and psychological assessments. Topics covered include both dichotomous and polytomous IRT modelling, item structure and latent traits estimation, modeling and detecting Differential Item Functioning, linking and equating, computer adaptive testing, dimensionality testing, and cognitive diagnosis. Same as PSYC 596. Prerequisite: EPSY 585 or PSYC 490.

EPSY 587 Hierarchical Linear Models credit: 4 Hours.

This course provides an overview of the use of multilevel models. Students will learn the techniques and theory of hierarchical linear models and apply the methods to data from studies in education, psychology and social sciences. Topics covered include multilevel analyses, random intercept and slope models, 2- and 3-level models, hypothesis testing, model assessment, longitudinal (repeated measures) data, and generalized hierarchical models for categorical variables. Same as PSYC 587 and STAT 587. Approved for letter and S/U grading. Prerequisite: EPSY 581 and EPSY 582, or PSYC 406 and PSYC 407.

EPSY 588 Covar Struct and Factor Models credit: 4 Hours.

Same as PSYC 588, SOC 588, and STAT 588. See PSYC 588.

EPSY 589 Categorical Data in Ed/Psyc credit: 4 Hours.

Concepts and methods for analyzing categorical data with an emphasis placed on building and applying models in education, sociology and psychology. Generalized linear models covered including logistic and Poisson regression models, loglinear, logit, and probit models, and models for ordinal data. Same as PSYC 589 and SOC 579. Approved for letter and S/U grading. Credit is not given for EPSY 589 and STAT 426. Prerequisite: EPSY 581 or PSYC 507.

EPSY 590 Advanced Seminar in Educ Psyc credit: 0 to 4 Hours.

Seminar in educational psychology; topics relate to the areas of specialization represented by the various divisions within the department. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor required.

EPSY 591 Field Study and Thesis Seminar credit: 4 to 8 Hours.

Assists doctoral candidates in planning field studies and thesis problems. Students are expected to present their studies at each of four stages: (1) the inception, delimitation, tentative design stage; (2) the proposed design stage; (3) the revised design stage; and (4) the final design stage. Students are expected to analyze critically all presentations. Prerequisite: Limited to students who have been admitted for doctoral study.

EPSY 595 Independent Study credit: 0 to 4 Hours.

Offers opportunity and challenge of self-directive, independent study; develops the individual's ability as an independent student; and enables the student to pursue needed study in a field in which appropriate courses are not being offered during a given term. Approved for both letter and S/U grading. May be repeated with approval. Prerequisite: Approval of study outline by adviser and the department chairperson prior to enrollment.

EPSY 599 Thesis Research credit: 0 to 16 Hours.

Individual direction of research and thesis writing. Approved for S/U grading only. May be repeated.

Electrical and Computer Engr (ECE)

ECE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ECE>)

Courses

ECE 101 Exploring Digital Info Technol credit: 3 Hours.

Principles and processes for the development of information technologies: digital music, digital images, digital logic, data compression, error correction, information security, and communication networks. Laboratory for design of hardware and software, and experiments in audio and image processing. Intended for students outside the College of Engineering. Credit is not given to Computer or Electrical Engineering majors.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

Quantitative Reasoning II

ECE 110 Introduction to Electronics credit: 1 to 3 Hours.

Introduction to selected fundamental concepts and principles in electrical engineering. Emphasis on measurement, modeling, and analysis of circuits and electronics while introducing numerous applications. Includes sub-discipline topics of electrical and computer engineering, for example, electromagnetics, control, signal processing, microelectronics, communications, and scientific computing basics. Lab work incorporates sensors and motors into an autonomous moving vehicle, designed and constructed to perform tasks jointly determined by the instructors and students.

ECE 120 Introduction to Computing credit: 4 Hours.

Introduction to digital logic, computer systems, and computer languages. Topics include representation of information, combinational and sequential logic analysis and design, finite state machines, the von Neumann model, basic computer organization, and machine language programming. Laboratory assignments provide hands-on experience with design, simulation, implementation, and programming of digital systems. Prerequisite: Restricted to Computer Engineering or Electrical Engineering majors or transfer students with ECE Department consent.

ECE 198 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. May be repeated in the same or separate terms for unlimited hours if topics vary. See class schedule for topics and prerequisites.

ECE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

ECE 200 Seminar credit: 0 Hours.

Discussions of educational programs, career opportunities, and other topics in electrical and computer engineering. Approved for Letter and S/U grading. May be repeated. For Computer Engineering and Electrical Engineering majors only.

ECE 205 Elec & Electronic Circuits credit: 3 Hours.

Basic principles of circuit analysis; transient analysis; AC steady-state analysis; introduction to semiconductor devices and fabrication; digital logic circuits; op-amps; A/D and D/A conversion. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: PHYS 212.

ECE 206 Elec & Electronic Circuits Lab credit: 1 Hour.

Laboratory instruments and basic measurement techniques; electric circuits; CMOS logic circuits; DTL and TTL circuits; op-amps. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: PHYS 212; concurrent registration in ECE 205.

ECE 210 Analog Signal Processing credit: 4 Hours.

Analog signal processing, with an emphasis on underlying concepts from circuit and system analysis: linear systems; review of elementary circuit analysis; differential equation models of linear circuits and systems; Laplace transform; convolution; stability; phasors; frequency response; Fourier series; Fourier transform; active filters; AM radio. Credit is not given for both ECE 210 and ECE 211. Prerequisite: ECE 110 and PHYS 212; credit or concurrent registration in MATH 285 or MATH 286.

ECE 211 Analog Circuits & Systems credit: 2 Hours.

Concepts from circuit and system analysis: linear systems; review of elementary circuit analysis; op amps; transient analysis; differential equation models of linear circuits and systems; Laplace transform. Credit is not given for both ECE 211 and ECE 210. Prerequisite: ECE 110 and PHYS 212; credit or concurrent registration in MATH 285 or MATH 286.

ECE 220 Computer Systems & Programming credit: 4 Hours.

Advanced use of LC-3 assembly language for I/O and function calling convention. C programming, covering basic programming concepts, functions, arrays, pointers, I/O, recursion, simple data structures, linked lists, dynamic memory management, and basic algorithms. Information hiding and object-oriented design as commonly implemented in modern software and computer systems programming. Prerequisite: ECE 120. Restricted to Computer Engineering or Electrical Engineering majors or transfer students with ECE Department consent.

ECE 297 Individual Study credit: 1 Hour.

Individual projects. Approved written application to department as specified by department or instructors is required. Approved for both letter and S/U grading. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Consent of instructor.

ECE 298 Special Topics credit: 1 to 4 Hours.

Lectures and discussions relating to new areas of interest. May be repeated in the same or separate terms for unlimited hours if topics vary. See class schedule for topics and prerequisites.

ECE 304 Photonic Devices credit: 3 Hours.

Introduction to active and passive photonic devices and applications; optical processes in semiconductor and dielectric materials including electrical junctions, light emission and absorption, and waveguide confinement; photonic components such as light emitting diodes, lasers, photodetectors, solar cells, liquid crystals, and optical fiber; optical information distribution networks and display applications. Prerequisite: PHYS 214.

ECE 307 Techniques for Engrg Decisions credit: 3 Hours.

Modeling of decisions in engineering work and the analysis of models to develop a systematic approach to making decisions. Fundamental concepts in linear and dynamic programming; probability theory; and statistics. Resource allocation; logistics; scheduling; sequential decision making; siting of facilities; investment decisions; application of financial derivatives; other problems for decision making under uncertainty. Case studies from actual industrial applications illustrate real-world decisions. Prerequisite: ECE 210; credit or concurrent registration in ECE 313.

ECE 310 Digital Signal Processing credit: 3 Hours.

Introduction to discrete-time systems and discrete-time signal processing with an emphasis on causal systems; discrete-time linear systems, difference equations, z-transforms, discrete convolution, stability, discrete-time Fourier transforms, analog-to-digital and digital-to-analog conversion, digital filter design, discrete Fourier transforms, fast Fourier transforms, spectral analysis, and applications of digital signal processing. Prerequisite: ECE 210.

ECE 311 Digital Signal Processing Lab credit: 1 Hour.

Companion laboratory for ECE 310. Prerequisite: Credit or concurrent registration in ECE 310.

ECE 313 Probability with Engrg Applic credit: 3 Hours.

Probability theory with applications to engineering problems such as the reliability of circuits and systems to statistical methods for hypothesis testing, decision making under uncertainty, and parameter estimation. Same as MATH 362. Credit is not given for both ECE 313 and MATH 461. Prerequisite: MATH 286 or MATH 415.

ECE 314 Probability in Engineering Lab credit: 1 Hour.

Designed to be taken concurrently with ECE 313, Probability in Engineering Systems, to strengthen the students' understanding of the concepts in ECE 313 and their applications, through computer simulation and computation using the Python programming language. Topics include sequential hypothesis testing, parameter estimation, confidence intervals, Bloom filters, min hashing, load balancing, inference for Markov chains, PageRank algorithm, vector Gaussian distribution, contagion in networks, principle component method and linear regression for data analysis, investment portfolio analysis. Prerequisite: Concurrent enrollment in ECE 313 or one of: ECE 313, IE 300, STAT 410.

ECE 316 Ethics and Engineering credit: 3 Hours.

Ethical issues in the practice of engineering: safety and liability, professional responsibility to clients and employers, whistle-blowing, codes of ethics, career choice, and legal obligations. Philosophical analysis of normative ethical theories. Case studies. Same as PHIL 316. Credit is not given for both ECE 316 and CS 210. Junior standing is required. Prerequisite: RHET 105.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil

ECE 317 ECE Technology & Management credit: 3 Hours.

Basic understanding of electrical and computer engineering concepts applicable to technology management. Circuit components; dc fundamentals; ac fundamentals; semiconductors; operational amplifiers; device fabrication; power distribution; digital devices; computer architecture (including microprocessors). Intended for the Business Majors in the Technology and Management program. Credit is not given to Computer or Electrical Engineering majors. Prerequisite: One of MATH 220, MATH 221, MATH 234.

ECE 329 Fields and Waves I credit: 3 Hours.

Electromagnetic fields and waves fundamentals and their engineering applications: static electric and magnetic fields; energy storage; Maxwell's equations for time-varying fields; wave solutions in free space, dielectrics and conducting media, transmission line systems; time- and frequency-domain analysis of transmission line circuits and Smith chart applications. Prerequisite: ECE 210.

ECE 330 Power Ckts & Electromechanics credit: 3 Hours.

Network equivalents; power and energy fundamentals, resonance, mutual inductance; three-phase power concepts, forces and torques of electric origin in electromagnetic and electrostatic systems; energy conversion cycles; principles of electric machines; transducers; relays; laboratory demonstration. Prerequisite: ECE 210.

ECE 333 Green Electric Energy credit: 3 Hours.

Electric power grid structure and policy; analysis of wind, solar, and fuels as raw resources; wind turbines and parks; solar cells, modules, arrays and systems; fuel cell power plants; energy and financial performance of green energy projects; integration of green energy into power grid; energy project report and presentation. Prerequisite: ECE 205 or ECE 210.

ECE 340 Semiconductor Electronics credit: 3 Hours.

Modern device electronics: semiconductor fundamentals including crystals and energy bands, charge carriers (electrons and holes), doping, and transport, (drift and diffusion); unipolar devices with the MOS field effect transistor as a logic device and circuit considerations; basic concepts of generation-recombination and the P-N junction as capacitors and current rectifier with applications in photonics; bipolar transistors as amplifiers and switching three-terminal devices. Prerequisite: ECE 210; PHYS 214; credit or concurrent registration in ECE 329.

ECE 342 Electronic Circuits credit: 3 Hours.

Analysis and design of analog and digital electronic circuits using MOS field effect transistors and bipolar junction transistors, with emphasis on amplifiers in integrated circuits. Credit is not given for both ECE 342 and PHYS 404. Prerequisite: ECE 210.

ECE 343 Electronic Circuits Laboratory credit: 1 Hour.

Companion laboratory for ECE 342. Credit is not given for both ECE 343 and PHYS 404. Prerequisite: Credit or concurrent registration in ECE 342.

ECE 345 Design and Innovation credit: 2 Hours.

Students identify a suitable project, build a team, and explore the feasibility and potential solution space for the selected project area. The intellectual structure of the engineering design process is studied in detail in order to encapsulate the ideation and problem identification aspects of engineering senior design and facilitate student innovation. Same as TE 345. May be repeated in separate terms to a maximum of 4 hours.

ECE 350 Fields and Waves II credit: 3 Hours.

Continuation of ECE 329: radiation theory; antennas, radiation fields, radiation resistance and gain; transmitting arrays; plane-wave approximation of radiation fields; plane-wave propagation, reflection, and transmission; Doppler effect, evanescent waves and tunneling, dispersion, phase and group velocities; waveguides and resonant cavities; antenna reception and link budgets. Prerequisite: ECE 329.

ECE 361 Digital Communications credit: 3 Hours.

Reliable communication of one bit of information over three types of channels: additive Gaussian noise, wireline, and wireless. Emphasis on the impact of bandwidth and power on the data rate and reliability, using discrete-time models. Technological examples used as case studies. Prerequisite: ECE 210 and ECE 313.

ECE 374 Introduction to Algorithms & Models of Computation credit: 4 Hours.

Same as CS 374. See CS 374.

ECE 380 Biomedical Imaging credit: 3 Hours.

Physics and engineering principles associated with x-ray, computed tomography, nuclear, ultrasound, magnetic resonance, and optical imaging, including human visualization and perception of image data.

Same as BIOE 380. Prerequisite: MATH 285 or MATH 286.

ECE 385 Digital Systems Laboratory credit: 3 Hours.

Design, build, and test digital systems using transistor-transistor logic (TTL), SystemVerilog, and field-programmable gate arrays (FPGAs). Topics include combinational and sequential logic, storage elements, input/output and display, timing analysis, design tradeoffs, synchronous and asynchronous design methods, datapath and controller, microprocessor design, software/hardware co-design, and system-on-a-chip. Prerequisite: ECE 110 and ECE 220.

ECE 391 Computer Systems Engineering credit: 4 Hours.

Concepts and abstractions central to the development of modern computing systems, with an emphasis on the systems software that controls interaction between devices and other hardware and application programs. Input-output semantics; synchronization; interrupts; multitasking; virtualization of abstractions. Term-based projects. Credit is not given for both ECE 391 and CS 241. Prerequisite: ECE 220 or CS 233.

ECE 395 Advanced Digital Projects Lab credit: 2 or 3 Hours.

Planning, designing, executing, and documenting a microcomputer-based project. Emphasis on hardware but special projects may require an equal emphasis on software. Prerequisite: ECE 385.

ECE 396 Honors Project credit: 1 to 4 Hours.

Special project or reading course for James Scholars in engineering. May be repeated. Prerequisite: Consent of instructor.

ECE 397 Individual Study in ECE credit: 0 to 4 Hours.

Individual Projects. Approved for both letter and S/U grading. May be repeated. Prerequisite: Consent of instructor. Approved written application to department as specified by department or instructor is required.

ECE 398 Special Topics in ECE credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ECE 399 Honors Seminar credit: 1 to 4 Hours.

Special lecture sequences or discussion groups arranged each term to bring James Scholars in engineering into direct contact with the various aspects of engineering practices and philosophy. For Computer Engineering and Electrical Engineering majors with senior standing. Prerequisite: Consent of instructor.

ECE 401 Signal and Image Analysis credit: 4 Hours.

An introduction to signal analysis and processing methods for advanced undergraduates or graduate students in the biological, physical, social, engineering and computer sciences. Signal analysis methods and their capabilities, weaknesses, and artifacts with an emphasis on their practical application. Significant hands-on processing and interpretation of real data using MATLAB. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ECE 310 and ECE 401. Prerequisite: MATH 220.

ECE 402 Electronic Music Synthesis credit: 3 Hours.

Historical survey of electronic and computer music technology; parameters of musical expression and their codification; analysis and synthesis of fixed sound spectra; time-variant spectrum analysis/synthesis of musical sounds; algorithms for dynamic sound synthesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 310.

ECE 403 Audio Engineering credit: 3 Hours.

Resonance and wave phenomena; Acoustics of rooms and transmission lines (e.g., horns); How loudspeakers work: A lab component has been added to measure and model real loudspeakers and enclosures; Topics in digital audio, including AD and DA (Sigma-Delta) audio converters. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 210 and ECE 310.

ECE 408 Applied Parallel Programming credit: 4 Hours.

Parallel programming with emphasis on developing applications for processors with many computation cores. Computational thinking, forms of parallelism, programming models, mapping computations to parallel hardware, efficient data structures, paradigms for efficient parallel algorithms, and application case studies. Same as CS 483 and CSE 408. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 220.

ECE 411 Computer Organization & Design credit: 4 Hours.

Basic computer organization and design: integer and floating-point computer arithmetic; control unit design; pipelining; system interconnect; memory organization; I/O design; reliability and performance evaluation. Laboratory for computer design implementation, simulation, and layout. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 391 or CS 241.

ECE 412 Microcomputer Laboratory credit: 3 Hours.

Design, construction, and use of a small general-purpose computer with a micro-processor CPU; MSI and LSI circuits used extensively; control panel, peripheral controllers, control logic, central processor, and programming experiments. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 385; ECE 391 or CS 233. Recommended: Credit or concurrent registration in ECE 411.

ECE 414 Biomedical Instrumentation credit: 3 Hours.

Same as BIOE 414. See BIOE 414.

ECE 415 Biomedical Instrumentation Lab credit: 2 Hours.

Same as BIOE 415. See BIOE 415.

ECE 416 Biosensors credit: 3 Hours.

Underlying engineering principles used to detect small molecules, DNA, proteins, and cells in the context of applications in diagnostic testing, pharmaceutical research, and environmental monitoring. Biosensor approaches including electrochemistry, fluorescence, acoustics, and optics; aspects of selective surface chemistry including methods for biomolecule attachment to transducer surfaces; characterization of biosensor performance; blood glucose detection; fluorescent DNA microarrays; label-free biochips; bead-based assay methods. Case studies and analysis of commercial biosensor. Same as BIOE 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 417 Multimedia Signal Processing credit: 4 Hours.

Characteristics of speech and image signals; important analysis and synthesis tools for multimedia signal processing including subspace methods, Bayesian networks, hidden Markov models, and factor graphs; applications to biometrics (person identification), human-computer interaction (face and gesture recognition and synthesis), and audio-visual databases (indexing and retrieval). Emphasis on a set of MATLAB machine problems providing hands-on experience. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310 and ECE 313.

ECE 418 Image & Video Processing credit: 4 Hours.

Concepts and applications in image and video processing; introduction to multidimensional signal processing: sampling, Fourier transform, filtering, interpolation, and decimation; human visual perception; scanning and display of images and video; image enhancement, restoration and segmentation; digital image and video compression; image analysis. Laboratory exercises promote experience with topics and development of C and MATLAB programs. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310; credit or concurrent registration in one of ECE 313, STAT 400, IE 300, MATH 461; MATH 415; experience with C programming language.

ECE 419 Security Laboratory credit: 3 or 4 Hours.

Same as CS 460. See CS 460.

ECE 420 Embedded DSP Laboratory credit: 2 Hours.

Development of real-time digital signal processing (DSP) systems using a DSP microprocessor; several structured laboratory exercises, such as sampling and digital filtering; followed by an extensive DSP project of the student's choice. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 310.

ECE 422 Computer Security I credit: 4 Hours.

Same as CS 461. See CS 461.

ECE 424 Computer Security II credit: 3 or 4 Hours.

Same as CS 463. See CS 463.

ECE 425 Intro to VLSI System Design credit: 3 Hours.

Complementary Metal-Oxide Semiconductor (CMOS) technology and theory; CMOS circuit and logic design; layout rules and techniques; circuit characterization and performance estimation; CMOS subsystem design; Very-Large-Scale Integrated (VLSI) systems design methods; VLSI Computer Aided Design (CAD) tools; workstation-based custom VLSI chip design using concepts of cell hierarchy; final project involving specification, design, and evaluation of a VLSI chip or VLSI CAD program; written report and oral presentation on the final project. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 385 and ECE 411; or CS 233.

ECE 428 Distributed Systems credit: 3 or 4 Hours.

Same as CS 425. See CS 425.

ECE 431 Electric Machinery credit: 4 Hours.

Theory and laboratory experimentation with three-phase power, power-factor correction, single- and three-phase transformers, induction machines, DC machines, and synchronous machines; project work on energy control systems; digital simulation of machine dynamics. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 330.

ECE 432 Advanced Electric Machinery credit: 3 Hours.

Advanced rotating machine theory and practice: dynamic analysis of machines using reference frame transformations; tests for parameter determination; reduced order modeling of machines; mechanical subsystems including governors, prime movers and excitation systems; digital simulation of inter-connected machines. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 431.

ECE 435 Computer Networking Laboratory credit: 3 or 4 Hours.

Design, application, analysis, and evaluation of communication network protocols under both Linux and Windows NT operating systems. Emphasis on identifying problems, proposing alternative solutions, implementing prototypes using available network protocols and evaluating results. Multiple programming team projects. Same as CS 436. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 438.

ECE 437 Sensors and Instrumentation credit: 3 Hours.

Hands-on exposure to fundamental technology and practical application of sensors. Capacitive, inductive, optical, electromagnetic, and other sensing methods are examined. Instrumentation techniques incorporating computer control, sampling, and data collection and analysis are reviewed in the context of real-world scenarios. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 438 Communication Networks credit: 3 or 4 Hours.

Same as CS 438. See CS 438.

ECE 439 Wireless Networks credit: 3 or 4 Hours.

Overview of wireless network architectures including cellular networks, local area networks, multi-hop wireless networks such as ad hoc networks, mesh networks, and sensor networks; capacity of wireless networks; medium access control, routing protocols, and transport protocols for wireless networks; mechanisms to improve performance and security in wireless networks; energy-efficient protocols for sensor networks. Same as CS 439. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 241 or ECE 391; one of MATH 461, MATH 463, ECE 313.

ECE 441 Physcs & Modeling Semicond Dev credit: 3 Hours.

Advanced concepts including generation-recombination, hot electron effects, and breakdown mechanisms; essential features of small ac characteristics, switching and transient behavior of p-n junctions, and bipolar and MOS transistors; fundamental issues for device modeling; perspective and limitations of Si-devices. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

ECE 444 IC Device Theory & Fabrication credit: 4 Hours.

Fabrication lab emphasizing physical theory and design of devices suitable for integrated circuitry; electrical properties of semiconductors and techniques (epitaxial growth, oxidation, photolithography diffusion, ion implantation, metallization, and characterization) for fabricating integrated circuit devices such as p-n junction diodes, bipolar transistors, and field effect transistors. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 340.

ECE 445 Senior Design Project Lab credit: 4 Hours.

Individual design projects in various areas of electrical and computer engineering; projects are chosen by students with approval of instructor. A professionally kept lab notebook, a written report, prepared to journal publication standards, and an oral presentation required. 4 undergraduate hours. No graduate credit.

This course satisfies the General Education Criteria for:

Advanced Composition

ECE 446 Principles of Experimental Research in Electrical Engineering credit: 4 Hours.

Interdisciplinary approach to learning principles of experimental research. Focuses on: 1) experimental design 2) prevalent experimental techniques 3) data organization, analysis, and presentation and 4) scientific computing. Presentation methods explored include poster session, conference talk, and journal paper. Open-ended labs and a project reinforce concepts discussed in class. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 310, ECE 313, ECE 329, and MATH 415.

ECE 447 Active Microwave Ckt Design credit: 3 Hours.

Microwave circuit design of amplifiers, oscillators, and mixers. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350 and ECE 453.

ECE 448 Artificial Intelligence credit: 3 or 4 Hours.

Same as CS 440. See CS 440.

ECE 451 Adv Microwave Measurements credit: 3 Hours.

Manual- and computer-controlled laboratory analysis of circuits at microwave frequencies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 452 Electromagnetic Fields credit: 3 Hours.

Plane waves at oblique incidence; wave polarization; anisotropic media; radiation; space communications; waveguides. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 453 Wireless Communication Systems credit: 4 Hours.

Design of a radio system for transmission of information; modulation, receivers, impedance matching, oscillators, two-port network analysis, receiver and antenna noise, nonlinear effects, mixers, phase-locked loops. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329, credit or concurrent registration in ECE 342.

ECE 454 Antennas credit: 3 Hours.

Antenna parameters; polarization of electromagnetic waves; basic antenna types; antenna arrays; broadband antenna design; antenna measurements. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 455 Optical Electronics credit: 3 or 4 Hours.

Optical beams and cavities; semiclassical theory of gain; characteristics of typical lasers (gas, solid state, and semiconductor); application of optical devices. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECE 350 or PHYS 436.

ECE 456 Global Nav Satellite Systems credit: 4 Hours.

Engineering aspects of space-based navigation systems, such as the Global Positioning System (GPS). Engineering and physical principles on which GPS operates, including orbital dynamics, electromagnetic wave propagation in a plasma, signal encoding, receiver design, error analysis, and numerical methods for obtaining a navigation solution. GPS as a case study for performing an end-to-end analysis of a complex engineering system. Laboratory exercises focus on understanding receiver design and developing a MATLAB-based GPS receiver. Same as AE 456. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329 and ECE 310 or AE 352 and AE 353.

ECE 457 Microwave Devices & Circuits credit: 3 Hours.

Electromagnetic wave propagation, microwave transmission systems, passive components, microwave tubes, solid state microwave devices, microwave integrated circuits, S-parameter analysis, and microstrip transmission lines. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340 and ECE 350.

ECE 458 Applic of Radio Wave Propag credit: 3 Hours.

Terrestrial atmosphere, radio wave propagation, and applications to radio sensing and radio communication. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 350.

ECE 459 Communications Systems credit: 3 Hours.

Analog underpinning of analog and digital communication systems: representation of signals and systems in the time and frequency domains; analog modulation schemes; random processes; prediction and noise analysis using random processes; noise sensitivity and bandwidth requirements of modulation schemes. Brief introduction to digital communications. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 313.

ECE 460 Optical Imaging credit: 4 Hours.

Scalar fields, geometrical optics, wave optics, Gaussian beams, Fourier optics, spatial and temporal coherence, microscopy, interference chromatic and geometric aberrations, Jones matrices, waveplates, electromagnetic fields, and electro-optic and acousto-optic effects. Laboratory covers numerical signal processing, spectroscopy, ray optics, diffraction, Fourier optics, microscopy, spatial coherence, temporal coherence, polarimetry, fiber optics, electro-optic modulation and acousto-optic modulation. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 329; credit or concurrent registration in ECE 313.

ECE 461 Digital Communications credit: 3 Hours.

Reliable communication of one bit of information over three types of channels: additive Gaussian noise, wireline, and wireless. Emphasis on the impact of bandwidth and power on the data rate and reliability, using discrete-time models. Technological examples used as case studies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 210 and ECE 313.

ECE 462 Logic Synthesis credit: 3 Hours.

Unate function theory, unate recursive paradigm, synthesis of two-level logic, synthesis of incompletely specified combinational logic, multi-level logic synthesis, binary decision diagrams, finite state machine synthesis, automatic test pattern generation and design for test, equivalence checking and reachability analysis of finite machines, and technology mapping. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 220 or CS 233.

ECE 463 Digital Communications Lab credit: 2 Hours.

Hands-on experience in the configuration and performance evaluation of digital communication systems employing both radio and optical signals. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 361 or ECE 459.

ECE 464 Power Electronics credit: 3 Hours.

Switching functions and methods of control such as pulse-width modulation, phase control, and phase modulation; dc-dc, ac-dc, dc-ac, and ac-ac power converters; power components, including magnetic components and power semiconductor switching devices. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 465 Optical Communications Systems credit: 3 Hours.

Fundamentals of lightwave systems: characterization of lightwave channels, optical transmitters, receivers, and amplifiers; quantum and thermal noise processes; design of optical receivers; multimode and single-mode link analysis. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 313 and ECE 350. Recommended: credit or concurrent registration in ECE 459 and ECE 466.

ECE 466 Optical Communications Lab credit: 1 Hour.

Fiber components and measurements, transmitters and detectors, fiber amplifiers, multimode fiber links, and wavelength division multiplexing. 1 undergraduate hour. 1 graduate hour. Prerequisite: Credit or concurrent registration in ECE 465.

ECE 467 Biophotonics credit: 3 Hours.

Overview of the field of biophotonics, in three segments: (1) fundamental principles of light, optics, lasers, biology, and medicine; (2) diagnostic biophotonics including imaging, spectroscopy, and optical biosensors; (3) therapeutic applications of biophotonics including laser ablation and photodynamic therapies. Reviews and presentations of current scientific literature by students. Tours of microscopy facilities. Same as BIOE 467. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of ECE 455, ECE 460, PHYS 402.

ECE 468 Optical Remote Sensing credit: 3 Hours.

Optical sensors including single element and area arrays (CCDs); optical systems including imagers, spectrometers, interferometers, and lidar; optical principles and light gathering power; electromagnetics of atomic and molecular emission and scattering with applications to the atmosphere the prime example; applications to ground and spacecraft platforms. Four laboratory sessions (4.5 hours each) arranged during term in lieu of four lectures. Same as AE 468. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329, ECE 313.

ECE 469 Power Electronics Laboratory credit: 2 Hours.

Circuits and devices used for switching power converters, solid-state motor drives, and power controllers; dc-dc, ac-dc, and dc-ac converters and applications; high-power transistors and magnetic components; design considerations including heat transfer. 2 undergraduate hours. 2 graduate hours. Prerequisite: ECE 343; credit or concurrent registration in ECE 464.

ECE 470 Introduction to Robotics credit: 4 Hours.

Fundamentals of robotics including rigid motions; homogeneous transformations; forward and inverse kinematics; velocity kinematics; motion planning; trajectory generation; sensing, vision; control. Same as AE 482 and ME 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of MATH 225, MATH 286, MATH 415, MATH 418.

ECE 472 Biomedical Ultrasound Imaging credit: 3 Hours.

Theoretical and engineering foundations of ultrasonic imaging for medical diagnostics. Conventional, Doppler, and advanced ultrasonic imaging techniques; medical applications of different ultrasonic imaging techniques; engineering problems related to characterization of ultrasonic sources and arrays, image production, image quality, the role of contrast agents in ultrasonic imaging, and system design. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329.

ECE 473 Fund of Engrg Acoustics credit: 3 or 4 Hours.

Development of the basic theoretical concepts of acoustical systems; mechanical vibration, plane and spherical wave phenomena in fluid media, lumped and distributed resonant systems, and absorption phenomena and hearing. Same as TAM 413. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 or MATH 286.

ECE 476 Power System Analysis credit: 3 Hours.

Development of power system equivalents by phase network analysis, load flow, symmetrical components, sequence networks, fault analysis, and digital simulation. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 330.

ECE 478 Formal Software Devel Methods credit: 3 or 4 Hours.

Same as CS 477. See CS 477.

ECE 480 Magnetic Resonance Imaging credit: 3 or 4 Hours.

Fundamental physical, mathematical, and computational principles governing the data acquisition and image reconstruction of magnetic resonance imaging. Same as BIOE 480. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Recommended: ECE 310.

ECE 481 Nanotechnology credit: 4 Hours.

Fundamental physical properties of nanoscale systems. Nanofabrication techniques, semiconductor nanotechnology, molecular and biomolecular nanotechnology, carbon nanotechnology (nanotubes and graphene), nanowires, and nanoscale architectures and systems. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of CHEM 442, CHBE 457, ME 485, MSE 401, PHYS 460.

ECE 482 Digital IC Design credit: 3 Hours.

Bipolar and MOS field effect transistor characteristics; VLSI fabrication techniques for MOS and bipolar circuits; calculation of circuit parameters from the process parameters; design of VLSI circuits such as logic, memories, charge-coupled devices, and A/D and D/A converters. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 483 Analog IC Design credit: 3 Hours.

Basic linear integrated circuit design techniques using bi-polar, JFET, and MOS technologies; operational amplifiers; wide-band feedback amplifiers; sinusoidal and relaxation oscillators; electric circuit noise; application of linear integrated circuits. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 342.

ECE 484 Prin Adv Microelec Processing credit: 3 Hours.

Principles of advanced methods of pattern delineation, pattern transfer, and modern material growth; how these are applied to produce novel and high performance devices and circuits in various electronic materials with special emphasis on semiconductors. Computer simulation of processes and the manufacturing of devices and circuits. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 444.

ECE 485 MEMS Devices & Systems credit: 3 Hours.

Introduction to principles, fabrication techniques, and applications of microelectromechanical systems (MEMS). In-depth analysis of sensors, actuator principles, and integrated microfabrication techniques for MEMS. Comprehensive investigation of state-of-the-art MEMS devices and systems. Same as ME 485. 3 undergraduate hours. 3 graduate hours.

ECE 486 Control Systems credit: 4 Hours.

Analysis and design of control systems with emphasis on modeling, state variable representation, computer solutions, modern design principles, and laboratory techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: ECE 210.

ECE 487 Intro Quantum Electr for EEs credit: 3 Hours.

Application of quantum mechanical concepts to electronics problems; detailed analysis of a calculable two-state laser system; incidental quantum ideas bearing on electronics. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 485.

ECE 488 Compound Semicond & Devices credit: 3 Hours.

Advanced semiconductor materials and devices; elementary band theory; heterostructures; transport issues; three-terminal devices; two-terminal devices; including lasers and light modulators. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340 and ECE 350.

ECE 489 Robot Dynamics and Control credit: 4 Hours.

Same as ME 446 and SE 422. See SE 422.

ECE 490 Introduction to Optimization credit: 3 or 4 Hours.

Basic theory and methods for the solution of optimization problems; iterative techniques for unconstrained minimization; linear and nonlinear programming with engineering applications. Same as CSE 441. 3 undergraduate hours. 4 graduate hours. Prerequisite: ECE 220 and MATH 415.

ECE 491 Numerical Analysis credit: 3 or 4 Hours.

Same as CS 450, CSE 401 and MATH 450. See CS 450.

ECE 492 Parallel Progrmg: Sci & Engrg credit: 3 or 4 Hours.

Same as CS 420 and CSE 402. See CS 420.

ECE 493 Advanced Engineering Math credit: 3 or 4 Hours.

Same as MATH 487. See MATH 487.

ECE 495 Photonic Device Laboratory credit: 3 Hours.

Active photonic devices and lightwave technology. Hands-on experience with several classes of lasers (HeNe laser, semiconductor edge emitting lasers, vertical cavity surface emitting lasers), photodetectors, and photonic systems. Familiarization with experimental optical characterization techniques and equipment. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 487 recommended.

ECE 496 Senior Research Project credit: 2 Hours.

Individual research project under the guidance of a faculty member: for example, mathematical analysis, laboratory experiments, computer simulations, software development, circuit design, or device fabrication. Preparation of a written research proposal, including preliminary results. 2 undergraduate hours. No graduate credit. May be repeated. ECE 496 and ECE 499 taken in sequence fulfill the Advanced Composition Requirement. Prerequisite: RHET 105; consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

ECE 498 Special Topics in ECE credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 0 to 4 undergraduate hours. 0 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

ECE 499 Senior Thesis credit: 2 Hours.

Completion of the research project begun under ECE 496. Preparation and oral presentation of a written thesis that reports the results of the project. 2 undergraduate hours. No graduate credit. To fulfill the Advanced Composition Requirement, credit must be earned for both ECE 496 and ECE 499. Prerequisite: ECE 496 and consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

ECE 500 ECE Colloquium credit: 0 Hours.

Required of all graduate students. Approved for S/U grading only.

ECE 508 Manycore Parallel Algorithms credit: 4 Hours.

Algorithm techniques for enhancing the scalability of parallel software: scatter vs. gather, problem decomposition, spatial sorting and binning, privatization for reduced conflicts, tiling for data locality, regularization for improved load balance, compaction to conserve memory bandwidth, double-buffering to overlap latencies, and data layout for improved efficiency of DRAM accesses. Same as CS 508. 4 graduate hours. No professional credit. Prerequisite: ECE 408 or CS 420.

ECE 510 Micro and Nanolithography credit: 4 Hours.

Comprehensive foundation in the broad field of micro and nanolithography; the science of optical imaging, photochemistry, and materials issues; technological developments including state-of-the-art commercial lithography systems. Applications of micro and nanolithography to diverse fields including: semiconductor devices, displays, flexible electronics, microelectromechanical systems, and biotechnology. Prerequisite: One of ECE 444, ECE 460, MSE 462, NPRE 429, PHYS 402.

ECE 511 Computer Architecture credit: 4 Hours.

Advanced concepts in computer architecture: design, management, and modeling of memory hierarchies; stack-oriented processors; associative processors; pipelined computers; and multiple processor systems. Emphasis on hardware alternatives in detail and their relation to system performance and cost. Same as CSE 521. Prerequisite: ECE 411 or CS 433.

ECE 512 Computer Microarchitecture credit: 4 Hours.

Design of high performance computer systems; instruction level concurrency; memory system implementation; pipelining, superscalar, and vector processing; compiler back-end code optimization; profile assisted code transformations; code generation and machine dependent code optimization; cache memory design for multiprocessors; synchronization implementation in multiprocessors; compatibility issues; technology factors; state-of-the-art commercial systems. Prerequisite: ECE 511 and CS 426.

ECE 513 Vector Space Signal Processing credit: 4 Hours.

Mathematical tools in a vector space framework, including: finite and infinite dimensional vector spaces, Hilbert spaces, orthogonal projections, subspace techniques, least-squares methods, matrix decomposition, conditioning and regularizations, bases and frames, the Hilbert space of random variables, random processes, iterative methods; applications in signal processing, including inverse problems, filter design, sampling, interpolation, sensor array processing, and signal and spectral estimation. Prerequisite: ECE 310, ECE 313, and MATH 415.

ECE 515 Control System Theory & Design credit: 4 Hours.

Feedback control systems emphasizing state space techniques. Basic principles, modeling, analysis, stability, structural properties, optimization, and design to meet specifications. Same as ME 540. Prerequisite: ECE 486.

ECE 517 Nonlinear & Adaptive Control credit: 4 Hours.

Design of nonlinear control systems based on stability considerations; Lyapunov and hyperstability approaches to analysis and design of model reference adaptive systems; identifiers, observers, and controllers for unknown plants. Prerequisite: ECE 515.

ECE 518 Adv Semiconductor Nanotech credit: 4 Hours.

Semiconductor nanotechnology from the formation and characterization of low-dimensional structures to device applications. Compound semiconductors, epitaxial growth, quantum dots, nanowires, membranes, strain effect, quantum confinement, surface states, 3D transistors, nanolasers, multijunction tandem solar cells, and nanowire thermoelectrics. Handouts are supplemented with papers from the research literature. Critical literature review assignments, research proposals in National Science Foundation format, and oral presentations are required. Prerequisites: ECE 340, ECE 444, and ECE 481.

ECE 519 Hardware Verification credit: 4 Hours.

This course teaches algorithms for verification that are applied to very large scale hardware in the chip design industry. The course teaches symbolic model checking, Binary decision diagrams (BDDs), satisfiability (SAT) based algorithms, symbolic simulation, coverage metrics for simulation, automatic assertion generation, analog circuit verification and post Silicon validation algorithms. The course teaches scalable search algorithms that can be applied to discrete and continuous space models. Same as CS 585. 4 graduate hours. No professional credit.

ECE 520 EM Waves & Radiating Systems credit: 4 Hours.

Fundamental electromagnetic theory with applications to plane waves, waveguides, cavities, antennas, and scattering; electromagnetic principles and theorems; and solution of electromagnetic boundary-value problems.

ECE 523 Gaseous Electronics & Plasmas credit: 4 Hours.

Basic concepts and techniques, both theoretical and experimental, applicable to gaseous electronics, gas and solid plasmas, controlled fusion, aeronomy, gas lasers, and magnetohydrodynamics. Prerequisite: ECE 452 or PHYS 485.

ECE 524 Advanced Computer Security credit: 4 Hours.

Same as CS 563. See CS 563.

ECE 526 Distributed Algorithms credit: 4 Hours.

Theoretical aspects of distributed algorithms, with an emphasis on formal proofs of correctness and theoretical performance analysis. Algorithms for consensus, clock synchronization, mutual exclusion, debugging of parallel programs, peer-to-peer networks, and distributed function computation; fault-tolerant distributed algorithms; distributed algorithms for wireless networks. Same as CS 539. 4 graduate hours. No professional credit. Prerequisite: One of CS 473, ECE 428, ECE 438.

ECE 527 System-On-Chip Design credit: 4 Hours.

System-on-chip (SOC) design methodology and IP (intellectual property) reuse, system modeling and analysis, hardware/software co-design, behavioral synthesis, embedded software, reconfigurable computing, design verification and test, and design space exploration. Class projects focusing on current SOC design and research. Platform FPGA boards and digital cameras are provided to prototype, test, and evaluate SOC designs. Prerequisite: ECE 391 and ECE 425.

ECE 528 Analysis of Nonlinear Systems credit: 4 Hours.

Nonlinear dynamics, vector fields and flows, Lyapunov stability theory, regular and singular perturbations, averaging, integral manifolds, input-output and input-to-state stability, and various design applications in control systems and robotics. Same as ME 546 and SE 520. 4 graduate hours. No professional credit. Prerequisite: ECE 515 and MATH 444 or MATH 447.

ECE 530 Large-Scale System Analysis credit: 4 Hours.

Fundamental techniques for the analysis of large-scale electrical systems, including methods for nonlinear and switched systems. Emphasis on the importance of the structural characteristics of such systems. Key aspects of static and dynamic analysis methods. Prerequisite: ECE 464 and ECE 476.

ECE 531 Theory of Guided Waves credit: 4 Hours.

Propagation of electromagnetic waves in general cylindrical waveguides; stationary principles; non-uniform inhomogeneously filled waveguides; mode and power orthogonality; losses in waveguides; analytical and numerical techniques; microwave integrated circuits waveguides; optical waveguides. Prerequisite: ECE 520. Recommended: MATH 556.

ECE 532 Compound Semicond & Diode Lasers credit: 4 Hours.

Compound semiconductor materials and their optical properties. Diode lasers including quantum well heterostructure lasers, strained layer lasers, and quantum wire and quantum dot lasers. Current topics in diode laser development. Prerequisite: ECE 340 and PHYS 486. Recommended: ECE 455; credit or concurrent registration in ECE 536.

ECE 534 Random Processes credit: 4 Hours.

Basic concepts of random processes; linear systems with random inputs; Markov processes; spectral analysis; Wiener and Kalman filtering; applications to systems engineering. Prerequisite: One of ECE 313, MATH 461, STAT 400.

ECE 535 Theory of Semicond & Devices credit: 4 Hours.

Introductory quantum mechanics of semiconductors; energy bands; dynamics of Bloch electrons in static and high-frequency electric and magnetic fields; equilibrium statistics; transport theory, diffusion, drift, and thermoelectric effects; characteristics of p-n junctions, heterojunctions, and transistor devices. Same as PHYS 565. Prerequisite: Senior-level course in quantum mechanics or atomic physics.

ECE 536 Integ Optics & Optoelectronics credit: 4 Hours.

Integrated optical and optoelectronic devices; theory of optical devices including laser sources, waveguides, photodetectors, and modulations of these devices. Prerequisite: One of ECE 455, ECE 487, PHYS 486. Recommended: ECE 488.

ECE 537 Speech Processing Fundamentals credit: 4 Hours.

Development of an intuitive understanding of speech processing by the auditory system, in three parts. I): The theory of acoustics of speech production, introductory acoustic phonetics, inhomogeneous transmission line theory (and reflectance), room acoustics, the short-time Fourier Transform (and its inverse), and signal processing of speech (LPC, CELP, VQ). II): Psychoacoustics of speech perception, critical bands, masking (JNDs), and the physiology of the auditory pathway (cochlear modeling). III): Information theory entropy, channel capacity, the confusion matrix, state models, EM algorithms, and Bayesian networks. Presentation of classic papers on speech processing and speech perception by student groups. MATLAB (or equivalent) programming in majority of assignments. Prerequisite: ECE 310.

ECE 539 Adv Theory Semicond & Devices credit: 4 Hours.

Advanced topics of current interest in the physics of semiconductors and solid-state devices. Prerequisite: ECE 535.

ECE 540 Computational Electromagnetics credit: 4 Hours.

Basic computational techniques for numerical analysis of electromagnetics problems, including the finite difference, finite element, and moment methods. Emphasis on the formulation of physical problems into mathematical boundary-value problems, numerical discretization of continuous problems into discrete problems, and development of rudimentary computer codes for simulation of electromagnetic fields in engineering problems using each of these techniques. Same as CSE 530. Prerequisite: CS 357; credit or concurrent registration in ECE 520.

ECE 541 Computer Systems Analysis credit: 4 Hours.

Development of analytical models of computer systems and application of such models to performance evaluation: scheduling policies, paging algorithms, multiprogrammed resource management, and queuing theory. Same as CS 541. Prerequisite: One of ECE 313, MATH 461, MATH 463.

ECE 542 Fault-Tolerant Dig Syst Design credit: 4 Hours.

Advanced concepts in hardware and software fault tolerance: fault models, coding in computer systems, module and system level fault detection mechanism, reconfiguration techniques in multiprocessor systems and VLSI processor arrays, and software fault tolerance techniques such as recovery blocks, N-version programming, checkpointing, and recovery; survey of practical fault-tolerant systems. Same as CS 536. Prerequisite: ECE 411.

ECE 543 Statistical Learning Theory credit: 4 Hours.

Advanced graduate course on modern probabilistic theory of adaptive and learning systems. The following topics will be covered; basics of statistical decision theory; concentration inequalities; supervised and unsupervised learning; empirical risk minimization; complexity-regularized estimation; generalization bounds for learning algorithms; VC dimension and Rademacher complexities; minimax lower bounds; online learning and optimization. Along with the general theory, the course will discuss applications of statistical learning theory to signal processing, information theory, and adaptive control. Basic prerequisites include probability and random processes, calculus, and linear algebra. Other necessary material and background will be introduced as needed. 4 graduate hours. No professional credit. Prerequisite: ECE 534 or equivalent.

ECE 544 Topics in Signal Processing credit: 4 Hours.

Lectures and discussions related to advanced topics and new areas of interest in signal processing: speech, image, and multidimensional processing. May be repeated 8 hours in a term to a total of 20 hours. Credit towards a degree from multiple offerings of this course is not given if those offerings have significant overlap, as determined by the ECE department. Prerequisite: As specified each term. It is expected that each offering will have a 500-level course as prerequisite or co-requisite.

ECE 545 Advanced Physical Acoustics credit: 4 Hours.

Advanced topics in acoustics including physical properties of a fluid; linear propagation phenomena; nonlinear phenomena such as radiation force, streaming, and harmonic generation; cavitation; absorption and dispersion. Prerequisite: One of ECE 473, ECE 520, TAM 518.

ECE 546 Advanced Signal Integrity credit: 4 Hours.

Signal integrity aspects involved in the design of high-speed computers and high-frequency circuits; addressing the functions of limitations of interconnects for system-level integration. Topics explored include packaging structures, power and signal distribution, power level fluctuations, skin effect, parasitics, noise, packaging hierarch, multilayer wiring structures as well as the modeling and simulation of interconnects through the use of computer-aided design (CAD) and computational electromagnetics. Prerequisite: ECE 520.

ECE 547 Topics in Image Processing credit: 4 Hours.

Fundamental concepts, techniques, and directions of research in image processing: two-dimensional Fourier transform and filtering, image digitization, coding, restoration, reconstruction, analysis, and recognition. Same as CSE 543. Prerequisite: ECE 310 and ECE 313.

ECE 548 Models of Cognitive Processes credit: 4 Hours.

Same as CS 548. See CS 548.

ECE 549 Computer Vision credit: 4 Hours.

Information processing approaches to computer vision, algorithms, and architectures for artificial intelligence and robotics systems capable of vision: inference of three-dimensional properties of a scene from its images, such as distance, orientation, motion, size and shape, acquisition, and representation of spatial information for navigation and manipulation in robotics. Same as CS 543. Prerequisite: ECE 448 or CS 225.

ECE 550 Advanced Robotic Planning credit: 4 Hours.

Computational approaches to robot motion planning, configuration space, algebraic decompositions, artificial potential fields, retraction, approximate decompositions, planning under uncertainty, grasp planning, and task-level planning. Same as AE 583. Prerequisite: ECE 470.

ECE 551 Digital Signal Processing II credit: 4 Hours.

Basic concept review of digital signals and systems; computer-aided digital filter design, quantization effects, decimation and interpolation, and fast algorithms for convolution and the DFT; introduction to adaptive signal processing. Prerequisite: ECE 310 and ECE 313.

ECE 552 Numerical Circuit Analysis credit: 4 Hours.

Formulation of circuit equations; sparse matrix algorithms for the solution of large systems, AC, DC, and transient analysis of electrical circuits; sensitivity analysis; decomposition methods. Same as CSE 532. Prerequisite: MATH 415 and ECE 210.

ECE 553 Optimum Control Systems credit: 4 Hours.

Theoretical and algorithmic foundations of deterministic optimal control theory, including calculus of variations, maximum principle, and principle of optimality; the Linear-Quadratic-Gaussian design; differential games and H-infinity optimal control design. Prerequisite: ECE 313 and ECE 515.

ECE 554 Dynamic System Reliability credit: 4 Hours.

Reliability and dynamic performance evaluation for large-scale and complex systems; building on system-theoretic modeling, analysis, and design techniques. Design methods for reliability including architecture design and filter-based fault detection and isolation. Analytical methods for optimal redundancy allocation, sensitivity analysis methods for iterative system design, and other techniques for design optimization. Mechatronic systems used in aircraft and automotive, power electronic systems, and electrical power systems are examples of applications discussed. Same as ME 544. Prerequisite: ECE 313 and ECE 515, or permission of instructor.

ECE 555 Control of Stochastic Systems credit: 4 Hours.

Stochastic control models; development of control laws by dynamic programming; separation of estimation and control; Kalman filtering; self-tuning regulators; dual controllers; decentralized control. Prerequisite: ECE 515 and ECE 534.

ECE 556 Coding Theory credit: 4 Hours.

Coding theory with emphasis on the algebraic theory of cyclic codes using finite field arithmetic, decoding of BCH and RS codes, finite field Fourier transform and algebraic geometry codes, convolutional codes, and trellis decoding algorithms. Prerequisite: MATH 417.

ECE 558 Digital Imaging credit: 4 Hours.

Multidimensional signals, convolution, transforms, sampling, and interpolation; design of two-dimensional digital filters; sensor array processing and range-doppler imaging; applications to synthetic aperture radar, optics, tomography, radio astronomy, and beam-forming sonar; image estimation from partial data. Prerequisite: ECE 310 and ECE 313.

ECE 559 Topics in Communications credit: 4 Hours.

Lectures and discussion related to advanced topics and new areas of interest in the theory of communication systems: information theory, coding theory, and communication network theory. May be repeated in the same term, if topics vary, to a maximum of 12 graduate hours; may be repeated in separate terms, if topics vary, to a maximum of 16 graduate hours. Credit toward a degree from multiple offerings of this course is not given if those offerings have significant overlap, as determined by the ECE department. Prerequisite: As specified each term. (It is expected that each offering will have a 500-level course as a prerequisite or co-requisite.)

ECE 560 VLSI in DSP & Communication credit: 4 Hours.

Basic concepts in digital signal processing, VLSI design methodologies, VLSI DSP building blocks; algorithm transformation and mapping techniques, high-speed, low-power transforms, applications to digital filtering; basics of finite-field arithmetic, forward-error correction algorithms, and architectures; DSP implementation platforms, programmable DSPs, media processors, FPGAs, ASICs, case studies of multimedia communications systems, video codecs, xDSL, and cable modems. Homework and a term project apply these concepts in the design of VLSI architectures for digital signal processing and communication systems. Prerequisite: ECE 310.

ECE 561 Detection & Estimation Theory credit: 4 Hours.

Detection and estimation theory, with applications to communication, control, and radar systems; decision-theory concepts and optimum-receiver principles; detection of random signals in noise, coherent and noncoherent detection; parameter estimation, linear and nonlinear estimation, and filtering. Prerequisite: ECE 534.

ECE 562 Advanced Digital Communication credit: 4 Hours.

Digital communication systems modulation, demodulation, signal space methods, channel models, bit error rate, spectral occupancy, synchronization, equalization, trellis-coded modulation, wireless channels, multi-antenna systems, spread spectrum, and orthogonal frequency modulation. Prerequisite: ECE 361 or ECE 459.

ECE 563 Information Theory credit: 4 Hours.

Mathematical models for channels and sources; entropy, information, data compression, channel capacity, Shannon's theorems, and rate-distortion theory. Prerequisite: One of ECE 534, MATH 464, MATH 564.

ECE 564 Modern Light Microscopy credit: 4 Hours.

Current research topics in modern light microscopy: optics principles (statistical optics, Gaussian optics, elastic light scattering, dynamic light scattering); traditional microscopy (bright field, dark field, DIC, phase contrast, confocal, epi-fluorescence, confocal fluorescence); current research topics (multiphoton, CARS, STED, FRET, FIONA, STORM, PALM, quantitative phase). Prerequisite: One of ECE 460, MSE 405, PHYS 402.

ECE 565 Energy Dissipation Electronics credit: 4 Hours.

Power dissipation in modern electronics, from fundamentals to system-level issues. Energy transfer through electrons and phonons, mobility and thermal conductivity, power dissipation in modern devices (CMOS, memory, nanowires, nanotubes), circuit leakage, thermal breakdown, interconnects, thermometry, heat sinks. Handouts are supplemented with papers from the research literature, Wikipedia assignments, a final conference-type group paper, and oral presentations required. Prerequisite: ECE 441.

ECE 566 Computational Inference and Learning credit: 4 Hours.

Computational inference and machine learning have seen a surge of interest in the last 15 years, motivated by applications as diverse as computer vision, speech recognition, analysis of networks and distributed systems, big-data analytics, large-scale computer simulations, and indexing and searching of very large databases. This course introduces the mathematical and computational methods that enable such applications. Topics include computational methods for statistical inference, sparsity analysis, approximate inference and search, and fast optimization. 4 graduate hours. No professional credit. Prerequisite: ECE 490, ECE 534.

ECE 567 Communication Network Analysis credit: 4 Hours.

Performance analysis and design of multiple-user communication systems; emphasis on rigorous formulation and analytical and computational methods; includes queuing networks, decentralized minimum delay routing, and dynamic network flow control. Prerequisite: CS 438; one of ECE 534, MATH 464, MATH 564.

ECE 568 Model & Cntrl Electromech Syst credit: 4 Hours.

Fundamental electrical and mechanical laws for derivation of machine models; simplifying transformations of variables in electrical machines; power electronics for motor control; time-scale separation; feedback linearization and nonlinear control as applied to electrical machines. Typical electromechanical applications in actuators, robotics, and variable speed drives. Prerequisite: ECE 431 and ECE 515.

ECE 569 Inverse Problems in Optics credit: 4 Hours.

Physical optics, solution of linear inverse problems, and computed imaging. Forward problems in diffraction, asymptotics, ray propagation, x-ray projections, scattering, sources, optical coherence tomography, and near-field optics. Solution of associated inverse problems including back-propagation, back-projection, Radon transforms (x-ray CT), inverse scattering, source localization, interferometric synthetic aperture microscopy, and near-field tomography. Special topics as time permits. Prerequisite: ECE 460.

ECE 570 Nonlinear Optics credit: 4 Hours.

Light propagation in anisotropic crystals; second- and third-order nonlinear susceptibility and electro-optic effect; discussion of the relationship of these effects along with such applications as light modulation, harmonic generation, and optical parametric amplification and oscillation. Prerequisite: ECE 520.

ECE 571 EM Waves in Inhomogen Media credit: 4 Hours.

Electromagnetic waves in layered media; plane wave expansion of electromagnetic point source field; Sommerfeld integrals; transient response; WKB method with asymptotic matching; scattering by junction discontinuity; surface integral equation; volume integral equation; inverse problems. Prerequisite: MATH 446; ECE 520 or PHYS 505.

ECE 572 Quantum Opto-Electronics credit: 4 Hours.

Theoretical approach to quantum mechanics and atomic physics, with many applications in spin resonance and modern maser theory. Prerequisite: PHYS 485 recommended.

ECE 573 Power System Control credit: 4 Hours.

Energy control center functions, state estimation and steady state security assessment techniques, economic dispatch, optimal power flow, automatic generation control, and dynamic equivalents. Prerequisite: ECE 476; credit or concurrent registration in ECE 530.

ECE 574 Nanophotonics credit: 4 Hours.

Nanoscale interaction between light and semiconductors, metals, or composites; plasmonics, cavity electrostatics, polariton cavity condensation, sub-wavelength structures, metamaterials, and applications. Prerequisite: ECE 455 or ECE 572; ECE 487 or PHYS 486.

ECE 576 Power System Dynm & Stability credit: 4 Hours.

Detailed modeling of the synchronous machine and its controls, such as excitation system and turbine-governor dynamics; time-scales and reduced order models; non-linear and linear multi-machine models; stability analysis using energy functions; power system stabilizers. Prerequisite: ECE 476; credit or concurrent registration in ECE 530.

ECE 577 Advanced Antenna Theory credit: 4 Hours.

Selected topics from recent engineering literature on antennas supplemented by advanced topics in electromagnetic theory needed for comprehension; current techniques for analysis of wire, slot, horn, frequency independent, quasi-optical, and array antennas. Prerequisite: ECE 520.

ECE 579 Computational Complexity credit: 4 Hours.

Same as CS 579. See CS 579.

ECE 580 Optimiz by Vector Space Methds credit: 4 Hours.

Normed, Banach, and Hilbert spaces; applications of the projection theorem and the Hahn-Banach Theorem to problems of minimum norm, least squares estimation, mathematical programming, and optimal control; the Kuhn-Tucker Theorem and Pontryagin's maximum principle; iterative methods. Prerequisite: MATH 415 or MATH 482; MATH 447.

ECE 581 Advanced Analog IC Design credit: 4 Hours.

Advanced topics in modern analog IC design. Emphasis on CMOS building blocks and circuit techniques as a result of fabrication technology advancement. Noise in linear analog circuits; linear feedback theory and stability; harmonic distortion in weakly nonlinear circuits; switched-capacitor circuit technique and realization; Nyquist-rate and oversampled data converters. Extensive computer simulations required in both homework and final project. Prerequisite: ECE 310 and ECE 483.

ECE 582 Physical VLSI Design credit: 4 Hours.

Basic physical design requirements for VLSI; performance-oriented formulation and optimization of chip partitioning, module placement and interconnection; optimized design and layout of on-chip modules; circuit extraction; high-speed VLSI circuits; yield and reliability analysis; advanced VLSI packaging and parametric testing. Prerequisite: ECE 425 or ECE 482.

ECE 584 Embedded System Verification credit: 4 Hours.

Examines formal analysis and synthesis approaches for discrete, continuous, and hybrid models of computing systems and their physical environment. Introduces timed and hybrid automata models. Analysis techniques including model checking, Hoare-style deduction, and abstractions for safety and stability, and controller synthesis strategies with applications in distributed robotics, automobile system, traffic control, and real-time systems. Same as CS 584. 4 graduate hours. No professional credit. Prerequisite: CS 476 or CS 477.

ECE 585 MOS Device Modeling & Design credit: 4 Hours.

Techniques for characterizing gate oxide and interface properties and reliability, I-V models for circuit simulation, design for control of short channel effects, silicon-on-insulator, and new device structures. Prerequisite: ECE 441.

ECE 586 Topics in Decision and Control credit: 4 Hours.

Lectures and discussions related to advanced topics and new areas of interest in decision and control theory: hybrid, sampled-data, and fault tolerant systems; control over networks; vision-based control; system estimation and identification; dynamic games. May be repeated up to 12 hours within a term, and up to 20 hours total for the course. Credit towards a degree from multiple offerings of this course is not given if those offerings have significant overlap, as determined by the ECE department. Prerequisite: As specified each term. It is expected that each offering will have a 500-level course as prerequisite or co-requisite.

ECE 588 Electricity Resource Planning credit: 4 Hours.

Techniques in electricity resource planning including methodologies for reliability evaluation and assessment, production costing, marginal costing, supply-side and demand-side planning, integrated planning, and planning under competition. Prerequisite: MATH 415, ECE 313, and ECE 476.

ECE 590 Grad Sem in Special Topics credit: 0 to 2 Hours.

Lectures and discussions on current research and literature on advanced topics in electrical engineering. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

ECE 594 Math Models of Language credit: 3 or 4 Hours.

Mathematical models of linguistic structure and their implementation in computational algorithms used in automatic speech understanding and speech synthesis. Statistical and automata-theoretic techniques are studied allowing a quantitative description of acoustic-phonetics, phonology, phonotactics, lexicons, syntax, and semantics. The methods are used to build components of a speech understanding system. For 4 hours credit, an extended project is required. Prerequisite: ECE 537.

ECE 596 Master's Project credit: 1 to 8 Hours.

Individual or team projects in electrical and computer engineering emphasizing advanced engineering analysis and design. May be repeated to a maximum of 16 hours.

ECE 597 Individual Study in ECE credit: 1 to 8 Hours.

Individual projects. Approved written application to department as specified by department or instructor is required. May be repeated. Prerequisite: Consent of instructor.

ECE 598 Special Topics in ECE credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in electrical and computer engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

ECE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Engineering (ENG)

ENG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENG>)

Courses

ENG 100 Engineering Orientation credit: 0 Hours.

Orientation required of new freshmen in the College of Engineering. Approved for S/U grading only.

ENG 101 Engineering at Illinois credit: 1 Hour.

Introduction to undergraduate programs of study available in the College of Engineering and the potential careers of graduates of those programs. Intended for Division of General Studies students who may be interested in becoming an Engineering major or other students who wish to explore engineering careers. Approved for S/U grading only.

ENG 191 International Dimensions of Engrg credit: 1 Hour.

Global views of the engineering profession presented by guest speakers. Key factors for success in global engineering practice, including industrial values, economics, politics, language, cultural values, and social trends. Development of individual plans to engage in international education to enhance career preparation.

ENG 198 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ENG 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

ENG 201 Cooperative Engrg Seminar credit: 0 Hours.

Discussion seminar addressing insights students have gained during co-op experiences. Presentations by co-op participants and discussion of presentation skills. Approved for S/U grading only. For on-campus Cooperative Education students only.

ENG 202 Cooperative Engrg Practice credit: 0 Hours.

Full-time practice of engineering in an off-campus government, industrial or research laboratory environment. Written work report, on-line Experiential Learning Report, and on-line ABET report required. Approved for S/U grading only. May be repeated. Approval of the Director of College of Engineering Experiential Learning Programs required to enroll. For Cooperative Education students only.

ENG 210 Engineering Apprenticeship credit: 0 Hours.

Part-time practice of engineering science in an on-campus research laboratory environment; summary report required. Approved for both letter and S/U grading. May be repeated.

ENG 261 Technology & Mgmt Seminar credit: 1 Hour.

Same as BADM 261. See BADM 261.

ENG 298 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ENG 299 Engineering Study Abroad credit: 0 to 18 Hours.

Illinois credit placeholder for foreign study and mechanism to maintain continuous Illinois enrollment while studying abroad. A detailed proposal must be submitted by the student for approval by the student's department and the college office prior to such study abroad. Final determination of credit and its application toward the degree is made by the college office after a review of the student's work abroad. (Summer Session, 0 to 6 hours).

ENG 300 Engrg Transfer Orientation credit: 0 Hours.

Orientation required of off-campus transfer students in the College of Engineering. Approved for S/U grading only.

ENG 310 Engineering Internship credit: 0 Hours.

Full-time or part-time practice of engineering in an off-campus government, industrial, or research laboratory environment. Written work report, on-line Experiential Learning report and on-line ABET report required. Approved for S/U grading only. May be repeated.

ENG 315 Learning in Community credit: 3 Hours.

Service-learning dedicated to benefiting nonprofit organizations. Learning through inquiry, acquisition of skills and knowledge to address projects, and development of project and team skills. Student teams work on a project of importance proposed by and in partnership with each organization. Projects vary by term. See Class Schedule. May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 12 hours.

ENG 397 Undergraduate Research Abroad credit: 1 to 4 Hours.

Research completed under faculty supervision at a location outside of the United States. Topics and type of assistance vary. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Consent of instructor; Department and college approval of research plan submitted prior to enrollment. Not available to freshman.

ENG 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Approved for both letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ENG 440 International Water Project I credit: 3 Hours.

First of two courses that assists an international rural community in establishing a sustainable water system. Serve a developing community effectively by working closely with alumni mentors and professional advisors on conceptual design development. Have the opportunity to travel to Honduras during Winter Break. Open to students in all majors. Same as LAST 440. 3 undergraduate hours. No graduate credit.

ENG 441 Honduras Water Project II credit: 3 Hours.

Second of two courses that assists an international rural community in establishing a holistic water system. Complete final engineering designs, project funding documents and governance guidance by working closely with alumni mentors and professional advisors. Open to students in all majors. Same as LAST 441. 3 undergraduate hours. No graduate credit. Prerequisite: ENG 440 or instructor approval.

ENG 451 Success in the Workplace credit: 2 Hours.

Guided experiential learning that facilitates the development of professional skills for students participating in career-related internships. Basic business skills such as reading a financial statement and annual report, understanding contracts, and understanding corporate strategy. Interpersonal skills necessary to succeed in industry such as networking, leadership, and communication. 2 undergraduate hours. No graduate credit.

ENG 471 Seminar Energy & Sustain Engrg credit: 1 Hour.

Challenges of developing energy systems and civil infrastructure that are sustainable in terms of resource availability, security, and environmental impact. Guest lecturers focus on: (i) global challenges – future energy demand, geologic sources of energy, climate change, energy-water nexus, energy and security; (ii) markets, policies and systems – economic incentives, policy and law, life cycle analyses; (iii) opportunities for change – CO₂ sequestration, renewable power, bioenergy feedstocks, biofuels for transportation, energy use in buildings, advanced power conversion, the smart grid. 1 undergraduate hour. 1 graduate hour. Prerequisite: MATH 220 or MATH 221; one of CHEM 104, CHEM 204, PHYS 101, PHYS 211. Recommended: NPRE 201.

ENG 491 Interdisciplinary Design Proj credit: 1 to 4 Hours.

Disciplined, multi-department, team-structured project design experience with an overall (or major phase) end-of-term completion date. Projects involve design specification through a proposal, analyses of cost and other tradeoffs among alternative designs, design review, fabrication and assembly, functional and environmental testing, and demonstrations (as applicable). Reports and presentations at the end of each term. Individual engineering activities as well as team responsibilities. 1 to 4 undergraduate hours. No graduate credit. Senior standing required. May be repeated. Credit toward the degree is determined by the student's major department. Prerequisite: Consent of instructor.

ENG 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated in the same or separate terms if topics vary.

ENG 510 Engineering Practice credit: 0 Hours.

Engineering Practice is for engineering graduate students who are completing curricular practical training, either full-time or part-time, that is related to their major field of study and an integral or important part of their program of study. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

ENG 571 Theory Energy & Sustain Engrg credit: 3 or 4 Hours.

Mathematical, scientific, engineering, and economic bases needed to analyze sustainable energy systems and civil infrastructure. Evaluation of current practice and future development of (i) energy extraction and conversion processes from geological, biological, and non-biological resources; (ii) energy usage for transportation, in residential and commercial buildings, and by industry. 3 or 4 graduate hours. No professional credit. Prerequisite: Credit or concurrent registration in ENG 471.

ENG 572 Energy Systems Practicum credit: 1 to 8 Hours.

Literature research and development of written and oral communication skills for preparing for undertaking, completing, and reporting on an internship or equivalent experience. Written report, development of a Web site, and oral presentation required on how experience in an internship or equivalent experience relates to pertinent reading material. 1 to 8 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: NPPE 481 recommended.

ENG 573 Energy Systems Project credit: 1 to 8 Hours.

Design project pertinent to energy systems. Report, development of a Web site, and oral presentation required. 1 to 8 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Recommended: NPPE 481.

ENG 591 Engineering Advanced Seminar credit: 0 or 1 Hours.

Seminar on topics of current interest as announced in the Class Schedule. 0 or 1 graduate hours. No professional credit. Approved for S/U grading only. May be repeated if topics vary. Prerequisite: As specified for each topic offering, see Class Schedule for course description.

ENG 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in engineering intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

Engineering Honors (ENGH)

ENGH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENGH>)

Courses

ENGH 195 Honors Seminar credit: 1 to 4 Hours.

Special lecture sequences or discussion groups for freshman James Scholars to enable them to explore various aspects of technology.

ENGH 397 Honors Independent Study credit: 1 to 4 Hours.

Individual investigations of any phase of engineering selected by James Scholars in engineering and approved by the Engineering Academic Affairs Office. May be repeated. Prerequisite: Consent of instructor.

English (ENGL)

ENGL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENGL>)

Courses

ENGL 101 Intro to Poetry credit: 3 Hours.

Close reading and analysis of poetry and other literary texts. Introduction to argumentative strategies for writing about poetry. Addresses prosody, poetic language (diction, metaphor, image, tone), and major verse forms (the sonnet, elegy, ode, ballad, dramatic monologue, free verse). Students also study poems from a range of literary periods and movements to learn how formal qualities change and develop over time and are relevant to everyday life.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 102 Intro to Drama credit: 3 Hours.

Explores such topics as the history of dramatic form, the major dramatic genres, the dramatic traditions of various cultures, and key terms used in the analysis of dramatic works. Reading plays from the ancient Greeks to the contemporary theatre, students will be taught skills in close reading and literary interpretation. Students will consider the importance of performance, considering how meanings might be represented through visual and aural means.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 103 Intro to Fiction credit: 3 Hours.

An introduction to the study of literature and literary history at the university level. Explores such topics as: the historical role and place of fictional narratives, the idea of genre, relationships between context and meaning in fictional works. Student will develop a critical vocabulary for interpreting and analyzing narrative strategies. Credit is not given for both ENGL 103 and ENGL 109.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 104 Intro to Film credit: 3 Hours.

Thoughtful viewing of diverse films (in required weekly screenings), along with ample discussion and critical reading and writing, to gain understanding of cinematic expression and of film's capacity to entertain and to exert artistic and social influence. Same as MACS 104.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 106 Literature and Experience credit: 3 Hours.

Understanding of the relationship between literature and human experience through the study of significant, recurrent themes. May be repeated one time if topics vary.

ENGL 109 Intro to Fiction-ACP credit: 3 Hours.

Introduction to critical analysis of prose fiction. Explores a wide range of short and long fiction across historical periods; examines narrative strategies such as plot, character, and point of view. Special emphasis placed on good literary critical writing. Course is similar to ENGL 103 except for the additional writing component. Credit is not given for both ENGL 109 and ENGL 103. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts

ENGL 110 Intro Lit Study for Non-Majors credit: 3 Hours.

Introduction to literary genres and literary interpretation, with an emphasis on close reading. For non-majors only.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 112 Literature of Global Culture credit: 3 Hours.

Through literature and films, studies the impact of historical change on individuals and on cultures, the breakdown of borders, the building of new hierarchies of domination and exploitation, the contact and collision between the local and the global, and the transnational and problematic processes of cultural globalization. Same as CWL 112.

ENGL 114 Bible as Literature credit: 3 Hours.

Same as CWL 111 and REL 101. See REL 101.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 115 Intro to British Literature credit: 3 Hours.

Acquaints students with the rich diversity of British prose, poetry, and drama. As a basic introduction to English literature, the course explores a series of literary texts, often thematically related, which appeal to modern readers and at the same time provide interesting insights into the cultural attitudes and values of the periods which produced them.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 116 Intro to American Literature credit: 3 Hours.

Explores a sampling of literature written by American authors, including some combination of essays, narratives, drama, fiction, and poems from various periods in American literary history. Texts for reading and discussion will include literature representing a variety of gender and ethnic perspectives.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 117 Shakespeare on Film credit: 3 Hours.

Explores the ongoing reinterpretation and appropriation of Shakespeare plays in twentieth- and twenty-first century film. Expect to read around five plays and analyze two productions of each play, and to consider how Shakespeare can be transformed to meet different cultural and contextual demands of the screen. Lecture and discussion. Same as MACS 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 119 Literature of Fantasy credit: 3 Hours.

Introduction to the rich traditions of fantasy writing in world literature. While the commercial category of fantasy post-Tolkien will often be the focal point, individual instructors may choose to focus on alternate definitions of the genre: literatures of the fantastic, the uncanny, and the weird; fantasy before the Enlightenment and the advent of realism; fantasy for young adult or child readers; and so on. Same as CWL 119.

ENGL 120 Science Fiction credit: 3 Hours.

Introduction to the study of science fiction, the genre that has both contributed to scientific knowledge and attempted to make sense of the changes that have taken place in the world since the Enlightenment, the onset of industrialization, and the acceleration of technology. Texts are taken from a variety of literary and pop culture sources: pulps and magazines, novels and films, comics and TV shows.

ENGL 121 Introduction to Comics credit: 3 Hours.

Introduction to graphic narratives—comic books, comic strips, graphic novels, manga, webcomics, and so on—from a diverse panoply of cultural, formal, and historical traditions.

ENGL 122 Swords, Sorcery & Sex: The Middle Ages in Popular Culture credit: 3 Hours.

Explores the use of medievalism in contemporary popular culture. Instructors may draw from film, television, music, fiction, graphic novels, gaming, and other sources, and they approach the material from a variety of cultural, historical, and aesthetic traditions. The goal of the course will be to understand how the medieval periods of world cultures have been reinvented in modern times, and how modernity has been constructed in relation and in opposition to the medieval imaginary. Same as MDVL 122. This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 150 Black Literature in America credit: 3 Hours.

Same as AFRO 105. See AFRO 105.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated one time.

Prerequisite: Consent of honors advisor.

ENGL 198 Freshman Honors Seminar credit: 4 Hours.

Introduction to the study of literature, with emphasis on individual work in fundamental problems of literary analysis; works studied are usually a combination either of short poems and short stories or of novels and plays. May be repeated one time if topics vary. Prerequisite: James Scholar standing or other designation as a superior student.

ENGL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Topics course that varies each semester and by section. The topics offered each semester will be listed in the Class Schedule. Approved for letter and S/U grading. May be repeated.

ENGL 200 Intro to the Study of Lit credit: 3 Hours.

Introduction to the study of literature, with an emphasis on interpretive theories and methods as well as the formal distinctions between the major literary genres. For majors only.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 202 Medieval Lit and Culture credit: 3 Hours.

Introduction to the diverse literatures and cultures of the global Middle Ages (Approx. 500-1500 CE). Students will read works by medieval authors in Modern English translation, with particular attention to placing works in their historical and material contexts. Same as CWL 253 and MDVL 201. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 204 Renaissance Lit and Culture credit: 3 Hours.

Readings in English and continental literary masterpieces with attention to significant cultural influences. Same as CWL 255. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 206 Enlightenment Lit and Culture credit: 3 Hours.

Study in Anglophone and global texts from the period 1600 to 1800, with attention to cultural and historical contexts. Same as CWL 257.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 207 Romantic Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual arts, and social criticism of the British Romantic period, with attention to broader cultural issues.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

ENGL 208 Victorian Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual arts, and social criticism of the British Victorian period, with attention to broader cultural issues.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 209 British Lit to 1800 credit: 3 Hours.

Historical and critical study of selected works of British literature to 1800 in chronological sequence. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 210 British Lit 1800 to Present credit: 3 Hours.

Historical and critical study of selected works of British literature after 1800 in chronological sequence. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 211 Intro to Mod African Lit credit: 3 Hours.

Same as AFST 210 and CWL 210. See AFST 210.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

ENGL 213 Modernist Lit and Culture credit: 3 Hours.

Study of literature, philosophy, visual and performing arts, social criticism, and popular sciences of the Anglo-American Modern period (1880-1920), with attention to broad cultural issues. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 216 Legends of King Arthur credit: 3 Hours.

Arthurian myth and legend is one of the most enduring literary traditions of Western Europe, and the characters of Arthur, Merlin, Guinevere, Lancelot, Gawain and Mordred were as popular in the Middle Ages as they are today. Originating in early medieval Wales, the legends traveled through England to France and Germany and throughout the modern world. Students will study the development of the Arthurian tradition in chronicles, poetry, romances, lais, and fabliaux, comparing variations across cultural and historical boundaries. Same as CWL 216 and MDVL 216. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 218 Introduction to Shakespeare credit: 3 Hours.

Representative readings of Shakespeare's drama and poetry in the context of his age, with emphasis on major plays; selections vary from section to section. Does not fulfill Shakespeare requirement for the English major. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 220 Literature and Science credit: 3 Hours.

Explores the mutual influences of science and literature in some key literary and non-literary texts. Covers scientific texts, literary works, and cultural theory to explore how and why scientific knowledge is intimately linked to literature.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 222 Jewish American Literature credit: 3 Hours.

Same as CWL 209 and JS 209. See JS 209.

ENGL 223 Jewish Storytelling credit: 3 Hours.

Same as CWL 221, JS 220, REL 220, and YDSH 220. See YDSH 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 224 Latina/o Popular Culture credit: 3 Hours.

Same as LLS 240 and SPAN 240. See LLS 240.

ENGL 225 Intro to Latina/o Literature credit: 3 Hours.

Same as LLS 242 and SPAN 242. See LLS 242.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

ENGL 241 Beginnings of Modern Poetry credit: 3 Hours.

An inquiry into some of the more complex and innovative poetry written in English. Students will read poets such as Frost, Robinson, Sandburg, Lindsay, Hardy, Hopkins, Housman, Yeats, Lawrence, the Imagists, and the early Pound and Eliot. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

ENGL 242 Poetry Since 1940 credit: 3 Hours.

An exploration of English-language poetry written since World War II.

Students study some or all of the following major poetic movements of the period: the Beats, the New York School, the Black Mountain poets, the Confessional school, the Deep Image poets, the British "movement" and post-"Movement" poets, the Black Arts movement, Feminist poets, Post-colonial poetry, Language poets, and the current multifarious poetry scene. Prerequisite: Completion of the Composition I requirement.

ENGL 243 Modern Drama I credit: 3 Hours.

Ibsen to O'Neill. Same as CWL 265. Prerequisite: Completion of the Composition I requirement.

ENGL 244 Modern Drama II credit: 3 Hours.

Pirandello to the present. Same as CWL 266. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 245 The Short Story credit: 3 Hours.

Historical and critical study of the short story (American and European) from the early nineteenth century to the present. Same as CWL 267.

Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

ENGL 247 The British Novel credit: 3 Hours.

A study of some of the more noteworthy and influential writers of the last two hundred and fifty years. The course traces the development of the novel as a genre that both celebrated and critiqued Britain and British nationalism. Examines how the novel has been important culturally over time. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 248 Brit, Amer & Contin Fiction credit: 3 Hours.

Examination of important thematic and structural relationships - influences, parallels, and variations - among selected major works of the nineteenth and twentieth centuries; readings chosen from works of Bronte, Hardy, Lawrence, Woolf, James, Faulkner, Bellow, Oates, Dostoevsky, Tolstoy, Stendhal, Flaubert, Camus, Kafka, Mann, Hesse, Moravia, and Pavese. All works read in English. Same as CWL 269.

Prerequisite: Completion of the Composition I requirement.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 250 The American Novel to 1914 credit: 3 Hours.

Critical study of selected American novels from the late eighteenth century to 1914. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 251 The American Novel Since 1914 credit: 3 Hours.

Critical study of selected American novels from 1914 to the present. Prerequisite: Completion of the Composition I requirement.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 253 Topics in Lit and New Media credit: 3 Hours.

Introduction to the role technological invention has played in history of print media and how literary aesthetics are changing with the advent of new media, such as software, video games, and graphic novels. We will consider material formats, genres, and modes of production along with the cultural, political, and societal implications of different forms and formats. May be repeated in separate terms up to 6 hours.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 255 Survey of American Lit I credit: 3 Hours.

American literature and its cultural backgrounds to 1870. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 256 Survey of American Lit II credit: 3 Hours.

American literature and its cultural backgrounds after 1870. Prerequisite: Completion of the Composition I requirement and ENGL 200.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 259 Afro-American Literature I credit: 3 Hours.

Historical and critical study of Afro-American literature in its social and cultural context from the beginning to 1915. Same as AFRO 259 and CWL 259. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

ENGL 260 Afro-American Literature II credit: 3 Hours.

Historical and critical study of Afro-American literature in its social and cultural context since 1915. Same as AFRO 260 and CWL 260. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

ENGL 261 Topics in Lit and Culture credit: 3 Hours.

Introductory study of variety of topics in literature and culture, including those that bridge traditional historical periods, focus on themes or movements, and cross disciplinary boundaries. May be repeated up to 6 hours in same or separate terms if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 265 Intro to American Indian Lit credit: 3 Hours.

Same as AIS 265. See AIS 265.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 266 Grimm's Fairy Tales in Context credit: 3 Hours.

Same as CWL 254 and GER 251. See GER 251.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 267 Grimms' Fairy Tales - ACP credit: 3 Hours.

Same as CWL 250 and GER 250. See GER 250.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

ENGL 268 The Holocaust in Context - ACP credit: 3 Hours.

Same as CWL 271 and GER 260. See GER 260.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

ENGL 269 The Holocaust in Context credit: 3 Hours.

Same as CWL 273 and GER 261. See GER 261.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

ENGL 270 American Film Genres credit: 3 Hours.

Introduction to the study of the dominant genres or types U.S. cinema. Examines the elements that constitute genres (such as visual and narrative patterns), the formation and reshaping of genres by filmmakers and the entertainment industry, the social and cultural factors that influence the genre cycles and subgenres, and the landmark works of each genre. The course treats several genres in historical perspective or focus on a single genre. May be repeated in separate terms up to 6 hours if topics vary.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 272 Minority Images in Amer Film credit: 3 Hours.

Addresses how a range of films made in the United States have represented diverse ethnicities and cultures in relation to each other and to dominant American media conventions and social ideas. A comparative, case study approach examines racial and gender stereotyping, historical and economic factors, and reactions of various audiences to the films. Same as AFRO 272. Prerequisite: Fulfillment of the Composition I English requirement; sophomore standing or above. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 273 American Cinema Since 1950 credit: 3 Hours.

Explores key issues in American cinema from 1950 to the present, structured around central problems of film studies (such as authorship, genre, narratology, film style, gender analysis, and the spectacle of violence), contextualizing them within moments of major transition in the American film industry. Viewing and discussion of a major film each week. Same as MACS 273. Prerequisite: Completion of the Composition I requirement.

ENGL 274 Literature and Society credit: 3 Hours.

Major literary works presented within the context of social issues of their time. May be repeated with the permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 275 Am Indian and Indigenous Film credit: 3 Hours.

Same as AIS 275 and MACS 275. See AIS 275. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 276 Asian Film Genres credit: 3 Hours.

Studies a variable selection of popular film genres produced and circulated in Asia (e.g., martial arts, horror, musicals, anime, melodramas, science fiction, monster movies, comedy) that have an impact across the region, with emphasis on East and Southeast Asia, and beyond. Takes a historical and transnational comparative approach to analyzing shifting narrative and visual and other cinematic realizations of each genre across different contexts, including Western reception and cross-cultural adaptations. Same as CWL 276 and EALC 276. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ENGL 280 Women Writers credit: 3 Hours.

Study of British and American women authors. Same as GWS 280. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 281 Women in the Lit Imagination credit: 3 Hours.

Study of the way various writers, both male and female, have portrayed woman's image, social role, and psychologies in British, American, or Anglophone literature. Same as GWS 281. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: Completion of the Composition I requirement.

ENGL 283 Jewish Sacred Literature credit: 3 Hours.

Same as CWL 283 and REL 283. See REL 283. This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 284 Modern Jewish Literature credit: 3 Hours.

Surveys imaginative literature by Jewish authors from the Enlightenment to the present, including fiction, poetry, drama, and autobiography written in English or translated from other languages. Same as CWL 284 and REL 284. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Humanities - Lit Arts

ENGL 285 Postcolonial Lit in English credit: 3 Hours.

Examination of selected postcolonial literature, theory, and film as texts that "write back" to dominant European representations of power, identity, gender and the Other. Postcolonial writers, critics and filmmakers studied may include Franz Fanon, Edward Said, Aime Cesaire, Ousmane Sembene, Chinua Achebe, Michelle Cliff, Mahesweta Devi, Buchi Emecheta, Derek Walcott and Marlene Nourbese-Philip. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

ENGL 286 Asian American Literature credit: 3 Hours.

Introduction to Asian American literary studies and culture through the reading of major works of literature selected from but not limited to the following American ethnic subgroups: Chinese, Filipino, Japanese, Korean, Indian, Pakistani, and Vietnamese. Same as AAS 286. Prerequisite: Completion of the Composition I requirement. This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

ENGL 290 Individual Study credit: 0 to 3 Hours.

Study of selected topics. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours. Students may register in more than one section per term. Prerequisite: Consent of instructor.

ENGL 293 The Anthropocene credit: 3 Hours.

Focuses on the current historical period of humans' relative dominance over major Earth systems. Introduces students to debates surrounding the scientific basis for the Anthropocene, followed by a survey of its major historical periodizations, from the so-called "Paleo-Anthropocene" of human agriculture, to industrialization, to the post-1950 "Great Acceleration" in economic development and resource consumption whose consequences we now face in crisis phenomena such as climate change, water scarcity, resource wars, and environmental refugeeism. Same as ESE 293.

ENGL 300 Writing About Lit Text&Culture credit: 3 Hours.

Writing-intensive, variable topic course designed to improve English majors' ability to write clear, well-organized, analytically sound and persuasively argued essays relevant to literary studies. Introduces students to some strategies of literary criticism and research through examination of critical texts appropriate to course topic. For majors only. Prerequisite: Completion of the Composition I requirement; one year of college literature or consent of instructor. This course satisfies the General Education Criteria for:
Advanced Composition

ENGL 301 Critical Approaches to Lit&Text credit: 3 Hours.

Introduction to influential critical methods and to the multiple frameworks for interpretation as illustrated by the intensive analysis of selected texts. For majors only. Prerequisite: Completion of the Composition I requirement and ENGL 200.

ENGL 310 Introduction to the Study of the English Language credit: 3 Hours.

Topics in the study of the English language, with emphasis on one or more of the following: the social, political, historical, technological, legal, and economic aspects of language use. Credit is not given for both ENGL 401 and ENGL 310.

ENGL 311 History of the English Language credit: 3 Hours.

Language variation and change from the earliest forms of English to the present day, with emphasis on the rise of Standard English and the social, geographic, and cultural aspects of linguistic change in English. Credit is not given for both ENGL 403 and ENGL 311.

ENGL 322 Dostoevsky credit: 3 Hours.

Same as CWL 324 and RUSS 322. See RUSS 322.

ENGL 323 Tolstoy credit: 3 Hours.

Same as CWL 323 and RUSS 323. See RUSS 323.

ENGL 325 Topics in LGBT Lit & Film credit: 3 Hours.

Explores topics on representations of non-heteronormative sexuality in canonical and recovered historical texts and in contemporary literature, on literature by LGBT authors, and on theories of sexuality that pertain to systems of textual and cultural meaning. May be repeated in separate terms to a maximum of 6 hours.

ENGL 330 Slavery and Identity credit: 3 Hours.

Explores slavery in the Americas through its representation in literature over time. Using a variety of disciplinary approaches, we will look at the enslaved, the enslavers, and the middle merchants who facilitated the slave trade, and will examine the experience of slavery and the economic, political, religious, and scientific justifications used to maintain it. We will also examine the African cultural traditions from which the slaves emerged and the aspects of it that lent to creation of the new U.S. culture.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

ENGL 333 Memoir & Autobiography credit: 3 Hours.

Same as GWS 333. See GWS 333.

ENGL 359 Lit Responses to the Holocaust credit: 3 Hours.

Same as CWL 320, JS 320, REL 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

ENGL 360 Environmental Writing credit: 3 Hours.

Same as ESE 360. See ESE 360.

This course satisfies the General Education Criteria for:

Advanced Composition

ENGL 373 Special Topics in Film Studies credit: 3 Hours.

Extended investigation of major subjects and issues in cinema and other media; topics vary and typically include studies of author/directors, genres, historical movements, critical approaches, and themes. Same as MACS 373. May be repeated with permission of English advising office to a maximum of 6 hours if topics vary. Prerequisite: One college-level course in film studies or literature.

ENGL 374 World Cinema in English credit: 3 Hours.

Course systematically addresses cinema movements and films of different periods, genres, themes and styles produced in one or two Anglophone countries other than the U.S. (e.g., Great Britain, Ireland, Australia, New Zealand, Canada, South Africa, and regions with Anglophone film movements or strands like South Asia and the Caribbean). Topics could include cinema in relation to relevant distinctive national and cultural histories, local audiences and production circumstances, and the challenges of international distribution in light of Hollywood's global dominance. Meets for 110 minutes twice a week, with some class time devoted to film screenings (not always on same day) and some longer feature films scheduled in required out-of-class screenings announced well in advance. May be repeated to a maximum of 6 credit hours in separate terms if topics vary.

ENGL 378 Fairy Tales & Gender Formation credit: 3 Hours.

Same as GWS 378. See GWS 378.

ENGL 380 Topics in Writing Studies credit: 3 Hours.

Advanced-level work in the field of Writing Studies. Building upon a traditional disciplinary understanding of writing as rhetoric, this course invites students to call upon sociological, anthropological, and/or ideological approaches to the study of writing in order to understand the myriad ways that writing makes meaning(s). See Class Schedule for topics. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Completion of the Composition I requirement.

ENGL 390 Advanced Individual Study credit: 3 Hours.

Advanced study of selected topics. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours. Prerequisite: Consent of instructor.

ENGL 391 Honors Individual Study credit: 3 Hours.

Study of selected topics. Restricted to English and English education majors with a 3.33 average who are working towards the degree with distinction in English or in English education. May be repeated to a maximum of 6 hours. Prerequisite: Enroll in undergraduate advising office.

ENGL 396 Honors Seminar I credit: 3 Hours.

Themes, movements, and forms in British, American, and Anglophone literature. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 397 Honors Seminar II credit: 3 Hours.

Periods in British, American, and Anglophone literature. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 398 Honors Seminar III credit: 3 Hours.

Major British, American, and Anglophone authors. Each seminar considers one or two major authors. May be repeated. Prerequisite: A 3.33 grade-point average or consent of the English Department's Director of Undergraduate Studies. Restricted to English and Rhetoric majors.

ENGL 402 Descriptive English Grammar credit: 3 or 4 Hours.

An introduction to English linguistics with emphasis on the phonetic, syntactic, and semantic structures of English; language variation, standardization, and change; language legislation and linguistic rights; English as a world language; and the study of language in American schools. Same as BTW 402. 3 undergraduate hours. 4 graduate hours.

ENGL 404 Engl Grammar for ESL Teachers credit: 3 or 4 Hours.

Same as EIL 422. See EIL 422.

ENGL 407 Introduction to Old English credit: 3 or 4 Hours.

Introduction to the form of English spoken and written prior to about AD 1100. Exploring concepts of cultural, historical, and linguistic change, students will learn to read Old English texts in the original. Readings include examples from the prose tradition (e.g., Bede's story of the poet Caedmon and the Anglo-Saxon Chronicle) as well as poetic texts (e.g., *The Dream of the Rood* and *The Wanderer*). Same as MDVL 407. 3 undergraduate hours. 4 graduate hours.

ENGL 411 Chaucer credit: 3 or 4 Hours.

A selection of Chaucer's major works read in Middle English. Instructors will usually emphasize either the *Canterbury Tales* or *Troilus and Criseyde* and the dream visions, but alternate combinations of texts are possible. Students will also be introduced to Chaucer's fourteenth-century context. Same as MDVL 411. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 412 Topics in Medieval Brit Lit credit: 3 or 4 Hours.

Advanced topics course exploring the literatures of medieval Britain, especially Old and/or Middle English but with some attention to Celtic, French, Latin, and Norse texts in translation. Same as CWL 417 and MDVL 410. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 416 Topics in Brit Drama to 1660 credit: 3 or 4 Hours.

Advanced topics course devoted to dramatic practice in the medieval and/or early modern British Isles. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary; Graduate students may repeat if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 418 Shakespeare credit: 3 or 4 Hours.

Survey of the plays and poems of William Shakespeare. Reading assignments will reflect the generic diversity and historical breadth of Shakespeare's work. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 421 Later Renaiss Poetry & Prose credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 423 Milton credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 426 Early 18th Century Literature credit: 3 or 4 Hours.

British Literature between 1600—the restoration of Charles II to the throne—and 1740. Focus on the plays, poems, and fiction by male and female authors with particular attention to issues of gender relations, colonialism and imperial expansion, and class tensions. Writers covered may include Aphra Behn, Alexander Pope, Eliza Haywood, Jonathan Swift, John Dryden, the Earl of Rochester, Daniel Defoe, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 427 Later 18th Century Literature credit: 3 or 4 Hours.

Focused study of texts produced in Great Britain and its empire between roughly 1740 and 1790. Writers may include Laurence Sterne, Mary Leapor, Thomas Warton, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 428 British Drama 1660-1800 credit: 3 or 4 Hours.

Focused study of the major male and female playwrights who wrote between 1660 (the reopening of the theaters after the Interregnum) and roughly 1800. Particular attention will be devoted to the social, cultural, political, and economic contexts of theatrical performance, and to the major issues dealt with on the London stage: sexual morality, the role of women in a patrilineal society, and the problems of empire, trade, and colonialism. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 429 18th Century Fiction credit: 3 or 4 Hours.

Focused study of British and Anglophone fiction in the eighteenth century. Authors may include Defoe, Swift, Haywood, Fielding, Richardson, Sterne, Burney, Walpole, Radcliffe, and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 431 Topics in British Romantic Lit credit: 3 or 4 Hours.

Focused study of British literature between roughly 1785 and 1832. Authors may include Wollstonecraft, Wordsworth, Coleridge, Keats, Byron, Austen and others. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 434 Victorian Poetry & Prose credit: 3 or 4 Hours.

Study of such major poets as Tennyson, Browning, Arnold, and Hardy; and of prose writers including Carlyle, Mill, Arnold, Pater, and Huxley. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 435 19th C British Fiction credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 441 British Lit 1900-1930 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 442 British Lit Since 1930 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 449 American Lit 1820-1865 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 450 American Lit 1865-1914 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 451 American Lit 1914-1945 credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 452 American Lit 1945-Present credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 455 Major Authors credit: 3 or 4 Hours.

Intensive study of the work of one or two major authors. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 458 Latina/o Performance credit: 3 or 4 Hours.

Same as LLS 458. See LLS 458.

ENGL 459 Topics in American Indian Lit credit: 3 or 4 Hours.

Same as AIS 459. See AIS 459.

ENGL 460 Lit of American Minorities credit: 3 or 4 Hours.

Advanced topics seminar exploring literary expressions of minority experience in America. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours. Graduate students may repeat as topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 461 Topics in Literature credit: 3 or 4 Hours.

Advanced seminar on any of a variety of literary topics. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 462 Topics in Modern Fiction credit: 3 or 4 Hours.

Advanced seminar devoted to topics in British, American, and Anglophone fiction from approximately 1800 to the present day. Continental fiction in English translation may occasionally be considered. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 465 Topics in Drama credit: 3 or 4 Hours.

Seminar covering advanced topics (such as genre, performance context, period, or theme) in drama studies. Same as CWL 465. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 470 Modern African Fiction credit: 3 or 4 Hours.

Same as AFST 410, CWL 410, and FR 410. See AFST 410.

ENGL 475 Lit and Other Disciplines credit: 3 or 4 Hours.

Advanced topics seminar exploring the intersection of literary study and other scholarly disciplines. The disciplines students study vary each term, but past courses have examined connections between literature and psychology, forensic science, environmental studies, and the law. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 476 Topics in Lit & Environment credit: 3 or 4 Hours.

From the developing field of "ecocriticism" to new historical examinations of canonical writers such as Thomson, Thoreau, or the "nature poets", to the new field of Science Studies, this advanced seminar examines a range of specialized topics related to literature and the environment. 3 undergraduate hours. 4 graduate hours. May be repeated with permission of English advising office to a maximum of 6 undergraduate hours if topics vary. May be repeated for graduate credit if topics vary. Prerequisite: One year of college literature or consent of instructor.

ENGL 477 Advanced Environmental Writing credit: 3 Hours.

Introduces students to the challenges of "turning data into narrative." With a focus on students' professional development as writers, this course emphasizes the research and rhetorical skills required to communicate current scientific research in earth and environmental science through non-fiction narrative forms—the investigative essay, long-form journalism, personal memoir, and op-ed—aimed at a general audience. Same as ESE 477. 3 undergraduate hours. No graduate credit.

ENGL 481 Comp Theory and Practice credit: 3 or 4 Hours.

Study of the history and theory of written composition. This course explores basic rhetorical principles, various theoretical perspectives in the field of composition/rhetoric, and helps students form practical approaches to the guidance of, response to, and structuring of student writing. 3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 482 Writing Technologies credit: 3 or 4 Hours.

Examines the relationship of computer technology to the larger field of writing studies. Topics include a historical overview of computers and other writing technologies; current instructional practices and their relation to various writing theories; research on word processing, computer-mediated communication, and hypermedia; and the computer as a research tool. Same as IS 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing and consent of instructor. Students must have a basic knowledge of word processing.

ENGL 485 Literature for the High School credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Prerequisite: One year of college literature or consent of instructor.

ENGL 486 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, GER 405, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

ENGL 498 Environmental Writing for Publication credit: 3 Hours.

Same as ESE 498. See ESE 498.

ENGL 500 Intro to Criticism & Research credit: 4 Hours.

Introductory course in methods and techniques in research and literary criticism.

ENGL 503 Historiography of Cinema credit: 4 Hours.

Same as CWL 503 and MACS 503. See MACS 503.

ENGL 504 Theories of Cinema credit: 4 Hours.

Same as CWL 504 and MACS 504. See MACS 504.

ENGL 505 Writing Studies credit: 4 Hours.

Reviews theory and research on the social and historical development of writing systems, including consideration of the relationship between oral and written language, writing and other graphic representation systems, alternative technologies, the evolution of writing systems, and the social functions of literacy. Same as CI 563. Prerequisite: Admission to the graduate programs of a unit offering the graduate specialization in Writing Studies, or consent of instructor.

ENGL 508 Beowulf credit: 4 Hours.

Reading and intensive study of Beowulf in the original language. Students will read the entire poem in Old English, with close attention to language, style, historical contexts, and medieval sources and analogues as well as modern editorial, interpretive, and theoretical approaches. Same as MDVL 508. Prerequisite: ENGL 407 or consent of instructor.

ENGL 511 Chaucer credit: 4 Hours.

Intensive study for graduate students on Chaucer's major works and related scholarship. Instructors will usually emphasize either the Canterbury Tales or Troilus and Criseyde and the dream visions, but alternate combinations of texts are possible. Same as MDVL 511. May be repeated to a maximum of 8 hours if topics vary.

ENGL 514 Seminar in Medieval Literature credit: 4 Hours.

Intensive study of selected texts, genres, themes, or theoretical issues in medieval British literature (usually focusing on either Old English or Middle English texts), or of scholarly methods in medieval studies (such as editing, paleography, or bibliography and methods of historical research). Same as MDVL 514. May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of medieval studies or consent of instructor.

ENGL 519 Seminar in Shakespeare credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of Shakespeare's work or consent of instructor.

ENGL 520 Seminar 16th C Literature credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of Renaissance studies or consent of instructor.

ENGL 524 Seminar in 17th C Literature credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of Renaissance studies or consent of instructor.

ENGL 527 Seminar in 18th C Literature credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of eighteenth-century studies or consent of instructor.

ENGL 533 Seminar Romantic Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of Romantic studies or consent of instructor.

ENGL 537 Seminar Victorian Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to an aspect of Victorian studies or consent of instructor.

ENGL 543 Seminar Mod British Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One college course devoted entirely to an aspect of modern British studies or consent of instructor.

ENGL 547 Seminar Earlier American Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One college course devoted entirely to an aspect of American studies or consent of instructor.

ENGL 553 Seminar Later American Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One college course devoted entirely to an aspect of American studies or consent of instructor.

ENGL 559 Seminar Afro-American Lit credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One college course devoted entirely to an aspect of American literature or consent of instructor.

ENGL 563 Seminar Themes and Movements credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One year of graduate study of literature or consent of instructor.

ENGL 564 Seminar Lit Modes and Genres credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One year of graduate study of literature or consent of instructor.

ENGL 578 Seminar Lit & Other Disciplines credit: 4 Hours.

May be repeated if topics vary. Prerequisite: One year of graduate study of literature or consent of instructor.

ENGL 581 Seminar Literary Theory credit: 4 Hours.

May be repeated if topics vary. Prerequisite: A college course devoted entirely to criticism or consent of instructor.

ENGL 582 Topics Research and Writing credit: 4 Hours.

Focuses on the diverse research paradigms that are often employed in the study of writing processes. Topics will vary each term. Examines past and current writing research in the topic area with an emphasis on the critical examination of research designs and the influence of epistemologies on the interpretation of data. Same as CI 565. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in writing studies or consent of instructor.

ENGL 583 Topics Writ Pedagogy & Design credit: 4 Hours.

Examines the relationships among writing studies, theories of pedagogy, and the practice of the writing teacher and administrator. Also focuses on particular problems or particular schools of thought. Typical topics include Writing Program Design and Administration; Writing, Thinking, and Problem Solving; The Classroom as a Research Site; Collaborative Learning; and Writing Across the Curriculum and Discourse Communities. Requirements will vary with instructors and topics. Same as CI 566. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in writing studies or consent of instructor.

ENGL 584 Topics Discourse and Writing credit: 4 Hours.

Focuses on the modes of inquiry central to writing research. The course topic will vary each term and may address such issues as cognitive research and writing, ethnographic research and writing, and discourse analysis and writing. Same as CI 569. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in writing studies or consent of instructor.

ENGL 586 Topics in Digital Studies credit: 4 Hours.

Inquiry into theory and research in one or more areas of digital scholarship, including new media studies, digital humanities, social media studies, and/or critical code studies. Same as CI 586. 4 graduate hours. No professional credit. May be repeated in separate terms up to 8 hours, if topics vary.

ENGL 591 Research in Special Topics credit: 1 to 4 Hours.

Independent study under the guidance of a member of the graduate faculty. May be repeated to a maximum of 8 hours.

ENGL 592 Masters Exam Tutorial credit: 6 or 12 Hours.

Reading for the Master's Area Examination under the guidance of the candidate's graduate adviser. May be repeated once for 12 hours or twice for 6 hours each. Credit may not be used toward a graduate degree.

ENGL 593 Prof Seminar College Tchg credit: 0 to 4 Hours.

Approved for both letter and S/U grading. May be repeated by Ph.D. candidates as topics vary, but without credit, after 8 hours have been earned in this course. Students needing the proseminar for their programs will be given priority enrollment. Prerequisite: Graduate standing in the Department of English or consent of instructor.

ENGL 599 Thesis Research credit: 0 to 16 Hours.

Guidance in writing theses for doctoral degrees. Approved for S/U grading only. May be repeated up to a maximum of 16 hours. Prerequisite: Doctoral candidate standing.

English as a Second Language (ESL)

ESL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ESL>)

Courses

ESL 109 Academic Conversation Skills for International Students credit: 0 Hours.

Introduction for international students to improve academic English speaking skills in class discussions and informal conversations with colleagues and instructors. Topics include participating in small group discussions, advising sessions, and small talk with colleagues. We will discuss and practice American English norms for agreeing and disagreeing, making requests and suggestions, apologizing, complaining, and complimenting within an academic setting. Approved for S/U grading only. May be repeated in separate terms.

ESL 110 English Pronunciation & Oral Fluency credit: 0 Hours.

Designed to improve the international student's ability to speak and understand English at normal conversational speed and to give the student the ability to continue improving pronunciation and oral fluency skills after the course is finished. Focus on the rhythm, stress, intonation, and sounds of natural speech and on fluency building strategies. Approved for S/U grading only. May be repeated in separate terms. Credit is not given toward an undergraduate degree. Prerequisite: Placement based on the speaking section score on the TOEFL or Placement based on English as a Second Language Placement Test (EPT) for undergraduate students without TOEFL or IELTS scores.

ESL 111 Intro to Academic Writing I credit: 3 Hours.

Introduction to the process of writing: fundamentals of paragraph development: analysis of rhetorical patterns: development of oral skills. This course is the first term of a two-term sequence (ESL 111-ESL 112) that fulfills the campus Composition I general education requirement. Credit is not given for both ESL 111 and ESL 115. Prerequisites: 111 placement result on the English Placement Test. This course satisfies the General Education Criteria for: Composition I

ESL 112 Intro to Academic Writing II credit: 3 Hours.

Continued instruction of the fundamentals of the multi-paragraph essay and introduction to research writing; instruction on basics of library research, synthesizing sources, and elements of style. This is the second term of a two-term sequence (ESL 111-ESL 112) that satisfies the campus Composition I general education requirement. Credit is not given for both ESL 112 and ESL 115. Prerequisite: Completion of ESL 111. This course satisfies the General Education Criteria for: Composition I

ESL 115 Principles of Academic Writing credit: 4 Hours.

Introduction to the research paper, including the writing process: pre-research, academic style and organization, and a variety of writing and skill-building tasks; development of peer and self-editing skills. ESL 115 fulfills the campus Composition I requirement for non-native speakers of English. Credit is not given for both ESL 115 and any other Comp I courses: RHET 101, RHET 102, RHET 103, RHET 104, RHET 105, CMN 111, CMN 112, ESL 111, ESL 112. Prerequisite: 115 placement result on the English Placement Test. This course satisfies the General Education Criteria for: Composition I

ESL 504 English Pronunciation for ITAs credit: 0 Hours.

Sounds, rhythm, and melody of spoken English for current and potential international teaching assistants who are required to teach in English. Includes word and phrase level study; special emphasis on the pronunciation of English vocabulary in students' own academic disciplines. Approved for S/U grading. Prerequisite: Placement based on SPEAK.

ESL 506 Oral Communication for ITAs credit: 0 Hours.

Focuses on use of English at the discourse level, with videotaping and critique of student presentation and development of teaching strategies related to university classroom and laboratory contexts. Approved S/U grading only. Prerequisite: Consent of instructor.

ESL 507 Adv Academic writing MATSEL credit: 0 Hours.

Focus on advanced academic writing in the field of Teaching English as a Second Language at the graduate level. Introduces rhetorical modes of writing in TESL, critical reading in the field and includes source-based writing, including critical reviews, proposals, and research reports. Approved for S/U grading only. Credit is not given for both ESL 507 and any of ESL 500, ESL 501, and ESL 502. Credit is not given toward a graduate degree.

ESL 508 Seminar for Intl TAs credit: 0 Hours.

Provides students with knowledge, resources and strategies to guide their ongoing development as international teaching assistants. Students analyze model teaching, receive feedback about their own strengths and weaknesses as a teaching assistant, and address key language or pedagogical concerns through a focused and customized term project. Approved for S/U grading only.

ESL 509 Academic Conversation Skills for International Students credit: 0 Hours.

Introduction for international students to improve academic English speaking skills in class discussions and informal conversations with colleagues and instructors. Topics include participating in small group discussions, advising sessions, and small talk with colleagues. We will discuss and practice American English norms for agreeing and disagreeing, making requests and suggestions, apologizing, complaining, and complimenting within an academic setting. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

ESL 510 English Pronunciation & Oral Fluency credit: 0 Hours.

Designed to improve the international student's ability to speak and understand English at normal conversational speed and to give the student the ability to continue improving pronunciation and oral fluency skills after the course is finished. Focus on the rhythm, stress, intonation, and sounds of natural speech and on fluency building strategies. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated in separate terms. Credit is not given toward a graduate degree. Prerequisite: Placement based on English as a Second Language Placement Test (EPT) or the speaking section score on TOEFL or IELTS.

ESL 511 Written and Oral Communication credit: 0 Hours.

Instruction in foundational skills for academic communication; skills covered include summarizing and synthesizing sources, reading and evaluating scholarly articles, and delivering oral presentations for an academic audience. This course is the first term of a two-term sequence (ESL 511-ESL 512). 0 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given toward a graduate degree. Prerequisite: Level 1 course placement result on the English Placement Test. ESL students only.

ESL 512 Introduction to Academic Writing credit: 0 Hours.

Instruction in writing secondary and primary research papers; skills covered include developing research questions and design, evaluating and synthesizing scholarly sources, producing well-reasoned and substantiated arguments, and writing research/project proposal. This course is the second term of a two-term course sequence (ESL 511-ESL 512). 0 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given toward a graduate degree. Prerequisite: ESL 511. ESL students only.

ESL 515 Introduction to Academic Writing credit: 0 Hours.

Instruction in essential skills in academic writing; skills for writing secondary and primary research papers, including developing research questions and design, evaluating and synthesizing scholarly sources, and producing well-reasoned and substantiated arguments. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated in separate terms. Credit is not given toward the graduate degree. Prerequisite: Level 2 course placement result on the English Placement Test. ESL students only.

ESL 521 Written and Oral Business Communication credit: 0 Hours.

Instruction for essential skills in business communication both in academic and professional settings; skills covered include writing professional correspondence, summarizing and analyzing sources, designing attractive documents, case-based writing, and delivering oral presentations. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated in separate terms. Credit is not given toward the graduate degree. Prerequisite: Level 1 course placement result on the English Placement Test. ESL students only.

ESL 522 Introduction to Business Writing credit: 0 Hours.

Continued instruction in essential skills in business communication both in academic and professional settings; Skills covered include writing professional correspondence and business proposals, synthesizing sources, and participating in group discussions. This course is the second term of a two-term course sequence (ESL 521 - ESL 522). 0 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given toward a graduate degree. Prerequisite: ESL 521 or Level 2 course placement result on the English Placement Test. ESL students only.

ESL 592 Advanced Academic Writing credit: 0 Hours.

Provides advanced international students additional support in the conventions of professional academic writing in their own fields. Through the use of Contract Learning, students define and pursue individualized writing goals for their own major programs with the support of the instructor. Lessons in genre analysis enable students to derive field-specific models for research articles, theses, and dissertations. 0 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given toward a graduate degree. Prerequisite: ESL 515 or equivalent; OR recommendation from UIUC English Placement Test; OR "full status" English proficiency admission.

ESL 593 Academic Presentation Skills credit: 0 Hours.

Provides international students with opportunities to improve skills in effectively presenting research in both oral and written formats in preparation for the professional conference presentation process. Students will practice orally explaining their research, asking and answering questions, giving and receiving feedback, and writing a conference proposal with the aim of creating and delivering compelling, professional presentations. 0 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given toward a graduate degree.

English as an Intl Language (EIL)

EIL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EIL>)

Courses

EIL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

EIL 214 TESL in the Elementary School credit: 3 Hours.

On-site practical experience in an elementary school, involving at least 100 hours of classroom observations, consultations, teaching, tutoring, and assisting, to acquaint students with the many facets of ESL/bilingual education in a public school setting. Hours to be arranged with the cooperating teacher. Satisfies one requirement for those who wish to obtain an Illinois ESL endorsement on an Illinois teaching certificate.

EIL 215 TESL in the Secondary School credit: 3 Hours.

On-site practical experience in a secondary school, involving at least 100 hours of classroom observations, consultations, teaching, tutoring, and assisting, to acquaint students with the many facets of ESL/bilingual education in a public school setting. Hours to be arranged with the cooperating teacher. Satisfies one requirement for those who wish to obtain an Illinois ESL endorsement on an Illinois teaching certificate.

EIL 411 Intro to TESL Methodology credit: 3 or 4 Hours.

Introduction to TESL/TEFL, including the concept of "communicative competence" and its components; teaching contexts; current research on teaching second language skills; syllabus, lesson, and materials design; and classroom techniques. 3 undergraduate hours. 4 graduate hours.

EIL 422 Engl Grammar for ESL Teachers credit: 3 or 4 Hours.

Adaptation of modern English grammar to meet the needs of the ESL/EFL teacher, with special emphasis on the development of knowledge and skills that can be used in the analysis of the syntax, lexis and pragmatics of English. Same as ENGL 404. 3 undergraduate hours. 4 graduate hours.

EIL 445 Second Lang Reading & Writing credit: 3 or 4 Hours.

Introduces students to second language reading and writing, including theory, research, and practical application. 3 undergraduate hours. 4 graduate hours. May be taken concurrently with EIL 489 with consent of instructor. Prerequisite: Consent of instructor.

EIL 456 Lang and Social Interaction I credit: 3 or 4 Hours.

The course goals are to develop an understanding of the characteristics of naturally-occurring talk; several methodologies for collecting and studying it; the relationship of talk to human conduct, society and culture, including cross-cultural (mis)understanding; and to relate these insights to language learning, language teaching methodologies, and materials design. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

EIL 460 Principles of Language Testing credit: 3 or 4 Hours.

Studies theoretical and practical aspects of language testing. Examines purposes and types of language tests in relation to theories of language use and language teaching goals; discusses testing practices and procedures related to language teaching and language research; and includes the planning, writing, and administration of tests, basic descriptive statistics, and test analysis. A project is required. Same as EPSY 487, FR 460, GER 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: EIL 489 or consent of instructor.

EIL 486 Ling for Language Teachers credit: 3 or 4 Hours.

Introduction to linguistics for language teachers. Examines history and scope of linguistics, and introduces key elements of linguistic analysis with accompanying theoretical analyses of syntax, morphology, phonology, the lexicon, and pragmatics. Also covers the role of non-linguistic factors in communication and prioritizes the application of linguistics to instructed language learning settings. 3 undergraduate hours. 4 graduate hours.

EIL 487 Topics in Second Lang Studies credit: 2 or 4 Hours.
Topics on practical applications of second language studies for classroom practice. 2 or 4 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

EIL 488 English Phon & Morph for TESL credit: 3 or 4 Hours.
Applications of linguistics to language learning with special emphasis on learning the sound system of English. The course involves face-to-face and online instruction. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

EIL 511 Task Based Language Teaching credit: 4 Hours.
Introduces students to current issues in the theory and practice of communicative language teaching. Discusses the notion that communication is a social event from three perspectives: theoretical linguistics; applied linguistics; and classroom teaching. Specific questions addressed range from a consideration of the nature of applied linguistics to issues related to student autonomy. Prerequisite: EIL 411 and consent of instructor.

EIL 512 Practicum in Teaching ESL credit: 4 Hours.
Practical guided experience teaching ESL. Students will recruit, test, and teach an ESL class of adults from the community, developing their own lessons and materials based on principles of communicative language teaching. Students will also observe their peer student teachers and provide them with feedback. Prerequisite: EIL 411 and permission of instructor.

EIL 580 Classroom Lang Acquisition credit: 4 Hours.
Same as FR 580, GER 580, ITAL 580, PORT 580, SLS 580, and SPAN 580. See SPAN 580.

EIL 587 Seminar in Second Lang Studies credit: 2 or 4 Hours.
May be repeated if topics vary. Prerequisite: Consent of instructor.

EIL 588 Generative Phon in Engl Tchg credit: 4 Hours.
Generative phonological analyses of English and the teaching of English pronunciation: reevaluation of teaching goals, content, presentation, and methodology; required projects involve research into English phonology leading to the development and evaluation of lesson materials for ESL classes. Prerequisite: EIL 411 and EIL 488.

EIL 591 Research in Special Topics credit: 1 to 4 Hours.
Independent study under guidance of a member of the graduate faculty. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

EIL 599 Thesis Research credit: 0 to 8 Hours.
Individual direction of research and thesis writing. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Consent of thesis supervisor.

Entomology (ENT)

ENT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENT>)

Courses

ENT 599 Thesis Research credit: 0 to 16 Hours.
Work may be taken in the following subjects: insect genetics; insect behavior; applied entomology; systematic entomology; biology and ecology of insects; and insect physiology. Approved for S/U grading only. May be repeated.

Environmental Studies (ENVS)

ENVS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENVS>)

Courses

ENVS 101 Introduction to Energy Sources credit: 3 Hours.
Same as NPRE 101. See NPRE 101.
This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

ENVS 210 Environmental Economics credit: 3 Hours.
Same as ACE 210, ECON 210, NRES 210, and UP 210. See ACE 210.
This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

ENVS 220 Communicating Agriculture credit: 3 Hours.
Same as AGCM 220 and NRES 220. See AGCM 220.
This course satisfies the General Education Criteria for:
Advanced Composition

ENVS 299 Ind Studies of Env. Topics credit: 0 to 4 Hours.
Approved for letter and S/U grading. Prerequisite: Consent of instructor.

ENVS 301 Tools for Sustainability credit: 3 Hours.
Develops systems-thinking skills needed to make connections between different disciplines to better understand problems and trade-offs related to sustainability. Students will gain competence in conducting cost-benefit and life-cycle analyses and learn about sustainability metrics while improving their ability to communicate about the integrated dimensions of sustainability within an interdisciplinary setting.
Prerequisite: For students enrolled in the Sustainability, Energy and Environment Fellows Program.

ENVS 310 Natural Resource Economics credit: 3 Hours.
Same as ACE 310, and NRES 310. See ACE 310.

ENVS 330 Environmental Communications credit: 3 Hours.
Same as AGCM 330 and NRES 330. See AGCM 330.

ENVS 336 Tomorrow's Environment credit: 3 Hours.
Same as CHLH 336 and CPSC 336. See CPSC 336.

ENVS 380 Environmental Geology credit: 4 Hours.
Same as GEOL 380. See GEOL 380.

ENVS 406 Urban Ecology credit: 4 Hours.
Same as UP 406. See UP 406.

ENVS 420 Conservation Biology credit: 4 Hours.
Same as CPSC 436 and IB 451. See IB 451.

ENVS 430 Comm in Env Social Movements credit: 3 Hours.
Same as AGCM 430, NRES 430, and SOC 464. See AGCM 430.

ENVS 431 Environ Toxicology & Health credit: 3 Hours.
Same as CHLH 461 and IB 485. See IB 485.

ENVS 433 Pesticide Toxicology credit: 3 or 4 Hours.
Same as CB 434 and IB 486. See IB 486.

ENVS 447 Environmental Sociology credit: 3 or 4 Hours.
Same as RSOC 447 and SOC 447. See SOC 447.

ENVS 469 Environmental Health credit: 3 or 4 Hours.
Same as CHLH 469. See CHLH 469.

ENVS 474 Principles of Epidemiology credit: 4 Hours.
Same as CHLH 474 and PATH 474. See CHLH 474.

ENVS 480 Basic Toxicology credit: 3 Hours.

Same as CB 449, CPSC 433 and FSHN 480. See FSHN 480.

ENVS 491 Sustainability Experience credit: 1 to 4 Hours.

Students will work with faculty, staff, and/or the Student Sustainability Committee to advance campus sustainability goals and the Illinois Climate Action Plan. This course is designed to enable students to apply their disciplinary knowledge to tackle inherently interdisciplinary problems, while also developing and enhancing their critical analysis, leadership, organizational, and project management/evaluation skills and preparing them for addressing sustainability issues in their careers. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated, if topics vary. Prerequisite: Consent of instructor.

ENVS 492 Sustainability, Energy and Environment Capstone credit: 4 Hours.

Problem-focused learning and a holistic and interdisciplinary perspective to address critical sustainability-related challenges facing society. Students will gain critical thinking skills to examine the sustainability of various decisions, analyze the trade-offs between the economic, environmental and social dimensions of sustainability of alternative solutions, learn techniques to operationalize the concept of sustainability and develop practical skills in sustainability assessment. Team projects will develop team building skills, communication skills and project management skills. 4 undergraduate hours. No graduate credit. Prerequisite: ENVS 301. For students enrolled in the Sustainability, Energy and Environment Fellows Program.

ENVS 510 Adv Natural Resource Economics credit: 4 Hours.

Same as ACE 510, ECON 548, and NRES 510. See ACE 510.

ENVS 514 Neurotoxicology credit: 3 Hours.

Same as CB 514 and PSYC 515. See CB 514.

ENVS 516 Reprod & Dev Toxicology credit: 3 Hours.

Same as CB 516. See CB 516.

ENVS 527 Statistics in Epidemiology credit: 4 Hours.

Same as CHLH 527 and PATH 525. See CHLH 527.

ENVS 596 Interdisciplinary Tox Sem credit: 1 Hour.

Same as PATH 596 and CB 596. See CB 596.

Environmental Sustainability (ENSU)

ENSU Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ENSU>)

Courses

ENSU 300 Environmental Sustainability credit: 3 Hours.

Same as LA 370 and NRES 370. See LA 370.

ENSU 301 Soc Impacts Weather & Climate credit: 3 Hours.

Same as ATMS 322. See ATMS 322.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

ENSU 302 Air Pollution to Global Change credit: 3 Hours.

Same as ATMS 323. See ATMS 323.

ENSU 303 Sustainable Business I credit: 4 Hours.

At the dawn of the 21st century, business and society is confronted with a confluence of factors, including environmental degradation, widespread poverty, and the need for renewable sources of energy. The diverse sources of information that point to an uncertain future suggests that a 'business as usual' approach has to be replaced with more proactive alternatives that address the needs of the environment, consumer welfare and community development. This course on sustainable marketing management begins to address these issues and engender an appreciation among our students for the challenges that lie ahead for businesses. Looks at the relationship between sustainable business practices, societal welfare, and ecological systems. Student projects will apply marketing and business concepts to create a sustainable business plan for organizations.

ENSU 310 Renewable & Alternative Energy credit: 4 Hours.

Fossil fuel supplies are finite and growing energy demands of an ever increasing population will quickly deplete these reservoirs. Focuses on the use and availability of renewable and alternative energy sources such as wind, solar, bio-fuels, ethanol, geothermal and nuclear power as well as the impacts of using these alternative energy sources on climate, society and the global economy. Students will develop the student's perspective on human energy consumption at all scales through a complete scale analysis of energy production and consumption ? from the individual to the national government to the world economy.

ENSU 410 Sustainable Organizations credit: 4 Hours.

Explores the notion of sustainability as a core business tenant, and how entrepreneurs and their companies are working to create and capture financial, social, and environmental value. The focus is on on large, for profit companies, but lessons will extend to smaller, non-profit, and governmental organizations. The aim is to prepare participants for the green challenge of adopting and implementing socially responsible practices in the workplace. 4 undergraduate hours. 4 graduate hours.

European Union Studies (EURO)

EURO Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/EURO>)

Courses

EURO 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 3 hours.

EURO 240 Arctic Narratives credit: 3 Hours.

Same as CWL 282, SCAN 240. See SCAN 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

EURO 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, ASST 325, AFST 325, INFO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

EURO 376 Children and Youth Literature credit: 3 Hours.

Same as CWL 376, GWS 376, and SCAN 376. See SCAN 376.

EURO 385 Politics of the European Union credit: 3 Hours.

Same as FR 385, GER 385, and PS 385. See PS 385.

EURO 410 Labor and the European Union credit: 4 Hours.

Same as LER 410 and SOC 410. See LER 410.

EURO 415 Europe and the Mediterranean credit: 3 or 4 Hours.

Examines the governments, societies, and cultures on the shores of the Mediterranean. Examines ideas associated with the Mediterranean and practices followed by its people and governments from the perspectives of a variety of disciplines, paying special attention to the region's relationship with the European Union. Same as ITAL 415 and PS 415. 3 undergraduate hours. 4 graduate hours. Prerequisite: Minimum of junior standing, or consent of instructor.

EURO 470 Imagining the Welfare State credit: 3 or 4 Hours.

Same as CWL 470 and SCAN 470. See SCAN 470.

EURO 478 African Immigrants in Europe credit: 3 or 4 Hours.

Same as AFST 478 and ANTH 478. See ANTH 478.

EURO 489 Green Screen: Film and Nature credit: 3 or 4 Hours.

Same as MACS 490 and SCAN 490. See SCAN 490.

EURO 490 Special Topics in EU Studies credit: 1 to 4 Hours.

Selected reading and research in European Studies. See schedule for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours in same or separate terms if topics vary. Prerequisite: Junior or senior standing, or consent of the instructor.

EURO 500 Dialogue on Europe credit: 1 Hour.

Exploration of a variety of subjects about the European Union and EU-US relations and comparative perspectives. This transatlantic relationship will be studied via a series of expert lectures offered by University of Illinois faculty and visiting scholars. Approved for letter and S/U grading. May be repeated in separate terms if topics vary.

EURO 501 EU Institutions and Governance credit: 4 Hours.

A graduate-level introduction to the European Union, its history, decision-making processes, legal framework and economic effects.

EURO 502 The EU in a Global Context credit: 4 Hours.

Introduces students to the role of the EU in international affairs. May be repeated in separate terms to a maximum of 8 hours.

EURO 576 Children and Youth Literature credit: 4 Hours.

Same as CWL 586, GWS 576, and SCAN 576. See SCAN 576.

EURO 580 Research Design & Techniques credit: 1 Hour.

Introduction for students in the master's in European Union Studies degree program to the processes involved in developing and completing an MA thesis project. Topics covered may include departmental and Graduate College thesis requirements; research methodologies; conducting effective field research; resources for thesis writing; and practical advice on managing a thesis project. Approved for S/U grading only.

EURO 590 Directed Ind Study credit: 1 to 6 Hours.

May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Consent of instructor.

EURO 596 Special Topics in EU Studies credit: 1 to 4 Hours.

Instruction on topics of current interest about the European Union. May be repeated in the same or separate terms if topics vary. See Class Schedule for current topics.

EURO 599 Thesis Research credit: 0 to 8 Hours.

To carry out work on the MA in European Union Studies. Approved for S/U grading only. May be repeated in separate terms to a maximum of 8 graduate hours. Prerequisite: EURO 501 and EURO 502.

Finance (FIN)

FIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FIN>)

Courses

FIN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. Course may be repeated for credit.

FIN 221 Corporate Finance credit: 3 Hours.

Introductory study of corporate financial management, in particular how the financial manager's choices add value to shareholder wealth through investment financing and operating decisions. Prerequisite: Completion of ECON 102 or ECON 103.

FIN 230 Introduction to Insurance credit: 3 Hours.

Introductory course on the role of insurance in society; covers insurance terminology, common personal insurance policies (auto, health, life and homeowners) and current issues.

FIN 232 Intro to Wealth Management credit: 3 Hours.

Creating a sound personal financial plan and issues related to becoming a financial planner. Course enrollment is limited to non-College of Business students and College of Business students with freshman or sophomore standing. Credit will not satisfy Finance major requirements. Credit is not given for both FIN 232 and ACE 240.

FIN 241 Fundamentals of Real Estate credit: 3 Hours.

A survey of real estate finance, appraisal, investment, law, brokerage, management, development and economics. Special attention is given to the analysis of aggregate real estate and mortgage markets, to the individual transactions within these markets, and to the legal and institutional factors which affect these markets. Prerequisite: ECON 102.

FIN 300 Financial Markets credit: 3 Hours.

Theory and applications associated with the functioning of financial markets to include the conceptual foundations of portfolio theory, risk management, and asset valuation. The stock, money, bond, mortgage, and futures and options markets are examined. Prerequisite: FIN 221.

FIN 321 Advanced Corporate Finance credit: 3 Hours.

Theories of firms' investment and financing decisions are covered. Topics include dividend policy, capital budgeting, capital structure, bankruptcy, long-term debt and leasing decisions. Prerequisite: FIN 300.

FIN 390 Finance Academy credit: 1 Hour.

The Finance Academy is an enrichment program for outstanding undergraduate Finance majors. A select program that focuses on developing future business leaders via enhanced academic and career opportunities. Students are normally invited to participate by the faculty during their junior year, when they are enrolled in FIN 300. If inducted, students participate throughout their junior and senior years. Approved for letter and S/U grading. May be repeated in separate terms. Course will not satisfy Finance major requirements. Prerequisite: Induction into the Finance Academy.

FIN 391 Investment Banking Academy credit: 1 Hour.

A diversified curriculum designed to prepare students for a successful career in investment banking; course incorporates peer mentorship, guest lectures (from bankers, accountants, private equity associates and hedge fund analysts), a case competition and a field trip. Course will not satisfy Finance major requirements. May be repeated for a maximum of 6 hours in separate terms. Prerequisite: Admission by application only.

FIN 392 Investment Management Academy credit: 1 Hour.

Overview of security analysis with the objective of how to value an investment proposition for inclusion in a portfolio of securities managed by students in the class. Focus will be in areas of fundamental securities analysis with the emphasis on equity valuation. Course will not satisfy Finance major requirements. May be repeated to a maximum of 6 hours in separate terms. Prerequisite: Admission by application only. Primarily for Finance majors with sophomore standing or above who show interest in pursuing their CFA credential.

FIN 411 Investment & Portfolio Mngt credit: 3 Hours.

Current theories of portfolio management are covered in considerable detail to provide a conceptual framework for the evaluation of investment strategies. Applications and implementation are covered in depth, including performance evaluation and international diversification. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300.

FIN 412 Options and Futures Markets credit: 3 Hours.

Introduction of options and futures markets for financial assets; examination of institutional aspects of the markets; theories of pricing; discussion of simple as well as complicated trading strategies (arbitrage, hedging and spread); applications for asset and risk management. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 413 Financial Engineering credit: 3 Hours.

This course will present and analyze modern tools for identification, measurement, and management of financial risk faced by corporations and institutional investors; in particular as related to the application of futures, forwards, options, swaps, and other derivatives. The focus will be evenly split between theoretical models and practical applications, and will include careful consideration of parameter estimation and numerical implementation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 414 Urban Economics credit: 3 or 4 Hours.

Same as ECON 414. See ECON 414.

FIN 415 Fixed Income Portfolios credit: 3 Hours.

Conceptual foundations and implementation of strategies for the selection, evaluation, and revision of portfolios of fixed-income financial assets (bonds). 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 418 Financial Modeling credit: 3 Hours.

The objective is to learn the fundamentals and practice building financial models using Microsoft Excel. By the end of the term, each student should be able to develop an understanding of any financial relationship and build that financial relationship into a model using the built-in functions of Excel. Financial modeling, by definition, requires significant work outside of the classroom. Models are introduced, demonstrated, and reviewed in class, but each student is expected to research and collect data, and to construct the models, prior to each week's class meeting. 3 undergraduate hours. 3 graduate hours. Prerequisite: FIN 300 and FIN 321, or consent of instructor.

FIN 419 Real Client Managed Portfolios credit: 3 Hours.

Applies academic topics on financial markets, security analysis/valuation and portfolio management to hands-on investment management. Students will form and review objectives, constraints, and investment policy as it relates to the client's money under management. They will purchase securities, monitor performance of the portfolio, and make recommendations for any adjustments to the holdings. They will be fully educated and responsible to the fiduciary and ethical standards of professional money management as guided by the CFA Institute. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 9 hours. Prerequisite: FIN 321 or consent of instructor.

FIN 422 Cases in Corporate Finance credit: 3 Hours.

Course totally devoted to the study of financial management cases, provides students a hands-on learning experience. The case work helps students to develop their analytical and interpretative skills in solving unstructured real world problems. The theoretical concepts and tools learned in the introductory finance courses provide the foundation for the case studies. Topics discussed include financial forecasting and working capital management; capital budgeting and cost of capital; and capital structure, dividend policy, corporate financing, financial restructuring, financial distress, mergers, acquisitions and firm valuation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 and FIN 321.

FIN 423 Financing Emerging Businesses credit: 3 or 4 Hours.

The study of the business environment, alternative methods of organization and financing, use of financial statements as a management tool, valuation methods and approaches to ethical dilemmas from the perspective of an owner-manager. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 300 or consent of instructor.

FIN 424 Mergers and Acquisition credit: 3 Hours.

Focuses on identifying ways to increase firm value through mergers and acquisitions (M&A) and corporate restructurings. Surveys the drivers of success (failure) in M&A transactions and develop your skills in the design and evaluation of transactions. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 425 Private Equity/Venture Capital credit: 3 Hours.

Provides students with an understanding of the nature of the private equity market, the principal participants in this market, and how they function. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 321.

FIN 431 Property-Liability Insurance credit: 3 or 4 Hours.

Examines in detail the functions of property-liability insurers, including marketing, underwriting, claims, ratemaking and administration, and the major current issues facing this industry. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 230.

FIN 432 Managing Fin Risk for Insurers credit: 3 or 4 Hours.

Introduces basic concepts in financial economics used in the analysis and management of financial risks, with an emphasis on the applications by insurers and pension plans; topics include decision making under uncertainty, economic statistics, deterministic and stochastic interest rate models, derivative securities, valuation, binomial models and option pricing models. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 300; either FIN 230 or FIN 435.

FIN 433 Corporate Risk Management credit: 3 or 4 Hours.

Case study course examining how corporations deal with pure risk. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: FIN 221, FIN 431, and FIN 434.

FIN 434 Employee Benefit Plans credit: 3 Hours.

Studies the purpose, structure, and financial aspects of employee benefit plans, including pensions, health insurance, life insurance, and disability plans. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 435 Personal Wealth Management credit: 3 Hours.

Studies personal wealth management techniques with an emphasis on life insurance products; covers life insurance policies, annuities, trusts, buy-sell arrangements, investing in stocks, bonds and mutual funds, banking and borrowing, purchasing residential and commercial real estate, income and estate taxation and management of personal financial portfolio. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300.

FIN 443 Legal Issues in Real Estate credit: 3 or 4 Hours.

Overview of legal concepts, issues, and principles involving real estate. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

FIN 444 Urban Real Estate Valuation credit: 3 Hours.

The terminology, theory and techniques of real estate valuation (appraisal); a modern view of the three approaches to estimating value - sales comparison, cost and income. Special requirements include local field trips to appraise at least one single-family property and one income property. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of the instructor, FIN 241 is recommended but not required.

FIN 445 Real Estate Investment credit: 3 Hours.

An approach to the evaluation of real estate investment opportunities. Begins with the identification of the investor's goals and ends with an investment decision. Considers legal, physical, locational, and financial constraint, aggregate real estate and financial markets, tax considerations and investment criteria. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of the instructor, FIN 241 is recommended but not required.

FIN 446 Real Estate Financial Markets credit: 3 Hours.

Discusses real estate financing techniques and the secondary market for real estate financial assets including residential and commercial mortgage-backed securities (RMBS and CMBS). 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor, FIN 241 is recommended but not required.

FIN 447 Real Estate Development credit: 3 or 4 Hours.

Provides students with an exposure to the real world of real estate through a series of lectures by real estate professionals focused primarily on retail real estate development. A side benefit of the class will be to provide graduating seniors some insights into different career paths to help improve the career choices that they make. 3 undergraduate hours. 4 graduate hours. Prerequisite: FIN 221 or FIN 241.

FIN 451 Intl Financial Markets credit: 3 Hours.

This course covers the three major international financial markets; the foreign exchange market, the eurocurrency market, and the international equity and bond market. The course looks at international financial decisions including operations, structure and valuation. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 and FIN 321.

FIN 461 Financial Intermediation credit: 3 Hours.

Financial intermediaries survey of the structure, functions, regulation, and risk management activities of financial intermediaries; central banking and monetary policy effects on financial intermediaries. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 or consent of instructor.

FIN 463 Investment Banking credit: 3 Hours.

The mechanics of financial statement analysis and ratio analysis; development of investment banking/corporate finance valuation models (including DCF, leveraged buyout and merger models) in order to determine the intrinsic value of companies and price investment banking deals. 3 undergraduate hours. No graduate credit. Prerequisite: FIN 300 (FIN 300 is waived if student is admitted to FIN 391 IBA). Priority to finance majors.

FIN 464 Investment Management credit: 3 or 4 Hours.

Students learn the fundamental equity research process including valuation and market and industry analysis. Students then select their own multi-asset portfolios using an online trading simulation software program. The course pays special attention to risk management. Ultimately, students implement hedging strategies based on real returns over the course of the semester. 3 undergraduate hours. 4 graduate hours. Prerequisite: FIN 300. Priority given to finance majors.

FIN 490 Special Topics in Finance credit: 1 to 3 Hours.

1 to 3 undergraduate hours. No graduate credit. May be repeated in the same term to a maximum of 6 hours. May be repeated in subsequent terms to a maximum of 9 hours. Course will not satisfy Finance major requirements. Prerequisite: FIN 300 or consent of instructor.

FIN 494 Senior Research credit: 2 to 4 Hours.

Research and reading course for students concentrating in finance, insurance, urban land economics, or related areas who meet one of the following requirements: (1) have a cumulative grade-point average of 3.0 or better; (2) have attained Honors Day recognition in the junior year; or (3) have consent of instructor. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated as topics vary. Prerequisite: Senior standing.

FIN 495 Senior Research credit: 2 to 4 Hours.

Research and reading course for students concentrating in finance, insurance, urban land economics, or related areas. May be taken by students in the college honors program in partial fulfillment of the honors requirements. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing; and cumulative grade-point average of 3.0 or better, Honors Day recognition in the junior year, or consent of instructor.

FIN 500 Introduction to Finance credit: 2 or 4 Hours.

Introduction to financial management and decision making. A customized course, designed to provide a survey of finance for graduate students who do not necessarily have previous training in the disciplines. Different sections of the course will cover different sets of topics. Prerequisite: Graduate standing or consent of department.

FIN 501 Financial Economics credit: 2 or 4 Hours.

Theory and logic of microeconomics, taught with applications to financial markets. First half of course covers the way in which efficient markets work to allocate resources; second half covers the way in which markets fail. Also includes selected topics in macroeconomics. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 4 hours if topic varies.

FIN 502 Quantitative Finance credit: 2 or 4 Hours.

Quantitative methods used for financial decision making. Topics include elements of statistics, mathematics, and specific analytical tools used in the study and practice of finance. Approved for letter or S/U grading. May be repeated in the same or separate terms to a maximum of 4 hours. Material may be split into two 8-week 2-hour modules, either across semesters or within the same semester; if so, credit is not given for taking the same half twice. Prerequisite: Graduate standing.

FIN 511 Investments credit: 2 or 4 Hours.

Introduction to investment analysis, including the theory and implementation of portfolio theory; empirical evidence on the performance of financial assets; evaluation of portfolio investment strategies; and the extension of diversification to international markets. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 512 Financial Derivatives credit: 4 Hours.

Introduction to options, futures, swaps and other derivative securities; examination of institutional aspects of the markets; theories of pricing; discussion of simple as well as complicated trading strategies (arbitrage, hedging, and spread); applications for asset and risk management. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 513 Financial Engineering I credit: 4 Hours.

Provides an introduction to modern techniques for pricing options, swaps, and related financial instruments; the use of such instruments in managing financial risk; and the measurement and management of their risks. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 514 Financial Engineering II credit: 4 Hours.

Presents the main ideas and techniques of modern option pricing theory, including: the Black-Scholes-Merton analysis; risk-neutral probabilities and the probabilistic solution; numerical techniques for computing option prices; an introduction to term structure modeling; and perhaps other topics, at the discretion of the instructor. Prerequisite: Prior or concurrent registration in FIN 513 or consent of instructor.

FIN 515 Fixed Income Portfolios credit: 2 or 4 Hours.

Conceptual foundations and implementation of strategies for the selection, evaluation, and revision of portfolios of fixed-income financial assets (bonds); examination of related research. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 516 Term Structure Models credit: 4 Hours.

Extensive coverage of several models of the term structure of interest rates, including their implementation, calibration, and use in valuing interest rate derivatives. Will include applications of both Monte Carlo methods and finite-difference or "tree" methods. Approved for letter and S/U grading. Prerequisite: FIN 500 and FIN 512, or equivalents.

FIN 517 Adv Topic in Fin Engineering credit: 4 Hours.

Discussion of advanced topics of current interest, based on evolving conditions and in the marketplace. Topics may include new valuation models and/or financial instruments, issues in risk management, trading strategies of current interest, and regulatory and public policy issues. Approved for letter and S/U grading. Prerequisite: FIN 500 and FIN 512, or equivalents.

FIN 518 Financial Modeling credit: 4 Hours.

The objective is to learn the fundamentals and practice building financial models using Microsoft Excel. By the end of the term, each student should be able to develop an understanding of any financial relationship and build that financial relationship into a model using the built-in function of Excel. Financial modeling, by definition, requires significant work outside of the classroom. Models are introduced, demonstrated, and reviewed in class, but each student is expected to research and collect data, and to construct the models, prior to each week's class meeting. Prerequisite: MSF students only.

FIN 519 Gen Equ Env Tax Policy credit: 4 Hours.

Focuses on how to build and use analytical general equilibrium models to do research. Students will replicate and extend existing G.E. models with general production and demand functions that are differentiated to find closed-form solutions for the incidence of the tax, including changes in all factor prices, input quantities, outputs, prices, and welfare of each group. The primary examples are drawn from environmental tax policy, but the method is equally useful for analysis of non-tax policies and other economic problems. Same as ECON 546. Prerequisite: Microeconomics and Econometrics at graduate level.

FIN 520 Financial Management credit: 4 Hours.

Introduction to financial management and decision making. Topics include risk-return relationships for financial securities; financial statement analysis and forecasting; working capital management; capital budgeting and the resource allocation process; capital structure and the cost of capital; dividend policy. Prerequisite: Enrollment in the Executive MBA, MSBA, or MS program.

FIN 521 Advanced Corporate Finance credit: 4 Hours.

Addresses both the theoretical and applied aspects of firms' financing decisions; topics include capital structure and cost of capital theories; mergers, acquisitions and leveraged buyouts; options, warrants, and convertibles; venture capital and initial public offerings; and pensions. Prerequisite: FIN 520, plus either ECON 506 or BADM 572 or concurrent registration in either course; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 522 Cases in Financial Strategy credit: 4 Hours.

Course focuses on financial management cases. Provides students with an active learning experience. Case work is based on concepts learned in introductory corporate finance. Topics discussed include measuring and interpreting cash flow performance, financial forecasting and turnaround management; capital investment and cost of capital; and capital structure, dividend policy; and firm valuation. Prerequisite: FIN 520, plus either ECON 506 or BADM 572 or concurrent registration in either course; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 524 Mergers and Acquisitions credit: 4 Hours.

The primary objective of this course is to give students experience in valuing firms. While the primary focus of the course is on mergers and acquisitions, the course will also cover topics such as initial public offerings, leveraged buyouts, spin-offs, and divestitures. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 526 Enterprise Risk Management credit: 4 Hours.

The application of basic risk management principles to all risks facing the organization. Integrates hazard, financial, strategic and operational risks under a single framework. Provides a conceptual framework for making risk management decisions to increase business value. The course will include a review of the legal and regulatory environment that sets the stage for Enterprise Risk Management, cover the tools used for risk analysis, examine data integration processes and show how risk measurement relates to strategic and tactical business decisions.

FIN 527 Mergers & Acquisitions Topics credit: 2 Hours.

This course focuses on identifying ways to increase firm value through mergers and acquisitions (M&A) and corporate restructurings. We will develop your skills in the design and evaluation of transactions. Specific topics addressed in the course are the valuation of companies, structuring of transactions, deal tactics and strategy, valuation of leveraged buyouts, and spin-offs/carve-outs. We will also delve into issues of law, accounting and taxation and how they affect the structuring and outcome of merger transactions. Knowledge about M&A is an important component of any corporate finance professional and is the foundation for effective work in a wide range of fields including corporate development, investment banking, consulting, and advising senior management. 2 graduate hours. No professional credit.

FIN 530 Foundations in Risk Management credit: 2 Hours.

This course introduces risk management including basic concepts and techniques of pure risk and financial risk management. Corporate hazard risk management including insurance and securitization of pure risks will be covered in detail. Insurer risk management will be examined including reinsurance, loss reserving, underwriting of risks, and catastrophic risk management. Students will also be introduced to Enterprise Risk Management (ERM). 2 graduate hours. No professional credit. Prerequisite: MSF and MBA students only.

FIN 536 Government Insurance Programs credit: 2 Hours.

Government insurance programs – including Social Security, Medicare and Medicaid, unemployment and disability insurance, terrorism insurance, and disaster relief – currently account for more than half of U.S. federal spending. These programs, which for decades have collectively been growing more quickly than the U.S. economy, represent a significant share of an employer's compensation expenses and significantly impact household budgets. This course will examine how the design of these programs affects economic efficiency, growth, business competitiveness, and social well-being. An important theme of the course will be the role of imperfect information and aggregate or long-term risks of insurance market failures, and conditions under which the government can or cannot remedy these failures. Prerequisite: MAS BPP Concentration.

FIN 541 Real Estate Fundamentals credit: 4 Hours.

Discusses the theory and practice of real estate and urban land economics; emphasizes real estate market analysis, finance, appraisal, and investment. 4 graduate hours. No professional credit. Prerequisite: FIN 520, plus ECON 302, ECON 500, or equivalent; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 544 Urban Real Estate Valuation credit: 4 Hours.

The terminology, theory and techniques of real estate valuation (appraisal); a modern view of the three approaches to estimating value - sales comparison, cost and income. Special requirements include local field trips to appraise at least one single-family property and one income property. 4 graduate hours. No professional credit. Prerequisite: FIN 541 is recommended but not required.

FIN 545 Real Estate Investment credit: 4 Hours.

Real estate accounts for one-third of the world's capital assets. This course provides students with a comprehensive understanding of real estate valuation, cycles, markets, investments, and decision-making. The bulk of the course covers income-producing commercial property, although we will also discuss residential housing. This course provides a unified finance based framework to answer real estate investment decision making problems in the real world. 4 graduate hours. No professional credit. Prerequisite: FIN 541 is recommended but not required. Graduate students only.

FIN 546 Real Estate Financial Markets credit: 4 Hours.

This is an applied course in real estate investment that focuses on the U.S. mortgage and asset-backed securities markets. The course will review the multi-trillion dollar mortgage and asset-backed bond markets. We will discuss the fundamentals of securitization, and strategies to structure deals. We will also consider real estate investment trusts (REITs), collateralized debt obligations (CDOs) and credit default swaps (CDS). The course will develop analytical skills in deal structuring and pricing, and offer all students an opportunity to develop their business skills through case discussions. 4 graduate hours. No professional credit. Prerequisite: FIN 541 recommended but not required. Graduate students only.

FIN 551 International Finance credit: 4 Hours.

Explores the characteristics of the international financial market and examines various aspects of corporate financial management. Topics may include international parity conditions, exchange rate risk management, country risk, cross-border investment analysis, multi national firm budgeting, hedging in foreign currency markets, accessing international financial markets for financing, and competitive strategy in a global marketplace. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 561 Financial Intermediation credit: 4 Hours.

Studies financial intermediation emphasizing analysis of problems faced by commercial bank managers. The three main areas covered are: the role of financial intermediation and its relation to the macro-economy, information technology, and government regulation; examination of the problems of pricing and evaluating the risk of bank financial services such as loans, loan commitments, and swaps; and consideration of bank portfolio risk management. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 562 Macrofinance credit: 4 Hours.

Overview of the workings of the financial sector of the macro economy; includes the roles of financial institutions, financial markets, macroeconomic policies, interest rates, and the flows of funds. Prerequisite: FIN 520; or MBA 505 - Section G (Finance II); or consent of instructor.

FIN 563 Investment Banking credit: 4 Hours.

This course will provide key building blocks necessary for a career in investment banking, valuation and other related fields. It is designed to provide a practical application of financial statement analysis, modeling, valuation, and presentation skills commonly performed by industry professionals. The course has three major parts. The first focuses on the mechanics of financial statement analysis, ratio analysis, and financial model building. The second applies the financial statements and forecasts within the context of company valuation, utilizing common industry techniques. In the third part of the course, we will employ these valuation techniques in common investment-banking deliverables such as pitch books and fairness opinions. 4 graduate hours. No professional credit. Prerequisite: Previous introductory accounting and finance coursework recommended. Graduate students only.

FIN 566 Algorithmic Market Microstructure credit: 4 Hours.

This course introduces the modern theoretical, empirical and institutional foundations of market microstructure and trading activity, with an emphasis on applications to algorithmic and high-frequency trading. The first part of the course addresses market microstructure and the algorithmic implementation of traditional microstructure-inspired tasks such as minimizing execution costs. The second part of the course proceeds to examine actual algorithmic strategies, and ultimately high-frequency trading. Recurrent themes throughout the course will be the use of economic theory to simplify computationally challenging problems, and the use of theory-driven structural models to construct more robust trading algorithms. 4 graduate hours. No professional credit. Prerequisite: Restricted to students in the MS in Financial Engineering program.

FIN 567 Financial Risk Management credit: 4 Hours.

This course covers selected topics in financial risk management. The focus is on statistical techniques used in financial risk management rather than risk management practice, cases, or valuation issues. The course will cover the value-at-risk (VaR) measure and expected shortfall, statistical techniques useful to model financial market returns, and techniques used to model the joint distribution of defaults on fixed income instruments. The course will also cover additional topics such as retail credit risk, risk budgeting, and economic capital modelling. 4 graduate hours. No professional credit. Prerequisite: FIN 500 or 511; IE 522 or FIN 502; FIN 512 (concurrent enrollment allowed); or consent of instructor.

FIN 568 Behavioral Finance credit: 2 Hours.

There is increasing evidence that the financial decisions of at least some investors are affected by various behavioral biases that do not follow from traditional portfolio choice models. This course will highlight and analyze key findings from this research and consider implications of this observed behavior for individual investors and money managers. The results are also of interest for managers of firms and human resource departments. 2 graduate hours. No professional credit. Prerequisite: Restricted to MSF and MBA Students.

FIN 570 Business and Public Policy credit: 4 Hours.

The role of government and its effects on business in a market economy; critical examination of tax rules, public spending and insurance programs, social security, health policy, environmental policy, and other regulations on businesses.

FIN 571 Retirement Policy credit: 2 Hours.

The retirement landscape in the US - including public policy, retirement plan design, and individual behavior - is constantly changing and evolving. This course will examine the economic, financial, legal, regulatory, political, and human resource issues involved with designing and implement both public and private retirement plans, including Social Security, pensions and retirement savings plans. Credit is not given for both FIN 434 and FIN 571. Prerequisite: MAS BPP Concentration.

FIN 572 Health Care Policy credit: 2 Hours.

Costly advances in health technology, together with an aging population, are making health care an increasingly important issue for individuals, firms, and governments. This course examines the economic, legal, and regulatory issues involved with implementing both public and private health plans, including Medicare, Medicaid, and employer-sponsored plans. Credit is not given for both FIN 434 and FIN 572. Prerequisite: MAS BPP Concentration.

FIN 573 Competition Policy credit: 2 Hours.

While perfect competition is a useful model, it often fails to capture much of what is observed in the real world. This course examines interaction of firms and consumers in markets that are not perfectly competitive and reviews policies that aim to increase efficiency in these markets. Topics covered will include oligopoly, anti-competitive practices, price discrimination, and antitrust regulation. Prerequisite: MAS BPP Concentration.

FIN 574 Individual Tax Policy credit: 2 Hours.

Contentious public debate surrounds how to tax individuals fairly and efficiently. This course will provide the tools to design and evaluate tax policies. Topics will include measuring how taxes affect individual behavior including labor supply, savings, and portfolio decisions; the efficiency cost of taxation; understanding who bears the true economic burden of taxes; measuring the progressivity of a tax system; and the pros and cons of alternative approaches to taxation. Prerequisite: MAS BPP Concentration.

FIN 575 Business Tax Policy credit: 2 Hours.

Government needs revenue and taxes people, but why also tax business? We review the pros and cons of a separate corporate taxes system, the interaction of corporate and personal taxes, the inefficiencies of capital misallocations, and economic incidence (who really bears the burden of a corporate income tax). We also review pros and cons of other taxes on capital income such as interest, dividends, capital gains, rental income, and foreign source-income. Prerequisite: MAS BPP Concentration.

FIN 576 Domestic Environmental Policy credit: 2 Hours.

Environmental regulation has become ubiquitous; Modern business leaders need to be aware of how it affects their businesses and how to operate within its constraints. The focus of this course is the design and critique of domestic environmental policies such as liability law, taxation, command-and-control regulations, and permit markets. We compare their effectiveness and distributional impacts, including effects on regulated firms, and discuss the differential effects these policies can have on technological process. Prerequisite: MAS BPP Concentration.

FIN 577 International Environmental Policy credit: 2 Hours.

As the business landscape becomes more and more global, international environmental policy is increasingly more relevant for the success of modern firms. In this course, we demonstrate how one country's policies can affect other countries and firms in those countries, the typical difficulties that arise in negotiating international environmental agreements and how these can be ameliorated, and the interaction between trade and the environment. Prerequisite: MAS BPP Concentration.

FIN 578 Govt Market Economy credit: 2 Hours.

Given the presumed efficiency of competitive markets, when might it be appropriate for government to intervene? This course reviews possible market failures? like externalities, public goods, taxes, monopoly power, adverse selection, and moral hazard. We show how each can reduce efficiency of private markets. We then discuss whether, when and how government can improve economic welfare using well-designed tax policy, social insurance, environmental regulation, or health policy. Prerequisite: MAS BPP Concentration.

FIN 579 Applied Portfolio Management credit: 4 Hours.

Applies academic topics on financial markets, security analysis/valuation and portfolio management to hands-on investment management.

Students will form and review objectives, constraints, and investment policy as it relates to the client's money under management. They will purchase securities, monitor performance of the portfolio, and make recommendations for any adjustments to the holdings. They will be fully educated and responsible for the fiduciary and ethical standards of professional money management as guided by the CFA Institute. May be repeated to a maximum of 8 hours. Prerequisite: Credit or concurrent enrollment in FIN 511.

FIN 580 Special Topics in Finance credit: 0 to 4 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 18 hours in a semester; may be repeated to a maximum of 32 hours in subsequent semesters. Prerequisite: Varies by section.

FIN 590 Individual Study and Research credit: 0 to 4 Hours.

Directed reading and research. Approved for letter and S/U grading.

FIN 591 Theory of Finance credit: 4 Hours.

Examines theoretical frameworks for financial decision making under certainty and uncertainty, as well as perfect and imperfect capital markets; discusses state preference, mean-variance, and continuous time models; emphasizes the structure of individual utility functions. Prerequisite: ECON 502; STAT 400; and admission to doctoral program or consent of instructor.

FIN 592 Empirical Analysis in Finance credit: 2 or 4 Hours.

Designed to train the student in the conduct of empirical work in Finance. Covers the major tools and databases needed to replicate the results of published academic papers and to conduct original research. Prerequisite: Enrollment in the doctoral program in Finance or consent of instructor.

FIN 593 Seminar in Investments credit: 4 Hours.

Investigates portfolio theory, CAPM, OPM, and arbitrage pricing theory theoretically and empirically; uses both mathematical statistics and modern econometric models to empirically analyze investment decisions and portfolio management. Prerequisite: FIN 591 and ECON 507.

FIN 594 Seminar in Corporate Finance credit: 4 Hours.

Theories, paradigms, and models of nonfinancial corporations; investigates the theoretical foundations and empirical evidence regarding corporate resource allocation, capital structure decisions, and dividend policies; covers in detail contingent claim analysis, signaling theory, and agency theory. Prerequisite: FIN 591 and ECON 507.

FIN 599 Thesis Research credit: 0 to 16 Hours.

Required for those writing master's and doctoral theses in finance. Approved for S/U grading only. May be repeated to a maximum of 16 hours.

Fine and Applied Arts (FAA)

FAA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FAA>)

Courses

FAA 101 Arts at Illinois credit: 1 Hour.

Common Arts experience for FAA freshmen that explores contemporary issues in the arts, cross-disciplinary ingenuity navigating a comprehensive research intensive university, professional practices and exposures to FAA faculty and guest artists through lectures, discussion groups, and online components.

FAA 110 Exploring Arts and Creativity credit: 3 Hours.

High and street art, tradition and experimentation, the familiar and unfamiliar, international and American creativity provide this course's foundation. Students will attend performances and exhibitions, interact with artists, and examine core issues associated with the creative process in our increasingly complex global society. Faculty from the arts, sciences, humanities, and other domains will lead students through visual arts, music, dance, and theatre experiences at Krannert Center and Krannert Art Museum to spark investigation and dialogue.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

FAA 199 Undergraduate Open Seminar credit: 0 to 3 Hours.

Various special topics in Fine and Applied Arts. See class schedule for offerings. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated in the same or separate semesters to a maximum of 6 hours if topics vary; some restrictions may apply.

FAA 202 Artsful Teaching through Integ credit: 3 Hours.

Designed to provide elementary education majors with a philosophical and practical basis for integrating the arts [including visual art, music, & dance] in public schools. Lecture, discussion, arts practices and class activities will focus on the ever expanding role of the arts in children's lives and the role of the teacher in nurturing artistic expressions through the development of skills, processes, and the various knowledges of the multi-modalities of the arts. Additional fees may apply. See Class Schedule. Prerequisite: Completion of applicable Teacher Licensure Gateway requirements. Contact College of Education for further information. Admission to the Elementary Teacher Education Program.

FAA 220 Introduction to Fashion credit: 3 Hours.

Introduction to Fashion will be an overview of the many diverse areas of interest and employment available to someone with and interest in fashion. This course will focus on the development of an individual apparel design process. Other topics include basic garment construction concepts, properties of textiles, fashion illustration, 20th century dress history, manufacturing, trend forecasting, merchandising, and social psychology of dress. May be repeated up to 6 hours in separate terms. This course satisfies the General Education Criteria for:
Humanities - Lit Arts

FAA 291 Civic Engagement Seminar credit: 1 Hour.

Designed to introduce students to community development practices and the participatory approach followed by Action Research. Illinois. Detailed information about the course is available at www.actionresearch.illinois.edu. Enrollment in this class requires attendance in two in-class sessions (one lecture, one discussion) and a two-day outreach event in Central Illinois, dates to be determined. Outreach event begins at 9 am Friday and ends by 9 pm Saturday. Lecture, discussion and outreach event will be offered with the one-week course period to be determined. Approved for S/U grading only. May be repeated in separate terms to a maximum of 2 hours.

FAA 299 FAA Study Abroad credit: 0 to 18 Hours.

Provides campus credit for foreign study and/or travel. A detailed proposal for study abroad must be submitted for approval by the appropriate committee of the department in which the student is studying and the college dean's office prior to such study abroad. Final determination of credit and its application toward the degree is made after a review of the student's work abroad by the above committee and college office. Approved for letter and S/U grading. May be repeated to a maximum of 36 hours. (summer session, 0 to 6 undergraduate hours). Prerequisite: Approval of the student's proposal by the departmental committee and the college office.

FAA 310 FAA Professional Development credit: 2 Hours.

Focuses on tailoring written, verbal, and online presentations to targeted audiences. Students will develop an application package including resume, letter, LinkedIn profile, elevator pitch, interview skills, and website. Course information: Prerequisite: Sophomore, junior or senior standing in FAA is required.

FAA 391 Action Research Seminar credit: 3 Hours.

Introduction to applied action research within the social sciences and humanities with the subject of research selected from partner organizations in Champaign-Urbana, Illinois, and surrounding communities. Students establish a research question, conduct fieldwork using qualitative and/or quantitative methods, and complete a project of sufficient quality for publication or presentation. May be repeated to a maximum of 12 hours in subsequent terms. Prerequisite: Junior standing or consent of instructor.

FAA 499 Special Topics credit: 0 to 4 Hours.

Special topics in subject areas within the College of Fine and Applied Arts intended to augment the existing curriculum. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for letter and S/U grading. May be repeated for a maximum of 8 credit hours in separate terms if topics vary.

Food Science & Human Nutrition (FSHN)

FSHN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FSHN>)

Courses

FSHN 101 Intro Food Science & Nutrition credit: 3 Hours.

Discusses the evolution of the food system to meet the needs and desires of a complex, heterogeneous society. Provides an overview of food in relation to nutrition and health, composition and chemistry, microbiology, safety, processing, preservation, laws and regulations, quality, and the consumer.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

FSHN 120 Contemporary Nutrition credit: 3 Hours.

Fundamental principles of human nutrition and their application to the selection of an adequate diet for health and wellness; current nutrition topics of importance. Credit is not given for FSHN 120 if credit has been given for FSHN 220. Prerequisite: CHEM 101 or equivalent.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

FSHN 125 Intro to Human Nutrition credit: 1 Hour.

Introductory course for students in Human Nutrition. Explore department, college and campus resources. Learn about current issues, opportunities, and careers in the nutrition field. Prerequisite: FSHN major with a concentration in Human Nutrition only.

FSHN 130 Introduction to Food Science credit: 1 Hour.

Introductory course for students in Food Science (FS) focused on student learning and success, current issues, and opportunities and careers in the field of food science. In addition, students will learn about how to enhance their learning strategies. Approved for S/U grading only. Prerequisite: For freshman majoring in FSHN with a concentration in Food Science only.

FSHN 140 Introduction to Hospitality credit: 3 Hours.

Overview of the hospitality industry with emphasis on organizational and operational structures of the major segments of the industry and career opportunities within each. Field trips required.

FSHN 145 Intro Hospitality Management credit: 3 Hours.

Explore the foodservice aspect of the hospitality industry by assisting Hospitality Management seniors taking FSHN 443 in the operation of the Spice Box. Course covers the planning, production, and service of meals in specialized settings. Additional fees may apply. See Class Schedule.

FSHN 150 Introduction to Dietetics credit: 1 Hour.

Introductory course for students in dietetics. Addresses current issues, opportunities and careers in the dietetics profession. Freshmen or transfer student into dietetics given priority.

FSHN 195 Intro to Undergrad Research credit: 1 Hour.

Learn about research opportunities available to undergraduate students in the FSHN department, and find a laboratory that fits a student's interests and education goals. Guest faculty members present research opportunities in their laboratory, and then give a laboratory tour for students to learn more about the research activities there. Approved for S/U grading only. Prerequisite: For FSHN majors only.

FSHN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in food science and human nutrition. Topic may not be repeated except in accordance with the Code. Approved for letter and S/U grading. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

FSHN 220 Principles of Nutrition credit: 4 Hours.

Course focuses on the nutritive value of foods and metabolism of essential nutrients, as well as the application of principles of nutrition to the requirements of normal individuals throughout the life cycle. Prerequisite: CHEM 102; MCB 244 and 246.

FSHN 230 Food Sci Professional Issues credit: 1 Hour.

Discussion of current topics in food science and professional issues, including ethics, undergraduate research, study abroad, graduate school options and internships. Approved for S/U grading only. Prerequisite: Sophomore and Junior transfer students with a Food Science concentration only.

FSHN 232 Science of Food Preparation credit: 3 Hours.

Application of food preparation principles and techniques in the preparation of standard food products; principles of food management and their application in the planning and preparation of meals. Additional course fees may apply. See Class Schedule. Prerequisite: FSHN 101 or concurrent registration.

FSHN 260 Raw Materials for Processing credit: 4 Hours.

Problems involved with procurement, harvesting, handling, and storage of fruits, vegetables, cereal grains, dairy products, red meat, poultry, fish, and eggs for the food-processing industry. Field trips to specialized operations. Additional fees may apply. See Class Schedule. Prerequisite: One high school course in biological science and FSHN 101.

FSHN 274 NonMajors Food Microbiology credit: 1 Hour.

Introduction to food microbiology and the role of microorganisms in foodborne illness and food manufacture. Credit is not given for both FSHN 274 and FSHN 101. Prerequisite: Sophomore standing or higher.

FSHN 293 Off Campus Internship credit: 2 to 4 Hours.

Supervised, off-campus experience in a field directly pertaining to the subject matter. Approved for letter and S/U grading. May be repeated to a maximum of 10 hours.

FSHN 294 On Campus Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 10 hours. Prerequisite: Sophomore standing, 2.0 GPA, consent of the advisor, and consent of the Department Teaching Coordinator.

FSHN 295 UG Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. Approved for letter and S/U grading. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisites: Cumulative GPA of 2.5 or above at the time the activity is arranged and consent of instructor.

FSHN 302 Sensory Evaluation of Foods credit: 3 Hours.

This course is devoted to learning the 1) physiological and psychological basis of human subjects, 2) chemistry of aroma and taste, 3) basic sensory methodologies in food evaluation, and 4) analysis and interpretation of sensory data. Additional fees may apply. See Class Schedule. Prerequisite: Recommended to students in junior and senior levels. Recommended to have taken foundational statistics course, i.e., STAT 100, STAT 200 or FSHN 440.

FSHN 312 Applied Microbiology Methods credit: 2 Hours.

Consideration, through experimentation, of properties of bacteria, yeasts, molds, and actinomycetes important to industrial processes; exploration of methods of control of microbial processes in industry and sanitation. Prerequisite: MCB 100 and MCB 101 or consent of instructor.

FSHN 322 Nutrition and the Life Cycle credit: 3 Hours.

Examines physiological changes that occur during gestation, postnatal growth, and aging and the influence of these changes on nutritional requirements. Prerequisite: FSHN 220 or consent of instructor.

FSHN 329 Communication in Nutrition credit: 3 Hours.

Application and integration of the principles of nutrition and their transmission to groups and individuals. Students will learn individual counseling techniques as well as how to present nutrition information to groups. Open to Dietetics and Human Nutrition juniors and seniors only. Prerequisite: RHET 105, CMN 101, and FSHN 220 or equivalents.

FSHN 340 Food Production and Service credit: 4 Hours.

Introduction to the management of commercial and noncommercial foodservice systems through the operation of Bevier Cafe. Students experience managing the procurement, production and service of food, as well as the sanitation and maintenance of equipment and facilities. Prerequisite: FSHN 332, credit or concurrent registration in FSHN 349 and FSHN 345.

FSHN 343 Foundations in Beverage Management: Introduction to Wine, Beer and Spirits credit: 2 Hours.

The course will focus on the application of principles and practices related to preparation and service of alcohol and specialty beverages in the hospitality industry. The course includes a study of management principles, study of bar operations, human resources and liability protection. Intrinsic to excellent service is having an understanding of proper tasting skills and knowledge to be able to verbalize nuances within the wine or spirit. Structured tastings will be utilized to discover, identify and describe attributes of the beverage. Successful completion of alcohol handler training required to maintain course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: All registrants must be 21 years of age or older.

FSHN 344 Business Etiquette credit: 1 Hour.

The fundamentals of business etiquette as they are applied to the modern multicultural and global business environments. Content includes the importance of the first impression, polite conversation, personal appearance, office politics, diplomacy, telephone and cell phone etiquette, high-tech etiquette, proper oral and written communication, and the protocol of meetings both in the United States and abroad. Students will also participate in a formal dining experience. Offered every other year. Prerequisite: Junior standing.

FSHN 345 Strategic Operations Management credit: 3 Hours.

This course is intended to promote an understanding of the managerial aspects of strategic operations. Strategic operations management examines facilities, capacity, process/work-force planning, organization, people, systems integration, and coordination between operations. An introduction to the principles and procedures for the purchasing, selection and procurement of food and non-food items in the hospitality industry is also included. This course provides students with the management information needed to make operational decisions based on sound criteria. Prerequisite: FSHN 232.

FSHN 349 Food Service Sanitation credit: 1 Hour.

Examines the dangers, costs and prevention of foodborne illness as well as the training and motivation of food service employees in sanitary food handling and quality assurance practices. Upon completion of this course, student will be eligible to apply for the food service sanitation certificate issued by the State of Illinois. Prerequisite: FSHN 101 and FSHN 232, or consent of instructor; MCB 100 and MCB 101 recommended. Course should be taken concurrently with or prior to FSHN 340.

FSHN 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward the degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

FSHN 398 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in food science and human nutrition. Approved for Letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 12 hours. Prerequisite: Sophomore standing.

FSHN 414 Food Chemistry credit: 3 Hours.

Examines the chemical aspects of major food components; water, carbohydrates, proteins, and lipids; properties of pigments, salts, and food dispersions. Undergraduate Food Science majors must enroll concurrently in FSHN 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 232 and CHEM 233.

FSHN 416 Food Chemistry Laboratory credit: 2 Hours.

Chemical and physical properties of water, proteins, lipids, carbohydrates, and other food components/additives are discovered in the context of their interactions and functional roles in foods. 2 undergraduate hours. 2 graduate hours. Prerequisite: CHEM 232 and CHEM 233 and concurrent enrollment in FSHN 414.

FSHN 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Same as NEUR 417 and PSYC 417. PSYC 417.

FSHN 418 Food Analysis credit: 4 Hours.

Principles and application of the chemical, physical, and instrumental methods used to determine the constituents of foods; special considerations applicable to the analysis of certain foods. Lecture and lab. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 232; FSHN 414; FSHN 416 or consent of instructor.

FSHN 419 Food Ingredient Technology credit: 2 Hours.

Explores the research, science and technology of the production of safe, high quality food ingredients through the application of food chemistry, food microbiology, and food processing principles. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 414 or consent of the instructor. FSHN majors only, junior standing required.

FSHN 420 Nutritional Aspects of Disease credit: 3 Hours.

Examines nutritional, biochemical, and physiological aspects of disease processes and studies the role of nutrition in prevention, management, and treatment of disease. Same as NUTR 420. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220 or comparable course with a physiology prerequisite; MCB 450 or equivalent.

FSHN 421 Pediatric Clinical Nutrition credit: 3 Hours.

Examines physiological, biochemical and nutritional aspects of disease processes relevant to infants, children and adolescents. Topics covered include prematurity, developmental disabilities, inborn errors of metabolism, food allergy, obesity and eating disorders. The role of nutrition in prevention, management and treatment of disease is also covered. Offered every other year. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 420; FSHN 322 is highly recommended.

FSHN 423 Advances in Foods & Nutrition credit: 2 Hours.

New developments in foods and nutrition; readings, lectures, and discussions. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 220 and FSHN 332, or equivalent.

FSHN 425 Food Marketing credit: 3 Hours.

Same as ACE 430. See ACE 430.

FSHN 426 Biochemical Nutrition I credit: 3 Hours.

The dietary and hormonal regulation of carbohydrate, lipid and amino acid metabolism. Emphasizes the regulation of enzyme activity and the different roles the major organs have in whole animal energy balance. Same as NUTR 426. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220, or FSHN 120 and FSHN 414, and MCB 450 or concurrent enrollment.

FSHN 427 Biochemical Nutrition II credit: 3 Hours.

Biochemistry and metabolism of the water and fat soluble vitamins and minerals. Emphasizes the digestion, transport, metabolism and intercellular functions of these nutrients and how diet/food intake and physiological states affect these processes. Same as NUTR 427. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220, or FSHN 120 and FSHN 414, and MCB 450 or concurrent enrollment.

FSHN 428 Community Nutrition credit: 3 Hours.

Application of nutrition principles to needs assessments, program planning, delivery and evaluation in local, national, and international settings using behavioral theory frameworks. Same as NUTR 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 220 or equivalent, one introductory statistics course, and one course in the social or behavioral sciences.

FSHN 429 Nutrition Assessment & Therapy credit: 3 Hours.

Problem-based learning application (via cases) of the nutrition care process with emphasis on nutrition assessment, diagnosis, intervention, monitoring and evaluation, as related to the management and treatment of disease states. This course is the clinical capstone course for the dietetics curriculum. 3 undergraduate hours. 3 graduate hours. Prerequisite: FSHN 420, or concurrent enrollment required.

FSHN 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, ANSC 440, CPSC 440, and NRES 440. See CPSC 440.

FSHN 442 Hospitality Management & Leadership Skills credit: 3 Hours.

Application of behavioral science and management techniques, methods and strategies to the hospitality industry. Applied management techniques will focus on those managerial behaviors needed to develop and maintain positive and productive relationships with subordinates, peers, supervisors and individuals external to the hospitality organization. 3 undergraduate hours. No graduate credit. Prerequisite: FSHN 340 or consent of instructor.

FSHN 443 Management of Fine Dining credit: 4 Hours.

Advanced application of food production and management principles to specific food service demands; emphasis on artistry in preparation, serving, and merchandising high quality food in quantity. 4 undergraduate hours. No graduate credit. Prerequisite: FSHN 340 and credit or concurrent registration in FSHN 442.

FSHN 450 Dietetics: Professional Issues credit: 2 Hours.

Discussion of current topics in dietetics, professional issues (ethics, outcomes research, marketing, legislation, registered dietitian exam) and preparing for dietetic internships. Required of all dietetics students. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior standing in dietetics.

FSHN 453 Nutrition for Performance credit: 3 or 4 Hours.

Same as KIN 453. See KIN 453.

FSHN 460 Food Processing Engineering credit: 3 Hours.

Examines application of process engineering principles to the conversion of raw agricultural materials into finished food products. Topics include basics of engineering analysis, units and dimensions, materials balances, energy balances, thermodynamics, heat transfer, psychrometry, refrigeration and mechanical separations. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 101 and MATH 220; or consent of instructor.

FSHN 461 Food Processing I credit: 4 Hours.

Principles, unit operations, and applications of food preservation and processing by high temperature, refrigeration, and freezing processes; includes heat transfer, kinetics, chemical and microbial changes in food as a result of processing. Also, principles and applications of food processing unit operations based upon the combination of heat and/or mass transfer, including such unit operations as evaporation, freeze-concentration, membrane separation, dehydration, centrifugation, extrusion, as well as water activity control. Lecture-based course. 4 undergraduate hours. 4 graduate hours. Prerequisite: FSHN 414 or equivalent; FSHN 460 or equivalent, and FSHN 418. FSHN 260 is recommended.

FSHN 462 Food Processing II credit: 2 Hours.

Laboratory course for FSHN 461. Includes labs on blanching, pasteurization, sterilization, freezing, freeze drying, dehydration (tray drying, drum drying and spray drying), evaporation, and extrusion; discussion and labs. Additional fees may apply. See Class Schedule. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 461.

FSHN 464 Beverage Science & Technology credit: 2 Hours.

Explores the research, science and technology of the production of safe, high quality beverages through the application of food chemistry, food microbiology, and food processing principles. 2 undergraduate hours. 2 graduate hours. Prerequisite: FSHN 414 or FSHN 332 or consent of instructor. FSHN majors only, junior or senior standing required.

FSHN 465 Principles of Food Technology credit: 3 Hours.

Overview of processing techniques in the food industry, including thermal/non-thermal processing, refrigeration, freezing, moisture removal, and separation. Presentations cover basic principles of each technology with examples of processing equipment. The changes of food components and nutrients caused by processing is also discussed. Lecture and field trips. 3 undergraduate hours. 3 graduate hours. Credit is not given for both FSHN 465 and the FSHN 461 - FSHN 462 sequence. Undergraduate food science majors or graduate students specializing in food processing/engineering may not enroll in FSHN 465. Recommended: FSHN 332 or food chemistry equivalent.

FSHN 466 Food Product Development credit: 3 Hours.

Principles of food product development: target market evaluation, concept development and presentation, formulation, manufacturing, packaging, product costs, pricing, safety, and marketing. May include a product in accordance with Institute of Food Technologists national competition guidelines. Products will be unveiled and presented for faculty evaluation. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours in separate terms if topics vary. Prerequisite: FSHN 332 or FSHN 414; FSHN 471 or FSHN 472; concurrent registration or completion of FSHN 461 and FSHN 462, or FSHN 465. This capstone course is limited to seniors in the Food Science or Foods Industry and Business options in FSHN. Graduate students will be allowed to register pending sufficient space in the class.

FSHN 469 Package Engineering credit: 3 Hours.

Cross-disciplinary study of the materials, machinery, research, design, techniques, environmental considerations, ethics and economics used in the global packaging industry with emphasis on the implementation of improved technologies for the problems unique to food packaging. An emphasis on the broad, systems-based nature of packaging will be maintained throughout the course. Same as ABE 482. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 220; one each of 100-level Chemistry and Physics courses or their equivalent; junior-senior standing or higher, or consent of instructor.

FSHN 471 Food & Industrial Microbiology credit: 3 Hours.

Relationship of microorganisms to food manufacture and preservation, to food and industrial fermentation and processing, and to food-borne illness. Same as MCB 434. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 101 or MCB 301 or equivalent.

FSHN 480 Basic Toxicology credit: 3 Hours.

Emphasizes basic toxicology principles and the pharmacokinetics, absorption, distribution, metabolism and excretion of drugs, non-nutrient dietary supplements and other compounds foreign to the body. Toxic effects on major target organ systems are discussed, including an introduction to how foreign compounds can initiate, enhance or prevent the carcinogenic process. Briefly surveys diverse areas of toxicology such as eco-, nano-, forensic, genetic, nutritional, clinical and reproductive toxicology; review the federal regulatory aspects of safety assessment and consumer protection. Same as CB 449, CPSC 433, and ENVS 480. 3 undergraduate hours. 3 graduate hours. Prerequisite: Biochemistry - MCB 450 or equivalent, or consent of instructor.

FSHN 499 Cur Topics in FS & Human Nutr credit: 1 to 3 Hours.

Group discussion or an experimental course on a special topic in food science and human nutrition. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary.

FSHN 502 Advanced Sensory Science credit: 3 Hours.

In-depth and current topics in sensory science beyond the scope of undergraduate sensory course, FSHN 302. The main course objectives are to 1) discuss the physiological and psychological basis for sensory evaluation, 2) discuss Thurstonian Modeling in Difference Tests, 3) utilize multivariate statistical methods in sensory studies, 4) critique current research papers and articles in the sensory science discipline, and 5) develop a proposal for research utilizing sensory methods. Prerequisite: Undergraduate sensory science course, such as FSHN 302. Graduate students only.

FSHN 510 Topics in Nutrition Research credit: 1 Hour.

Same as ANSC 525 and NUTR 510. See NUTR 510.

FSHN 511 Regulation of Metabolism credit: 4 Hours.

Same as ANSC 521 and NUTR 511. See NUTR 511.

FSHN 514 Advanced Food Chemistry credit: 3 Hours.

Emerging issues related to the chemistry of water, carbohydrates, lipids and proteins, as well as postharvest physiology and impact of processing on chemical reactions in foods. Prerequisite: Organic CHEM 232, or equivalent.

FSHN 517 Fermented & Distilled Beverages credit: 2 Hours.

The production technology, microbiology and chemistry (including the compositional chemistry, flavor chemistry, and chemistry of aging) of fermented and distilled beverages. Additional fees may apply. See Class Schedule. Prerequisite: Graduate student status, or a food microbiology course and a food chemistry or biochemistry course.

FSHN 518 Chemistry of Lipids in Foods credit: 3 Hours.

Detailed examination of the chemical and physical properties of lipids in foods. Offered every other year. Prerequisite: A food chemistry or biochemistry course is highly recommended.

FSHN 519 Flavor Chemistry and Analysis credit: 4 Hours.

Provides graduate students with the tools and understanding necessary for the study of complex food flavor systems. Students will learn: 1) modern techniques of analysis used in the chemical evaluation of food flavor systems, 2) accepted techniques for the sensory evaluation of food flavor, 3) approaches for combined sensory-analytical evaluation of food flavor and 4) principles of food flavor chemistry with emphasis placed on some well-understood flavor systems. Offered every other year. Prerequisite: FSHN 414 and FSHN 418 or equivalent.

FSHN 520 Advanced Clinical Nutrition credit: 2 Hours.

Same as NUTR 561. See NUTR 561.

FSHN 530 Childhood Obesity I credit: 3 Hours.

Same as CHLH 530, HDFS 551, KIN 530, NUTR 530, SOCW 570. See NUTR 530.

FSHN 531 Childhood Obesity II credit: 4 Hours.

Same as CHLH 531, HDFS 552, KIN 531, NUTR 531, SOCW 571. See NUTR 531.

FSHN 550 Grantsmanship and Ethics credit: 3 Hours.

Same as NUTR 550. See NUTR 550.

FSHN 563 Food Materials Science credit: 2 Hours.

Study of the structure of foods that confer attributes such as soft, crunchy, juicy, creamy, and many others. Foods will be probed at the micro and nano scales. The goal is to better understand, predict, and design food properties and functionalities. 2 graduate hours. No professional credit. Prerequisite: FSHN 414 (Food Chemistry) or equivalent.

FSHN 573 Advanced Food Microbiology credit: 3 Hours.

Detailed examination of food microbiology topics including food-borne pathogens, food fermentation and microbial spoilage. Prerequisite: Graduate student standing or consent of instructor.

FSHN 574 Value Added Biotransformation credit: 3 Hours.

Crop residues, renewable biomass, and agricultural wastes as sustainable and inexpensive substrates for producing value added products through enzymatic and microbial conversion processes. Concepts and applications of metabolic engineering. 3 graduate hours. No professional credit. Prerequisite: FSHN 471.

FSHN 575 Issues in Food Safety credit: 3 Hours.

Current issues affecting the safety of the food supply including emerging pathogens, food additives and pesticides, genetically modified organisms and new technologies will be evaluated in the context of current scientific knowledge, United States food law, and consumer opinions. Offered every other year. Prerequisite: Graduate standing.

FSHN 590 Dietetic Internship I credit: 5 Hours.

Supervised learning experience in a variety of settings and locations related to clinical nutrition, community nutrition and health promotion, and food service management within Urbana/Champaign and surrounding areas. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. Prerequisite: Enrollment in dietetic internship program.

FSHN 591 Dietetic Internship II credit: 5 Hours.

Supervised learning experience in a variety of settings and locations related to clinical nutrition, community nutrition and health promotion, and food service management within Urbana/Champaign and surrounding areas. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. Prerequisite: FSHN 590.

FSHN 592 Graduate Internship Experience credit: 0 to 12 Hours.

Supervised, off-campus experience in a field related to a students' option/concentration. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 12 hours.

FSHN 593 Seminar in Foods and Nutrition credit: 2 Hours.

Communication-based course that focuses on enhancing professional oral presentation skills, particularly with regard to communicating current food science and/or human nutrition topics. 2 graduate hours. No professional credit. Prerequisite: Undergraduate degree in foods, nutrition, or comparable background in chemistry, microbiology, physiology, or other biological science; consent of instructor.

FSHN 595 Advanced Topics in Food Science and Human Nutrition credit: 1 to 4 Hours.

Studies of selected topics in Food Science. Study may be on specialized topics in any one of the following fields: food chemistry, food microbiology, nutrition, food processing/engineering. Lectures and/or laboratory. 1 to 4 graduate hours. No professional credit. May be repeated if topics vary. Students may register only once for a given topic. Prerequisite: Graduate level status or consent of instructor.

FSHN 597 Graduate Seminar credit: 0 to 1 Hours.

Discussions on specialized research topics and current literature relating to food science and human nutrition. Required of all graduate students. 0 or 1 graduate hour. No professional credit. Approved for letter and S/U grading.

FSHN 598 Advanced Special Problems credit: 1 to 8 Hours.

Supervised individual study on advanced special problems in food science and human nutrition. Approved for letter and S/U grading. May be repeated in the same or subsequent semesters. (Summer session: 1 to 4 graduate hours). Prerequisite: Written consent of instructor must be obtained prior to enrollment.

FSHN 599 Thesis Research credit: 0 to 16 Hours.

Original research designed and conducted under graduate faculty supervisor. Approved for S/U grading only. May be repeated.

Foreign Language Teacher Education (FLTE)

FLTE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FLTE>)

Courses

FLTE 471 Introduction to Second Language Teaching credit: 4 Hours.

Introduction to contemporary approaches to language teaching, teaching as a profession, and second language acquisition theory. Includes two teaching components and 45 hours of early field experience. 4 undergraduate hours. No graduate credit. Credit is not given for FLTE 471 and any of the following courses: CHIN 471, FR 471, GER 469, JAPN 471, HUM 471, LAT 471, RUSS 471, SPAN 471. Prerequisite: Admission to a qualifying teacher education curriculum. Early field experiences require Illinois State criminal background check and other training.

FLTE 475 Learning to Teach World Language credit: 4 Hours.

Course focuses on pedagogy, teacher knowledge and efficacy, and the development of professional dispositions for use in K-12 teaching. Emphasis is on preparing for the edPTA through lesson planning and assessment development. Includes multiple teaching components and 55 hours of early field experience. 4 undergraduate hours. No graduate credit. Credit is not given for FLTE 475 and any of the following courses: CHIN 475, GER 475, JAPN 475, FR 475, LAT 475, RUSS 475, SPAN 475. Prerequisite: Successful completion of FLTE 471.

FLTE 478 Secondary World Language Teaching credit: 1 or 3 Hours.

Course focuses on practical aspects of high school teaching and learning in the 21st century. Emphasis on teaching world languages at the secondary level. Majors topics include teaching with technology, unit planning, instructional methods, assessment development and classroom management. 1 or 3 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 4 hours. Credit is not given for FLTE 478 and any of the following courses; CHIN 478, FR 478, GER 478, JAPN 478, LAT 478, RUSS 478, SPAN 478. In the fall semester, students enroll for 3 hours with instruction occurring in the first 10 weeks. In the spring semester, students enroll for 1 hour with instruction occurring in the first 4 weeks. At the end of the fall semester, students will have completed all Early Field Experiences in accordance with the ISBE/CoTE requirement that teacher candidates fulfill all EFE hours prior to Student Teaching. Prerequisite: Successful completion of FLTE 471 and FLTE 475.

French (FR)

FR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/FR>)

Courses

FR 101 Elementary French I credit: 4 Hours.

Four-skill course leading toward elementary proficiency in oral expression, listening comprehension, reading, writing, and cultural understanding. Online language laboratory and internet assignments required.

FR 102 Elementary French II credit: 4 Hours.

Continuation of FR 101. Introduces cultural and supplementary enrichment materials; requires online laboratory sessions as in FR 101. Prerequisite: FR 101 or one year of high school French.

FR 103 Intermediate French I credit: 4 Hours.

Continuation of FR 102. Introduces students to a full range of structures to complete their initial study of the grammatical system; emphasizes the development of all four skills and cultural understanding through readings and audiovisual enrichment materials. Online language laboratory and internet assignments required. Students planning to major or minor in French should take FR 133 in lieu of FR 103. Prerequisite: FR 102 or equivalent, or a placement score showing high school achievement equivalent to FR 102.

FR 104 Intermediate French II credit: 4 Hours.

Continuation of FR 103. Comprehensive grammar review with emphasis on oral expression and the continued development of reading and written skills. Completion satisfies graduation requirement in the College of Liberal Arts and Sciences. Students planning to take advanced French courses should take FR 134 in lieu of FR 104. Prerequisite: FR 103 or equivalent, or a placement score showing high school achievement equivalent to FR 103.

FR 133 Accel Intermediate French I credit: 4 Hours.

Similar to FR 103, but accelerated for those interested in pursuing French in advanced courses; includes comprehensive grammar review and readings in literature and culture. Prerequisite: FR 102, or two semesters of college French, or a placement score showing high school achievement equivalent to FR 102. Normally for students with a "B" average in French or with consent of instructor.

FR 134 Accel Intermed French II credit: 4 Hours.

Continuation of FR 133. Comprehensive grammar review and readings in French literature and culture preparatory for continued work at the advanced level; emphasizes all four skills and culture. Prerequisite: FR 133, or FR 103 with department approval, or three semesters of college French, or a placement score showing high school achievement equivalent to FR 103.

FR 156 Exploring Paris credit: 3 Hours.

Examines the role of Paris in French culture through literature, art, and film. We will consider the city of Paris from its earliest beginnings to the modern era, as a physical, social, and symbolic reality. Through literature, art, and film we will explore the ways in which Paris is at the center of French political and intellectual life. Additionally, close attention will be paid to historical and political developments and their representation. All readings are in English and the course is conducted in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

FR 179 Migration & Fr Nat ID credit: 3 Hours.

Studies books and films that emphasize cultural difference and the complexities of the post-colonial world, focusing on the impact of migration and cultural interaction on contemporary France. Stresses themes of immigration and exile, tensions between relations of domination and exploitation and between colonizing and colonized peoples, and the cultural pluralities of community and nation.

FR 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

FR 195 French Intellectual Tradition credit: 3 Hours.

Close reading and in-depth discussion of texts by major French intellectuals from the sixteenth to the mid-twentieth century. Aims to explore the centrality of epistemology (How can we know? Can we know that which we know is true? How can we reason in the face of evil?) in selected texts that will be discussed within their historical contexts, investigating why these issues were raised then and how their contemporaries might have responded to them, as well as their relationship to issues still debated in the twenty-first century. Taught in English.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

FR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. May be repeated.

FR 205 Oral French credit: 2 Hours.

Developing oral facility and aural comprehension, focusing on everyday events. Prerequisite: FR 104 or FR 134 or equivalent.

FR 207 Writing and Grammar Workshop credit: 3 Hours.

Practice-intensive grammar review and vocabulary-building, with an emphasis on strategies to improve accuracy of, and expressivity in, speaking and writing in French. Grammar textbook supplemented with readings and materials from French and Francophone culture (articles, social media, literary works, films). Prerequisite: Four years of high school French or equivalent, or FR 134 or, with departmental approval, FR 104.

FR 208 Critical Writing and Reading credit: 3 Hours.

Intensive practice of writing and reading skills in French, emphasizing vocabulary and critical concepts important to analyzing literary and cultural texts. Prerequisite: FR 207 or equivalent must be taken prior to this course.

FR 211 Introduction to Literary Studies credit: 3 Hours.

Introduction to concepts of modernity and questions of representation, through French texts from the nineteenth through the twenty-first centuries. Analysis of diverse literary forms (poems, plays, narratives), and use of resources for literary, historical and cultural research. Strengthening of reading, writing and speaking skills in French through research projects, writing assignments and revisions, and oral presentations. Prerequisite: FR 207 or equivalent.

FR 212 Introduction to Cultural Analysis: French Identities credit: 3 Hours.

Introduction to concepts of and debates on French national identity. Materials are drawn from a multiplicity of media and from many spheres of modern life in France: political, artistic, the everyday, etc. Identification of major resources for the study of culture and analysis of diverse cultural texts. Strengthening of reading, writing and speaking skills in French through a wide range of exercises and projects. Prerequisite: FR 207.

FR 213 French Phonetics credit: 2 Hours.

Practical introduction to French phonetics, stressing pronunciation.

Prerequisite: FR 104 or FR 134 or equivalent.

FR 240 Constr Afr and Carib Identity credit: 3 Hours.

Introduces students to cultural pluralism by comparing and contrasting African and Caribbean identities, as they are represented in literature and film. Taught in English. Same as AFST 209, CWL 225, and LAST 240.

Credit is not given towards the major or minor in French.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

FR 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in French language, literature, civilization, and in other academic areas appropriate to the student's course of study. Approved for both letter and S/U grading. May be repeated in the same term to a maximum of 18 hours; may be repeated in separate terms to a maximum of 36 hours; may be repeated in a summer session to a maximum of 8 hours. Maximum of 34 hours per academic year. Prerequisite: FR 209 and two of the following: FR 205, or 207; 2.75 overall average; 3.0 average in French courses.

FR 301 Medieval and Early Modern Literature credit: 3 Hours.

Overview of French literature from the Middle Ages to the Revolution in its historical context. Taught in French. Credit is not given for FR 209 and FR 301. Prerequisite: FR 211 and FR 212.

FR 309 Poetry credit: 3 Hours.

The study of major movements and figures in French poetry. Traditions and innovations. Poetic genres. Introduction to versification and metrics. Close readings of individual poems. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 311 Narrative Literature credit: 3 Hours.

Reading and interpretation of selected French novels and short narratives from all periods. History and analysis of narrative literature as a genre. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 312 Theater and Performance credit: 3 Hours.

Reading and interpretation of plays and other performative genres, with attention to historical development and critical analysis. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 314 Advanced Grammar in Context credit: 3 Hours.

Advanced practical study of present-day French, with an emphasis on grammar, free composition and a consideration of various cultural contexts of language use. Credit is not given for FR 314 and FR 414. Prerequisite: FR 207.

FR 319 Introduction to Francophone Literature credit: 3 Hours.

Examination of selected major novels from the French-speaking world outside France along thematic and formal lines; literary responses to colonialism, political independence and departmentalization in a variety of former (and current) French territories; study of critical approaches to narrative and related issues of individual and communal identity and culture. Same as CWL 317. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 322 Movements and Perspectives credit: 3 Hours.

Focused study and discussion of a major literary movement or critical perspective. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 323 Major Literary Figures credit: 3 Hours.

Presents the works of one or several major figures of French or francophone literary traditions in their cultural contexts. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 324 Literature and the Other Arts credit: 3 Hours.

Explores relationships between French literature and such fields as art, architecture, and music. Topics will vary. May be repeated to a maximum of 6 hours. Prerequisite: FR 207, FR 211, and FR 212; or equivalents.

FR 335 French Cultural History to 1789 credit: 3 Hours.

Survey of French cultural history from the Middle Ages to the French Revolution. Taught in French. Credit is not given for FR 335 and FR 435. Prerequisite: FR 211 and FR 212.

FR 336 French Cultural History 1789-1968 credit: 3 Hours.

Survey of French cultural history from the French Revolution to 1968. Taught in French. Credit is not given for FR 336 and FR 436. Prerequisite: FR 211 and FR 212.

FR 337 Contemporary France credit: 3 Hours.

Overview of major cultural, social, and political issues and debates in late 20th- and 21st-century France. Topics may include: political life; definitions of the French Republic; the government and social policies; evolving views on sexuality, gender and the family; France and the European Union; professional life and labor laws; immigration; the cultural identity of France; new media. Some readings in English. Class discussion and written work in French. Prerequisite: FR 207, FR 211, FR 212.

FR 385 Politics of the European Union credit: 3 Hours.

Same as EURO 385, GER 385, and PS 385. See PS 385.

FR 387 French & Comparative Cinema I credit: 3 Hours.

The art, techniques, sociology, politics of French cinema in the context of French culture, world history, and general film development from 1895 to approximately 1950. Selected trends studied through films from several countries with stress on major French filmmakers including Lumiere, Melies, Gance, Clair, Vigo, Renoir, Carne, Cocteau, Prevert, Clouzot. Knowledge of French not required. Same as CWL 387, HUM 387, and MACS 382. Credit is not given for both FR 387 and FR 488.

FR 389 French & Comparative Cinema II credit: 3 Hours.

The art, techniques, sociology, politics of French cinema in the context of French culture, world history, and general film development from approximately 1950 to the present. Selected trends studied through films from several countries with stress on major French filmmakers such as Clouzot, Bresson, Chabrol, Resnais, Godard, Truffaut, Varda, Marker, Rohmer, Beineix, Kassovitz, and Assayas. Knowledge of French not required. Same as CWL 389, HUM 389, and MACS 383. Credit is not given for both FR 389 and FR 489. Prerequisite: One college-level Media or Media and Cinema Studies course or consent of instructor.

FR 390 Indiv Study Major Tutorial credit: 1 to 12 Hours.

Tutorial taken by students during two of their last four terms of undergraduate study. Students read the works on a departmental reading list with the guidance of a tutor. Approved for letter and S/U grading. May be repeated to a maximum of 12 hours. Prerequisite: FR 205, FR 207, FR 209, and FR 210, or equivalent; a declared major in French; junior standing.

FR 410 Modern African Fiction credit: 3 or 4 Hours.

Same as AFST 410, CWL 410, and ENGL 470. See AFST 410.

FR 413 French Phonetics and Phonology credit: 3 Hours.

Introduction to theoretical aspects of French phonetics and phonology, research methods, and pronunciation exercises on speaking styles in French. 3 undergraduate hours. 3 graduate hours. Prerequisite: FR 213 or equivalent.

FR 416 Structure of French Language credit: 3 Hours.

General survey of the linguistic structure of modern standard French, including phonology, morphology, and syntax; emphasis on the differences between its spoken and written forms. Same as LING 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: FR 413 or equivalent training in phonetics.

FR 417 History of the French Language credit: 3 or 4 Hours.

Introduction to the historical development of the French language, from its Latin origins to the present. Analysis of texts from a variety of genres across the written history of the language, and an examination of the social role of the language in the definition of France. Same as MDVL 417. 3 undergraduate hours. 4 graduate hours. Prerequisite: FR 314.

FR 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Introduction to political, judicial, linguistic, and cultural issues concerning indigenous and migrant/immigrant languages in the countries of the European Union. Focuses on political and judicial issues, such as legal aspects of bilingual education and minority language use, as well as linguistic and cultural aspects, such as assimilation, language-mixing, and language change. Taught in English. Same as GER 418, ITAL 418, LING 418, PS 418, SLAV 418, and SPAN 418. 3 undergraduate hours. 4 graduate hours.

FR 419 Techniques in Translation I credit: 2 or 3 Hours.

Practical course in the techniques of translating technical, commercial, scientific, and literary texts from English into French and vice versa. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 314 or consent of instructor.

FR 421 Techniques in Translation II credit: 2 or 3 Hours.

Continuation of FR 419. Practical exercises in translating from French to English and vice versa in a variety of texts, along with an introduction to theoretical aspects of translation. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 419 or consent of instructor.

FR 443 Studies in French credit: 3 to 4 Hours.

See Schedule for current topics. 3 undergraduate hours. 3 to 4 graduate hours. May be repeated in the same or separate terms to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: Junior standing.

FR 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, GER 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

FR 462 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as ITAL 435, LING 462, PORT 435, RMLG 435, and SPAN 435. See SPAN 435.

FR 479 Studies in Francophonie credit: 3 or 4 Hours.

Study of various topics in French language, literature, and culture outside of France. Regions may include francophone Africa, the Americas, Europe, and the Middle East. Same as CWL 434. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated to a maximum of 12 undergraduate hours or 16 graduate hours if topics vary.

FR 481 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as GER 489, ITAL 489, LING 489, PORT 489, and SPAN 489. See LING 489.

FR 485 Commercial & Econ French I credit: 2 or 3 Hours.

Studies French business practices: company structures, selling and buying techniques, banking, import/export and other commercial negotiations, employment, formalities, and conventions of letter-writing; involves both theory and practice. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 314 or equivalent, or consent of instructor.

FR 486 Commercial & Econ French II credit: 2 or 3 Hours.

Emphasizes business correspondence and simulation of business practices in the areas introduced in FR 485; also focuses on geographic and economic topics pertaining to France within the European community and Europe in general. 3 undergraduate hours. 2 graduate hours. Prerequisite: FR 485 or equivalent, or consent of instructor.

FR 492 Senior Thesis credit: 2 Hours.

For candidates for honors in French and for other seniors. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing.

FR 498 Senior Seminar credit: 3 Hours.

Studies in authors, genres, themes, and movements in French literature; conducted entirely in French. 3 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Senior standing.

FR 500 Beginning French Grads credit: 4 Hours.

Basic grammar, vocabulary, and reading practice; designed for graduate students desiring help in preparing for the French reading requirements for the Ph.D. Credit is not given toward a graduate degree.

FR 501 Reading French Grads credit: 4 Hours.

Grammar, vocabulary, and general and special reading; designed for graduate students desiring help in preparing for the French reading requirements for the Ph.D. Credit is not given toward a graduate degree. Prerequisite: FR 500, or FR 101 and FR 102, or equivalent.

FR 503 The Study of Culture I credit: 4 Hours.

Study of major artistic, historical, political, and literary aspects of France up to the French Revolution with emphasis on the relationship between literature and other aspects of French culture.

FR 504 The Study of Culture II credit: 4 Hours.

Study of major artistic, historical, political, and literary aspects of France from the French Revolution to the present with emphasis on the relationship between literature and other aspect of French culture.

FR 505 Teaching College and Secondary Foreign Language credit: 4 Hours.

Examination and discussion of classroom goals, procedures and techniques in teaching a foreign language (French, Italian) at the college and secondary level, associated with a demonstration class and supervision of teaching practice. Required of new teaching assistants in the Department of French and Italian. Same as ITAL 505. 4 graduate hours. No professional credit.

FR 529 Studies in French Linguistics credit: 4 Hours.

Variable topics course dealing with both synchronic and diachronic aspects of the French language. May be repeated if topics vary.

FR 530 Introduction to Research and Text Criticism credit: 4 Hours.

Proseminar in literary studies: research and methods; approaches to the literary text. Required of all M.A. and Ph.D. candidates. Same as ITAL 530. 4 graduate hours. No professional credit.

FR 543 French Studies credit: 4 Hours.

Flexible course limited only by the concentration of its material in French; may be activated by faculty proposal. May be repeated to a maximum of 16 hours if topics vary.

FR 552 Studies French & Comp Cinema credit: 4 Hours.

Historical, aesthetic, social, and technical studies of the French cinema; its development and relation to world cinema and to literature. Same as CWL 552. May be repeated to a maximum of 12 hours.

FR 559 Sem Romance Ling credit: 4 Hours.

Same as ITAL 559, LING 559, PORT 559, RMLG 559, and SPAN 557. See SPAN 557.

FR 570 Seminar Old French Literature credit: 4 Hours.

Discussion and research on a specialized topic in Old French literature. See Schedule for current topic. Same as MDVL 570. May be repeated. Prerequisite: FR 531 or consent of instructor.

FR 571 Seminar 16thC French Lit credit: 4 Hours.

Discussion and research on a specialized topic in sixteenth-century French literature. See Schedule for current topic. May be repeated.

FR 572 Seminar 17thC French Lit credit: 4 Hours.

Discussion and research on a specialized topic in seventeenth-century French literature. See Schedule for current topic. May be repeated.

FR 573 Seminar 18thC French Lit credit: 4 Hours.

Discussion and research on a specialized topic in eighteenth-century French literature. See Schedule for current topic. May be repeated.

FR 574 Seminar 19thC French Lit credit: 4 Hours.

Discussion and research on a specialized topic in nineteenth-century French literature. See Schedule for current topic. May be repeated.

FR 576 Seminar in Francophonie credit: 4 Hours.

Discussion and research on a specialized topic in literature in French outside of France. See Schedule for current topic. 4 graduate hours. No professional credit. May be repeated in separate terms if topics vary.

FR 578 Seminar 20thC French Lit credit: 4 Hours.

Discussion and research on a specialized topic in twentieth-century French literature. See Schedule for current topic. Same as CWL 578. May be repeated.

FR 579 Seminar in French Literature credit: 4 Hours.

Discussion and research on a specialized area in French literature. See Schedule for current topic. May be repeated.

FR 580 Classroom Lang Acquisition credit: 4 Hours.

Same as EIL 580, GER 580, ITAL 580, PORT 580, SLS 580, and SPAN 580. See SPAN 580.

FR 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, EPSY 563, GER 584, ITAL 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

FR 588 Sem Second Lang Learn credit: 4 Hours.

Same as EALC 588, GER 588, ITAL 588, LING 588, PORT 588, and SPAN 588. See SPAN 588.

FR 591 Individual Topics credit: 1 to 8 Hours.

Prerequisite: Graduate standing with a major or minor in French.

FR 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Gender and Women's Studies (GWS)

GWS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GWS>)

Courses

GWS 100 Intro Gender & Women's Studies credit: 3 Hours.

Interdisciplinary introduction to the study of gender, women, and sexuality. Addresses issues such as social experience, representation and popular culture, femininities and masculinities, family structure, education, employment, economics, literature and the arts, religion, history, and technology. Explores interrelationships of race, ethnicity, sexuality, gender, ability, and age from a transnational perspective. Same as HDFS 140 and SOC 130.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

GWS 103 Black Women in the Diaspora credit: 3 Hours.

Same as AFRO 103 and AFST 103. See AFRO 103.

This course satisfies the General Education Criteria for: Cultural Studies - US Minority

GWS 150 Contemp Women's Issues credit: 3 Hours.

Explores the most recent debate and research related to contemporary issues which affect primarily women. Reviews issues related to sexual and domestic violence, gender socialization, feminization of poverty, women's health, sexual harassment, work and family, politics, and media influences from a multi-discipline and multi-cultural perspective.

GWS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

GWS 201 Race, Gender & Power credit: 3 Hours.

Presents multiple windows into perceptions and perspectives upon gender, sexuality, power, identity and culture, and their multiple intersections. The concept of race in its many manifestations is used to examine relationships of self to society, state institutions and cultures. By paying greater attention to race and power, nuanced understandings of the way the gender systems are maintained, patrolled and formed will be examined. Topics may include: film, media, technology, culture, religion, identities, sexualities. Same as SOC 201.

This course satisfies the General Education Criteria for: Cultural Studies - Western

GWS 202 Sexualities credit: 3 Hours.

Surveys sexualities from multiple perspectives, standpoints, disciplines, and theories. How have different cultures, different people, and different viewpoints understood, shaped, and interpreted sex, sexualities and genders? Course places the concept of sexuality at its core to examine citizenship, education, reproduction, science, tourism, urban/rural space, and politics. Topics may include: gender, race, identities, power, transformation, reproduction. Same as SOC 202.

This course satisfies the General Education Criteria for: Cultural Studies - Western

GWS 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AIS 295, AFRO 215, and LLS 215. See AAS 215.

This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - US Minority

GWS 218 Intro to Social Issues Theatre credit: 3 Hours.

Same as THEA 218. See THEA 218.

GWS 225 Women in Prehistory credit: 3 Hours.

Same as ANTH 225. See ANTH 225.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

GWS 226 Black Women Contemp US Society credit: 3 Hours.

Same as AFRO 226 and SOC 223. See AFRO 226.

GWS 230 Latina/o Genders & Sexualities credit: 3 Hours.

Same as LLS 230. See LLS 230.

GWS 240 Sex & Gender in Antiquity credit: 3 Hours.

Same as CLCV 240 and CWL 262. See CLCV 240.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

GWS 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Same as HIST 245 and MDVL 245. See HIST 245.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

GWS 250 Gender and Representation credit: 3 Hours.

Focusing primarily on gender, race, sexuality, and their intersections, this introductory course analyzes the politics of representation drawn from popular culture, painting, television and film, literature, music, religion, and new media.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GWS 255 Queer Lives, Queer Politics credit: 3 Hours.

Investigates queer lives in relation to dominant ideas about "deviance" and "equal rights." Drawing on case studies, the course investigates questions related to nation, race, economy, bodies, drugs, health, identities, agency and action as they intersect with contemporary queer politics. Students will learn conceptual and qualitative methods to investigate issues related to queer lives. Same as SOC 255.

GWS 258 Sex in Nature and Culture credit: 3 Hours.

Same as ANTH 258. See ANTH 258.

GWS 261 Gender in a Transnational Perspective credit: 3 Hours.

Same as SOC 261. See SOC 261.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GWS 262 Women's Lives credit: 3 Hours.

Same as ANTH 262. See ANTH 262.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

GWS 263 US History of Medicine credit: 3 Hours.

Same as HIST 263. See HIST 263.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

GWS 270 Sexuality and Literature credit: 3 Hours.

Same as GER 270 and CWL 272. See CWL 272.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

GWS 272 Women and Politics credit: 3 Hours.

Same as PS 272. See PS 272.

GWS 280 Women Writers credit: 3 Hours.

Same as ENGL 280. See ENGL 280.

GWS 281 Women in the Lit Imagination credit: 3 Hours.

Same as ENGL 281. See ENGL 281.

GWS 285 US Gender History to 1877 credit: 3 Hours.

Same as HIST 285. See HIST 285.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

GWS 286 US Gender History Since 1877 credit: 3 Hours.

Same as HIST 286. See HIST 286.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

GWS 287 African-American Women credit: 3 Hours.

Same as AFRO 287 and HIST 287. See HIST 287.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

GWS 295 Beginning Topics GWS credit: 3 Hours.

Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 hours; may be repeated in separate terms to a maximum of 12 hours.

GWS 305 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Same as AAS 300 and LLS 305. See AAS 300.

This course satisfies the General Education Criteria for:

Advanced Composition

GWS 315 War, Memory, and Cinema credit: 3 Hours.

Same as AAS 315. See AAS 315.

GWS 320 Gender & Latina/o Migration credit: 3 Hours.

Same as LLS 320 and SOC 321. See LLS 320.

GWS 325 Lesbian/Queer Media Cultures credit: 3 Hours.

Discusses how various LGBT/Q communities were consolidated or drawn together by print and invented in the very acts of writing, distributing, purchasing, and reading print artifacts. Students examine early homophile publications, the rise of presses dedicated to LGBT/Q literature, independent bookstores and distribution networks, as well as the contemporary world of zines, blogs, chatrooms, fanfiction, and online journals, to see the intersection of sexuality, community, identity, and the print sphere. Students will learn how to historicize the rise of various LGBT/Q subcultures through a long history of print and how to navigate and understand the gregarious contemporary world of online publishing and social networking. Prerequisite: Previous course in GWS recommended.

GWS 330 Bodies & Tech in Pop Culture credit: 3 Hours.

Examines gender, race, sexuality and nation as embodied in visions of science and technologies in popular culture. Topics include medicine, work, leisure, domesticity, games, films, fiction, geopolitics, and the body. Prerequisite: GWS 100 or GWS 250 or GWS 350 or consent of instructor.

GWS 333 Memoir & Autobiography credit: 3 Hours.

Explores the phenomenon of autobiography in the contemporary world. Students will read theories of autobiography, and ask questions about how writing about the self is gendered, and how representations of the self fare in the outside world. An important aspect of the course will be examinations of how changing media such as film, television talk shows and the Internet shape these representations. Students will be assigned to read and make a presentation on one of the supplementary texts of autobiographies chosen from authors in the First and Third worlds. Same as ENGL 333.

GWS 334 Brazilian Women's Lit Trans credit: 3 Hours.

Same as PORT 334. See PORT 334.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

GWS 335 Film, TV, and Gender credit: 3 Hours.

Examines the history and theory of film, television, and their interrelationship through one or more specific case studies. Topics may include: film and feminist movements; girl films; queer TV; gender, sport and TV. Focuses attention on gender and related issues such as race, ethnicity, sexuality, age, ability and disability, class, and nationality. Addresses issues of representation, narrative, genre, industry, audience, exhibition, media convergence, new and mobile media, and social space. Same as MACS 335.

GWS 337 Interrogating Masculinities credit: 3 Hours.

Explores the social construction of gender as it pertains to masculinities in conjunction with analyses of race, class, gender, ability, and sexuality. Masculinities, in its various forms, shapes and lives of both women and men and this course will examine the construction, reproduction, and impact of masculinities on the institutions of politics, education, work, religion, sports, family, media, and the military to name a few. Paying careful attention to the conjunctions between materiality and culture, this course will interrogate how masculinities shape individual lives, groups, nationalisms, organizations, and institutions and will analyze the ways in which power functions within local transnational contexts. Above all, this course offers a road map for forging new, progressive models of masculinity.

GWS 340 Gender, Relationships & Society credit: 3 Hours.

Same as HDFS 340 and SOC 322. See HDFS 340.

GWS 345 Digital & Gender Cultures credit: 3 Hours.

This interdisciplinary course uses the lens of gender critique and pairs it with social activism to provide students analytical tools to engage with, reshape, and create digital cultures. Examines recent research and public policies related to the gendered, raced, and classes dimensions of digital cultures and inequality; the broad range of labor issues embedded in the growing income disparity related to digital cultures; the various ways that digital inequality has been defined by public policy, sociologists, and activists, and real examples of collective activism and social change related to emerging technologies. Same as INFO 345, MACS 345, and SOC 345.

GWS 350 Feminist & Gender Theory credit: 3 Hours.

Interdisciplinary survey of feminist and gender theory. Traces developments in feminist theory and LGBT/Q approaches and explores contemporary debates.

GWS 355 Beauty and Culture credit: 3 Hours.

Examines beauty and culture, in particular how tropes, ideologies, and politics bolster the construction of beauty as an aesthetic value. Looks at the ways in which beauty is imagined, visualized, narrated, naturalized, reproduced, privileged, and contested through various venues such as art, performance, philosophy, media, history, and popular culture. Attention will be given to race, class, gender, sexuality, and the implications thereof.

GWS 356 Sex & Gender in Popular Media credit: 3 Hours.

Same as MACS 356. See MACS 356.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

GWS 360 Women and the Visual Arts credit: 3 Hours.

Same as ARTH 360. See ARTH 360.

GWS 361 Women in East Asia credit: 3 Hours.

Same as EALC 361. See EALC 361.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

GWS 363 Gender, Health & Pop Culture credit: 3 Hours.

Aspects of popular culture, including television, magazines, newspapers, social networking sites, and internet sources to name a few, are ways that health information is disseminated. Students will examine how we define health and understand disease as related to popular culture. Discusses how people resist or reinforce these messages about health, well being, fitness, and diet. Also discusses how understandings of race, sexuality and class affect the ways that we think about sickness, health and constructions of gender.

GWS 366 Feminist Disability Studies credit: 3 Hours.

Explores the complex relationship between gender and disability. Approaching disability as a social and political category rather than a strictly medical one, we will ask: how is the language of disability used to produce and police a variety of gender, sexual, and racial identities as non-normative? How might debates over medicine, technology, and the concept of "natural" pit gender and disability against one another? How have feminist, queer, and transgender scholarship and activism engaged disability? Prerequisite: One of the following: GWS 100, GWS 201, GWS 202.

GWS 370 Queer Theory credit: 3 Hours.

Traces the development of queer theory as a mode for understanding queer studies methodologies and the changing intellectual landscape of key issues in the field. As part of the course, students will review key concepts and theoretical schools of thought, navigating important debates guiding the field. Theories will engage questions of the social and cultural through topics including race, gender, nation, family, history, identity formation, sexology, the state, and capital. Same as SOC 320. Prerequisite: GWS 100, GWS 201, GWS 202, or consent of instructor.

GWS 376 Children and Youth Literature credit: 3 Hours.

Same as CWL 376, EURO 376, and SCAN 376. See SCAN 376.

GWS 378 Fairy Tales & Gender Formation credit: 3 Hours.

Discusses how femininity and gender formation are related through fairy tales. As children grow they are taught the difference between male and female roles. One of the main ways this instruction takes place is through the pleasurable media of fairy tales in books, poems, and more recently, films. *Sleeping Beauty*, *Snow White*, *Beauty and the Beast*, and the *Little Mermaid*, among others, will be examined to understand how sexual identity is constructed differently in different cultures, and how issues such as rape and incest are addressed within the narratives. The readings explore the ways that fairy tales work to express psychological reactions to maturation while conditioning both characters and readers to adopt specific social roles in adulthood. Same as ENGL 378.

GWS 380 Black Women Hist & Cultures credit: 3 Hours.

Interdisciplinary study of black women's multiple histories and varied cultures including black women from North America, Africa, and the Caribbean. Same as AFRO 380. Prerequisite: AFRO 100 or GWS 100 or GWS 250 or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

GWS 382 Black Women & Popular Culture credit: 3 Hours.

Explores how Black women have been are currently portrayed in popular media, such as television, internet, movies, and popular mediums such as magazines, popular fiction, newspapers, and other cultural phenomenon. Examines what these portrayals reveal about Black women's role in society and how black women as consumer and participants respond to these stereotypes, and create alternative oppositional images. This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

GWS 383 Hist of Blk Women's Activism credit: 3 Hours.

Same as AFRO 383 and HIST 383. See AFRO 383.

GWS 385 Transnational Sexualities credit: 3 Hours.

Investigates the ways in which sexual identities change as national contexts change, as borders are imagined, valued, and crossed, and as definitions of race, gender, and religion shift. Interrogates how national and transnational identities (at home and abroad), modernities, histories, and colonial and global narratives are built on ideas of racialized sexualities, and as such, is particularly interested in the study of queer diaspora. Importantly, this course utilizes transnational feminist frameworks for re-thinking issues related to sexuality, immigration, nation-building, race and gender. Areas of inquiry include imperialism, immigration, war, tourism and globalization. Same as HIST 385.

Prerequisite: GWS 100, GWS 201 or GWS 202 or consent of instructor.

GWS 387 History of Sexuality in U.S. credit: 3 Hours.

Explores a wide variety of sources to understand how notions of sexuality have emerged and been contested at key moments in U.S. history. Our guiding questions include: How have "official" or governing discourses of sexuality (in law, medicine, religions, science) been formulated? In turn, how have "ordinary" people understood and practiced their sexuality? How has the meaning of particular sexual practices changed over time? How have ideas about race, gender, and/or class been embedded within the discourse of sexuality at different moments in U.S. history? What methods of reading and interpretation are most useful for the historical study of sexuality? Also emphasizes skills such as critically analyzing primary sources within their historical context; interpreting different types of primary sources; locating, understanding, and evaluating scholarly secondary sources; and presenting historical arguments, based on both primary and secondary sources. Same as HIST 387.

GWS 390 Individual Study credit: 0 to 3 Hours.

Special topics not treated in regularly scheduled classes. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: One course in Gender and Women's Studies; consent of instructor.

GWS 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Same as LLS 392 and SOC 392. See LLS 392.

This course satisfies the General Education Criteria for:
Advanced Composition

GWS 395 Intermediate Topics GWS credit: 3 Hours.

Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 hours; may be repeated in separate terms to a maximum of 12 hours.

GWS 397 Sexuality in Modern Europe credit: 3 Hours.

Course Information: Same as HIST 397. See HIST 397.

GWS 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLBL 403, HIST 434, REL 403 and SAME 403. See REL 403.

GWS 409 Women's Health credit: 3 Hours.

Same as CHLH 409. See CHLH 409.

GWS 415 Africana Feminisms credit: 3 or 4 Hours.

Same as AFRO 415 and AFST 420. See AFRO 415.

GWS 417 Leading Post-Perform Dialog credit: 4 Hours.

Same as THEA 417. See THEA 417.

GWS 418 Devising Social Issues Theatre credit: 3 or 4 Hours.

Same as THEA 418. See THEA 418.

GWS 421 Sex Role Theory in Counseling credit: 4 Hours.

Same as EPSY 421. See EPSY 421.

GWS 424 Gender & Race in Contemp Arch credit: 3 Hours.

Same as ARCH 424. See ARCH 424.

GWS 432 Gender and Language credit: 3 or 4 Hours.

Same as CMN 432 and LING 432. See CMN 432.

GWS 435 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, AFRO 435, LLS 435, and MACS 432. See LLS 435.

GWS 442 Body, Culture & Society credit: 3 or 4 Hours.

Same as KIN 442. See KIN 442.

GWS 450 Topics in Bodies and Genders credit: 3 Hours.

Same as CWL 450. See CWL 450.

GWS 454 Social Work with Women credit: 3 or 4 Hours.

Same as SOCW 455. See SOCW 455.

GWS 459 Gender, Sex, & Postcoloniality credit: 3 or 4 Hours.

Explores the relationship of imperialism, sexuality, and race through the lens of postcolonial theory. Same as HIST 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: GWS 100 or GWS 250 and GWS 350 or GWS 370; or consent of instructor.

GWS 462 Hip Hop Feminism credit: 3 or 4 Hours.

Explores how hip hop has shaped the culture, aesthetics, experiences, and perspectives of an emergent generation of artists, scholars, and writers with several aims: 1) To challenge systemic social inequalities. 2) To articulate new visions of justice that depend on the power young people possess. To better understand how and why the relationship between hip hop and feminism is coherent, meaningful, and compelling, students will become familiar with artists working within and beyond various elements of hip hop (rap, graffiti, emceeing, dee-jaying, etc.), social critics concerned with documenting hip hop's cultural practices, and critical educator (broadly defined). 3 undergraduate hours. 4 graduate hours.

GWS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Same as AAS 465, AFRO 465, and LLS 465. See LLS 465.

GWS 467 Locating Queer Culture credit: 3 Hours.

Our goal is to learn different methods for researching "queer culture," with a special focus on the local context. Explores two research methods in depth: history and ethnography. Students will produce their own original research based on genuine gaps in existing knowledge. Provides an opportunity to learn both received knowledge about queer culture, as well as that which we do not yet know. By the end of this course, the class will collectively produce new knowledge about queer culture using local stories. Same as HIST 468. 3 undergraduate hours. No graduate credit.

GWS 470 Transgender Studies credit: 3 or 4 Hours.

What are the issues and politics related to transgender and transsexual identities? Students will examine and critically evaluate historical and contemporary debates that contest normative male/female binaries and traditional categorizations of sexuality. The course moves beyond these initial inquiries into gender theory to consider the effects of institutional discourses produced through stage and civil society. Taught with particular attention given to questions of race, national formations, medical, and legal discourses. Areas of inquiry may include gender theory, transnational identities, gendered and racial performances, medical and psychological diagnoses, violence, the law, and the Prison Industrial Complex. Through these topics, students will be asked to consider important questions over political and legal representation, autonomy, the rights of citizenship, and the practice of everyday life. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200- or 300-level, or consent of instructor.

GWS 478 Sex, Power and Politics credit: 3 or 4 Hours.

Examines representations of the relationship between sex, power, and subjectivity and how they have shaped feminism. Explores critical approaches to feminist analyses of women's oppression and debates about sexuality, including issues such as consent, rape and prostitution. Same as PS 413. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200- and 300-level or consent of instructor.

GWS 485 The Politics of Fashion credit: 3 or 4 Hours.

Interdisciplinary and transnational study of the historical and cultural development of fashion. Examines the social and political tensions embodied in fashion, the fashion industry, and sartorial practices in relation to gender, race, nation, and sexuality. Same as AAS 485. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Gender and Women's Studies at the 200 or 300 level, or consent of instructor.

GWS 490 Individual Study credit: 2 to 4 Hours.

Supervised reading and research in Gender and Women's Studies chosen by the student with instructor approval. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Two courses in Gender and Women's Studies at the 200-400 levels; or junior standing; or consent of instructor.

GWS 495 Advanced Topics GWS credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 9 undergraduate hours or 12 graduate hours; may be repeated in separate terms to a maximum of 12 undergraduate or 12 graduate hours.

GWS 498 Senior Seminar credit: 3 Hours.

Considers the relationship between theory and research in Women's Studies. Reviews and examines the key issues of feminist scholarship. Provides students with the methodological knowledge and opportunity to carry out a research project. 3 undergraduate hours. No graduate credit. Prerequisite: Senior standing and enrollment as a major in Gender and Women's Studies, or consent of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

GWS 501 Prob in Comp Women's Hist credit: 4 Hours.

Same as HIST 503. See HIST 503.

GWS 508 Feminism, Gender and Sexuality credit: 4 Hours.

Same as ANTH 508. See ANTH 508.

GWS 512 Gender Relations & Intl Dev credit: 4 Hours.

Same as SOCW 581 and WGGP 581. See WGGP 581.

GWS 540 Intersectional Pedagogies credit: 4 Hours.

Examines the link between political movements and pedagogies, including feminist, critical, critical multicultural, critical race, and queer pedagogies. Students will analyze pedagogical theories and implement practical techniques and strategies. Same as EPS 540. Prerequisite: Graduate standing and previous coursework in Gender and Women's Studies; or consent of instructor.

GWS 545 Sexualities and Education credit: 4 Hours.

Same as EPS 545. See EPS 545.

GWS 550 Feminist Theories & Methods credit: 4 Hours.

Interdisciplinary study in diverse feminist theories and methods produced in and across various disciplines. Contemporary philosophical and theoretical developments in the study of gender to specific histories of class, race, ethnicity, nation and sexuality. Prerequisite: At least one graduate-level humanities course or consent of instructor.

GWS 560 Feminist Media Studies credit: 4 Hours.

Same as MDIA 560. See MDIA 560.

GWS 561 Race and Cultural Critique credit: 4 Hours.

Same as AAS 561, AFRO 531, ANTH 565, and LLS 561. See AAS 561.

GWS 575 Transnational Feminisms credit: 4 Hours.

Study of the terms, methodologies and theoretical interventions of transnational feminist studies. Transnational is a term that calls attention to circuits of political, economic, and social phenomena across the boundaries of nation-states. Emerging as a response to the shortcomings of overarching, economic theorizations of globalization as well as Western versions of "global feminism," transnational feminist studies is an interdisciplinary critical field that draws from the vocabularies of postcolonial studies, poststructuralism, Third World feminisms, race and ethnic studies feminism in self-reflexive and context-specific ways. Examines recent reconceptualizations of relations between woman and nation; gender and globalization; feminist theory and practice.

GWS 576 Children and Youth Literature credit: 4 Hours.

Same as CWL 586, EURO 576, and SCAN 576. See SCAN 576.

GWS 580 Queer Theories & Methods credit: 4 Hours.

Interdisciplinary study in queer theories and methods produced in and across various disciplines. Contemporary philosophical and theoretical developments in queer studies specific to histories of class, race, ethnicity, nation and sexuality. Prerequisite: Graduate standing.

GWS 581 Topics in Queer Studies credit: 4 Hours.

Interdisciplinary graduate seminar on a current topic in the field of queer studies. May be repeated in separate terms to a maximum of 8 hours if topics vary. Prerequisite: Graduate standing and previous coursework in women's or gender studies, or consent of instructor. GWS 580 or previous coursework in queer studies is recommended.

GWS 585 Doctoral Training & Beyond credit: 2 Hours.

Explores the unique challenges and structures of interdisciplinary programs and departments and what it means to hold a joint appointment. Special attention will be paid to strategies to manage research, teaching, and service for interdisciplinary fields and joint appointments. Leveraging the PhD for non-academic jobs also addressed. Provides students with advanced standing skills to explore and pursue pathways of employment from multiple experienced mentors. This course is intended to supplement existing graduate training. Same as AAS 585 and LLS 585. 2 graduate hours. No professional credit. Approved for S/U grading only. Credit is not given for both GWS 585 and GC 550. Prerequisite: Graduate standing.

GWS 590 Topics in GWS credit: 4 Hours.

May be repeated. Prerequisite: Graduate standing and previous coursework in women's or gender studies, or consent of instructor.

General Engineering (GE) -- Changed to Systems Engineering and Design (SE)

General Studies (GS)

GS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GS>)

Courses

GS 101 Exploring General Studies credit: 1 or 2 Hours.

An introduction to the opportunities and resources available to the "undeclared" students enrolled in the Division of General Studies at Illinois. Introduces students to the breadth of diverse fields of study available, prepares DGS students for myriad potential careers, and helps foster a sense of collaboration and engagement through campus orientation, study, and project-based assignments. May not be repeated.

GS 102 Prep for 21st Cent Challenges credit: 1 Hour.

In this honors seminar, DGS James Scholar freshmen will learn to develop their strengths, interests, and transferrable skills while investigating current and evolving societal challenges. Through class discussion, readings, and a semester-long project, students will explore a variety of topics, including leadership, creativity, research and service. Students will also learn how to craft their own honors experience by understanding the many opportunities available at Illinois.

GS 198 DGS Honors Seminar credit: 0 to 3 Hours.

Approved for both letter and S/U grading.

GS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated for a maximum of 6 hours if topics vary.

GS 299 DGS Study Abroad credit: 0 to 18 Hours.

Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved for overseas programs. Final determination of credit is made upon the student's completion of the work. (Summer session, 0 to 8 hours) Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 44 hours, all of which must be earned within one calendar year. Prerequisite: One year of residence at UIUC, good academic standing, and prior approval of the Division of General Studies.

Geography (GEOG)

GEOG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GEOG>)

Courses

GEOG 100 Introduction to Meteorology credit: 3 Hours.

Same as ATMS 100. See ATMS 100.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOG 101 Global Development&Environment credit: 3 Hours.

Introduces geographical perspectives on environment and development studies with case studies drawn from Africa, Asia, and Latin America. Investigates the origins of the global South in relation to the global North, especially the historical and contemporary processes driving environmental, economic, and cultural change.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

GEOG 103 Earth's Physical Systems credit: 4 Hours.

A basic introduction to the environmental systems of the Earth's surface, including landforms, soils, and ecosystems and how these systems are affected by global change. Emphasizes the importance of human-Earth relations and a holistic view of environmental systems. Same as ESE 103.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOG 104 Social and Cultural Geography credit: 4 Hours.

Introduces the basic concepts of social and cultural geography, and the application of these concepts to a variety of topics; mental maps, territoriality, cultural regions, cultural elements and their diffusion, population movement and migration, settlement patterns, environmental hazards, and spatial patterns of social problems.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 105 The Digital Earth credit: 3 Hours.

Geospatial technologies such as global positioning systems (GPS) and geographic information systems (GIS) are becoming increasingly important tools in research and policy arenas and in everyday life. This course will provide an introduction to these emerging technologies and to the principles of mapping science that underpin them. At the same time, the course will explore how these innovative technologies are changing the spaces and places around us, including how we interact with the environment and each other. Lab exercises provide hands-on experience in collecting and mapping geospatial information, interpreting digital imagery and the Earth's environments, and critically thinking about the social implications of the digital Earth.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 106 Geographies of Globalization credit: 3 Hours.

A survey of major world regions by systematically considering five themes: environment, population and settlement patterns, cultural coherence and diversity, geopolitical fragmentation and unity, and economic and social development. While examining the persistence of unique regions, the course will both scale up to global linkages and scale down to place-specific impacts of globalization processes. Same as ESE 106.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

GEOG 198 Freshman Honors Seminar credit: 3 Hours.

Through discussions and research projects, the seminar is designed to provide an in-depth understanding of topics in the field of systematic or regional geography which are selected for group study. Appropriate geographic methodology is emphasized. Prerequisite: James Scholar standing or other designation as a superior student.

GEOG 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GEOG 204 Cities of the World credit: 3 Hours.

In-depth exploration of global urbanization. Using a comparative regional approach, discuss the recent history of global urbanization, dissect its problems, and offer possible solutions. Approximately ten major regions of the world will be examined, exploring the significant urban patterns and processes, built and natural environments, and social, economic, and cultural landscapes of each.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

GEOG 205 Business Location Decisions credit: 3 Hours.

Analyzes location decision-making emphasizing industrial and commercial location patterns; identifies important institutional factors and their changing roles over the recent past; and focuses on plant closings, economic disruptions, and problems of structural change. Same as BADM 205. Prerequisite: ECON 102 or ECON 103, or equivalent.

GEOG 210 Social & Environmental Issues credit: 3 Hours.

Introduction to the complex relationship between people and the natural environment from a social science perspective. Explores different approaches to environmental issues, and examines the role of population change, political economy, technologies, environmental policymaking, and social institutions in causing and resolving contemporary social and environmental global issues. Same as ESE 210.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 215 Resource Conflicts credit: 3 Hours.

Geographic concepts of place, scale, region, and territoriality are used to explore the causes and consequences of competition for the control of natural resources. Situations that lead to violent conflict are discussed as well as mechanisms for the peaceful resolution of resource conflicts. Resources discussed include oil, water, access to land, and the impact of climate change. Same as ESE 215 and GLOBL 215.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 221 Geographies of Global Conflict credit: 3 Hours.

Focuses on contemporary cultural conflicts, competition among nations for economic and mineral resources; treats territorial disputes from a cultural and geographic perspective. Case studies vary to illustrate types of contemporary conflicts. Same as GLOBL 221. Credit is not given for GEOG 221 and GEOG 110.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 222 Big Rivers of the World credit: 3 Hours.

An interdisciplinary approach to the study of big rivers, encompassing geomorphology, engineering, ecology, risk assessment and planning. Commencing with an assessment of the nature of big rivers; their hydrology and geomorphic setting; hazards associated with large rivers, and issues of river impoundment and management, then proceed to examine the geography, geomorphology, and ecology and management of a range of the World's greatest rivers, focusing on how a geomorphological understanding of such large rivers can aid study of riverine ecohabitats and inform decisions regarding water usage and engineering management. If the weather permits, a one day field-trip will be organized in the second half of the course to view aspects of a local river in Illinois/Indiana. Same as ESE 222.

GEOG 224 Geog Patterns of Illinois credit: 3 Hours.

Systematic analysis of the environmental and human processes that have shaped the regional landscapes of rural and urban Illinois.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GEOG 254 American People, Places, & Environments credit: 3 Hours.

Regional geography survey of the U.S., including physical settings, cultural and economic patterns, and human-environment relationships. Topics include spatial patterns of settlement and migration, uneven vulnerability to natural hazards, and cultural diversity as seen in the landscape, with an overall focus on how human and physical geography together shape the American environment across different regions. Same as ESE 254.

GEOG 280 Intro to Social Statistics credit: 4 Hours.

Same as SOC 280. See SOC 280.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

GEOG 287 Environment and Society credit: 3 Hours.

Same as ESE 287, NRES 287 and PS 273. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

GEOG 310 Political Geography credit: 3 Hours.

Problems and issues surrounding the geographic distribution of political actions and outcomes in the context of globalization. Topics include war and peace, access to natural resources, nationalism, democratization, terrorism, and the politics of identity. Prerequisite: Junior standing or consent of instructor.

GEOG 350 Sustainability and the City credit: 3 Hours.

Examination of the tools, techniques, strategies, and rationales that can be used by urbanists to produce and sustain a productive, fair, and equitable city. Emphasis is placed on diagnosing, implementing, and sustaining an ideal U.S. city as a complex whole that embeds an array of interconnecting parts (neighborhoods, retail districts, downtowns, city economies). Lectures and discussion cover the broad background of theories, concepts, and principles that will be essential for imagining and implementing these ideals, strategies and plans.) Same as ESE 350.

GEOG 356 Sustainable Development in South Asia credit: 3 Hours.

Examination of sustainable development in the region of South Asia (India, Nepal, Pakistan, Afghanistan, Bangladesh, Sri Lanka). Geographic analysis of development processes since the colonial period, with particular emphasis on the interrelated processes of environment, society, and politics as related to sustainability. Prerequisite: Sophomore standing or consent of instructor.

GEOG 370 Water Planet, Water Crisis credit: 3 Hours.

Same as ESE 320 and GEOL 370. See ESE 320.

GEOG 371 Spatial Analysis credit: 4 Hours.

Overview of the spatial analysis (nomothetic) approach to geographic research, both physical and human; includes discussion of the scientific method, with explanations and uses of analytic geographic concepts in studying real world problems. Prerequisite: A course in geography.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

GEOG 373 Geography Field Course credit: 1 to 4 Hours.

Field observation and mapping of human and/or physical phenomena using basic geographic field techniques, including pre- and post-trip meetings. Required field trip. May be repeated if topics vary. Prerequisite: Major or minor in Geography & GIS, or consent of instructor.

GEOG 379 Intro to GIS Systems credit: 4 Hours.

Investigates the fundamentals of geographic information science as well as the basic skills in the execution of that theoretical knowledge with industry standard software packages. Student will learn the basics of projections and coordinate systems, how geographic information is stored and manipulated, and the theory and practice behind the production of thematic maps. Includes lecture and hands-on laboratory components. Same as ESE 379.

GEOG 380 GIS II: Spatial Prob Solving credit: 4 Hours.

Study of the analytical capabilities of geographic information systems with an emphasis on learning to solve spatial problems in both the vector and raster data formats. Students will develop the skills necessary to answer questions or solve problems in their areas of interest, with particular emphasis on problems and questions that require multiple steps to resolve. Students will learn the fundamental theory behind spatial problem solving, but also learn to execute these procedures with industry-standard software packages. Thus, this class contains both lecture/discussion elements and hands-on laboratory work. Same as ESE 380. Prerequisite: GEOG 379

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

GEOG 381 Environmental Perspectives credit: 3 Hours.

Focus on the major ideas in contemporary environmentalism, especially on how humans do and should interact with the environment. Same as ESE 381. Prerequisite: Junior or senior undergraduate standing.

GEOG 384 Population Geography credit: 3 Hours.

Problems and issues surrounding the geographic distribution of populations at the world, regional, and local levels; emphasizes problems associated with population growth and decline, recent population redistribution, births and deaths, and elderly and minority populations.

GEOG 390 Individual Study credit: 2 to 4 Hours.

Supervised independent study of special topics or regions. May be repeated once. Prerequisite: Junior standing; at least one formal course in the topic or region of interest; consent of instructor.

GEOG 391 Honors Individual Study credit: 2 to 4 Hours.

Individual study and research projects for students who are working toward the degree with distinction in geography. May be repeated to a maximum of 8 hours. Prerequisite: Junior standing; consent of honors adviser.

GEOG 392 Geography & GIS Internship credit: 0 to 3 Hours.

Supervised, off-campus experience in a field directly pertaining to Geography and/or GIS. A written report is required at the end of the internship relating work accomplishments to the student's program of study. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Consent of faculty sponsor and Director of Undergraduate Studies; at least two courses taken within Geography & GIS.

GEOG 394 Special Topics Social Geog credit: 4 Hours.

Introduction to current research in social geography; includes such topics as access to public facilities, geography of crime, innovation diffusion, geography of communications, spatial assimilation of minorities, and geography of social well-being. See Schedule for current topics. May be repeated.

GEOG 401 Watershed Hydrology credit: 3 Hours.

Same as NRES 401. See NRES 401.

GEOG 405 Geography Field Course credit: 1 to 4 Hours.

Field observation and mapping of human and/or physical phenomena using basic geographic field techniques, including pre- and post-trip meetings. Required field trip. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Major or minor in Geography & GIS, or consent of instructor.

GEOG 406 Fluvial Geomorphology credit: 4 Hours.

Systematic overview of the forms and processes associated with rivers and drainage basins; topics include basin hydrology, drainage networks, river hydraulics, sediment transport processes, channel morphology, channel change, and human impacts on fluvial systems. Same as GEOL 406, and NRES 406. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 101, and GEOG 103 or GEOL 107, or consent of instructor.

GEOG 408 Humans and River Systems credit: 4 Hours.

Systematic analysis of the biophysical processes operating in rivers and watersheds and the interaction of humans on these processes. The course will emphasize the importance of biophysical processes and human interaction with these processes in river and watershed management. Class discussion and a class project will focus on analysis of practical river and watershed problems. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 103 or an introductory course in earth or environmental science.

GEOG 410 Green Development credit: 4 Hours.

Theory and practice of sustainable development. Course materials draw upon theoretical and case study material from the social and natural sciences to analyze environment and development relations with emphasis on the Global South. Same as ESE 410. 4 undergraduate hours. 4 graduate hours.

GEOG 412 Geospatial Tech & Society credit: 3 Hours.

Examines the use of geographic information systems (GIS), geographical positioning systems (GPS), and other geospatial technologies in everyday life with emphasis on their implications for social, economic, and environmental change. Topics include critical cartography, GIS, and social theory, crime and health, environmental justice, feminism, economic development and environmental change. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 105 or consent of instructor.

GEOG 421 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOL 481 and NRES 422. See ATMS 421.

GEOG 423 Politics of International Conservation and Development credit: 3 Hours.

Same as NRES 423. See NRES 423.

GEOG 436 Biogeography credit: 3 Hours.

Same as ANTH 436, ESE 439, IB 439 and NRES 441. See IB 439.

GEOG 438 Geography of Health Care credit: 3 or 4 Hours.

Methods and perspectives of health care. Emphasizing the spatial analysis of health and health care. The organization, provision and competition of health care will be highlighted. Same as SOC 478. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 384 or SOC 274 or consent of instructor.

GEOG 439 Health Applications of GIS credit: 3 Hours.

Same as CHLH 439 and PATH 439. See PATH 439.

GEOG 440 Business Applications of GIS credit: 3 or 4 Hours.

Design and implementation of GIS for business and strategic planning applications. Course goals include: (1) provide students with an understanding of Geographic Information Systems; (2) provide students with an understanding of how GIS can be applied in various business applications; (3) familiarize students with GIS and modeling techniques; (4) provide students with opportunities to work with various data sources through a project related to their own interest in business. Same as BADM 440. 3 undergraduate hours. 4 graduate hours.

GEOG 446 Sustainable Planning Seminar credit: 4 Hours.

Same as LA 446, NRES 446, and UP 446. See LA 446.

GEOG 455 Geog of Sub-Saharan Africa credit: 3 Hours.

Regional geography of Africa south of the Sahara. Geographic analysis of Africa which includes topics in both physical and human geography and provides a general overview of the processes and interactions between human and environmental factors that shape Africa's physical and human geography. 3 undergraduate hours. 3 graduate hours.

GEOG 459 Ecohydraulics credit: 4 Hours.

Interactions between hydraulic, ecological, and geomorphic processes in river environments at a wide range of both spatial and temporal scales. Draws upon and synthesizes fundamental concepts from biology, ecology, fluid mechanics and morphodynamics, to apply them to truly interdisciplinary problems. Such an approach, coupled with hands-on experience involving planning, conducting and analyzing hands-on experiments at the Ven Te Chow Hydrosystems Laboratory and field surveys on local natural waters will provide the students with a broad perspective on the interconnections between physical and ecological systems. Students will apply their knowledge of fundamental processes to assess complex problems involving monitoring, management, conservation and restoration of ecosystems. 4 undergraduate hours. 4 graduate hours.

GEOG 460 Aerial Photo Analysis credit: 3 or 4 Hours.

Review of methods for extracting quantitative and qualitative information from aerial photographs using computer-based techniques and visual interpretation. The first part of the course will cover basic photogrammetry and mapping. The second part will focus on interpretation of physical, biological, and cultural features. Same as NRES 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: Knowledge of trigonometry (MATH 014 or equivalent) and basic physical geography (GEOG 103 or equivalent).

GEOG 465 Transp and Sustainability credit: 3 or 4 Hours.

Descriptors of transportation systems; transportation as an industrial activity and public good; and transportation and spatial development, including the role of transportation in urban and regional development. Emphasis on the economic, environmental, and social aspects of sustainability as they apply to transportation systems and the activities they enable at local, regional, national and global levels. Field trip required. Same as ESE 465. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours.

This course satisfies the General Education Criteria for:

Advanced Composition

GEOG 466 Environmental Policy credit: 3 or 4 Hours.

Examination of the geographical and political aspects of human-environmental relations; focusing on how environmental problems are defined, negotiated, and addressed through policy formulation. Specific approaches to environmental policy will be considered at different geographical scales. Same as ESE 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in Geography or Political Science or consent of instructor.

GEOG 468 Biological Modeling credit: 3 or 4 Hours.

Interdisciplinary modeling course for students interested in dynamic system modeling of living processes; each student will build a model by the end of the course. No special mathematical background required. Same as ANSC 449, CPSC 448, and IB 491. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 444 or equivalent, depending on curriculum.

GEOG 471 Recent Trends in Geog Thought credit: 4 Hours.

Examination of recent trends in human and physical geography. Themes include empiricism, logical positivism, regionalism, Marxism, realism, phenomenology, and post-modernism as applied to geographic research. Emerging geographic literature is explored to identify the latest conceptual developments. 4 undergraduate hours. 4 graduate hours.

GEOG 473 Digital Cartography & Map Design credit: 4 Hours.

Instruction and practice in the basic techniques of map making followed by a consideration of problems involved in the construction of maps for presentation in a reproduced form (i.e., printed, photographed); the selection of proper source materials for the base and body of the map, the compilation and correlation of these materials, and methods of mechanical and photographic reproduction. 4 undergraduate hours. 4 graduate hours.

GEOG 476 Applied GIS to Environ Studies credit: 3 Hours.

Demonstrates how geographic information systems (GIS) have become a major technology ubiquitously applied to solve important problems encountered in geospatial and environmental applications. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 103 or GEOG 104, consent of instructor.

GEOG 477 Introduction to Remote Sensing credit: 3 Hours.

Fundamentals of energy-matter interaction mechanisms, and the manifestation of reflected and emitted radiation on photographs and images; introduces characteristics of aerial films and filters, electro-optical scanners, and digital processing; and emphasizes applications in environmental problems. Same as NRES 477. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 280 (beginning statistics) or equivalent, or consent of instructor.

GEOG 478 Techniques of Remote Sensing credit: 4 Hours.

Optical and digital information processing of imagery acquired from aircraft and satellite remote sensing platforms; includes systems design, mensuration theory, photographic enhancement techniques, and automatic digital classification for all of the standard sensor systems; and laboratory focusing on the design and implementation of information processing techniques with application limited to a survey of uses. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 477 or equivalent.

GEOG 479 Advanced Topics in GIS credit: 3 Hours.

Introduces advanced concepts in Geographic Information Science. Course topics may vary. 3 undergraduate hours. 3 graduate hours. May be repeated, if topics vary, in separate terms to a maximum of 9 hours, but not more than 6 hours in any one term. Prerequisite: GEOG 379 or equivalent.

GEOG 480 Principles of GIS credit: 3 Hours.

Focuses on Geographic Information Science (GIScience) principles that underlie the development of Geographic Information Systems (GIS) software and its intelligent use. Helps students adapt to rapidly changing geospatial technologies. Knowledge gained in this course will be general and, thus, not be limited to any specific software product that may be revised in the future. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOG 379 and GEOG 380 or equivalent, or consent of instructor.

GEOG 481 Intl Environ Cooperation credit: 3 Hours.

Examines the problems, politics and policies related to environmental issues that require international cooperation to address effectively. Transboundary, regional, and global environmental issues will be analyzed, spanning the atmosphere (acid rain, protection of the ozone layer, and climate change), the oceans (pelagic fisheries), and biodiversity (whaling, trade in endangered species). Discusses methods for increasing international environmental cooperation, such as unilateral actions, trade sanctions, financial aid, non-governmental monitoring and innovations in institutional design. Same as ESE 481. 3 undergraduate hours. 3 graduate hours. Prerequisite: One course in Geography or Political Science or consent of instructor.

GEOG 482 Challenges of Sustainability credit: 3 Hours.

Same as ESE 482 and GEOL 483. See ESE 482.

GEOG 483 Urban Geography credit: 3 Hours.

Broad background of theories, concepts, and methods of research for understanding how and why our cities have reached their current status. Focus on examining the internal structure of the North American city, including analysis of the commercial, industrial, and residential sectors of the urban environment. Particular emphasis is placed on the range of urban theories developed to explain both urban structure and contemporary urban ills. 3 undergraduate hours. 3 graduate hours.

GEOG 484 Cities, Crime, and Space credit: 3 or 4 Hours.

Focusing on US cities, this theory-intensive course surveys traditional and critical perspectives on relations between crime, space, and place. We will explore this interplay within broader contexts of industrial and post-industrial urbanization, concentrating on dynamics including governances, economic processes, and social transformations. Emphasis will be placed on the extent to which these interwoven processes generate, classify, organize, and react to crime across cityscapes. 3 undergraduate hours. 4 graduate hours.

GEOG 489 Programming for GIS credit: 4 Hours.

Introduction to programming to customize and extend the capabilities of geographic information systems. Topics include the principles of programming, advanced function and tools coding, visualization, fundamental spatial data structures, and spatial algorithms. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 379 and GEOG 380 or equivalents, or consent of instructor.

GEOG 491 Research in Geography credit: 2 Hours.

Detailed examination and discussion of the methods of initiating and executing research projects in human or physical geography (taught in separate sections); requires students to write a research proposal of a quality suitable for a graduate thesis. 2 undergraduate hours. 2 graduate hours. Prerequisite: GEOG 471; either graduate standing in geography or senior standing as a geography major and consent of department.

GEOG 493 Democracy and Environment credit: 3 or 4 Hours.

Explores the effects of local democracy on natural resource management and the ways natural resource management can leverage the establishment and consolidation of local democracy. Investigates theoretical foundations of localism and decentralization, and analyzes the policy process by which theory is inscribed in law and project documents and translated into practice. Cases of global environmental policy, such as climate adaptation, UN Reduced Emissions from Deforestation and Degradation of the World Banks' Community Driven Development policies will be used for theoretical and empirical analysis. Draws case examples from developing countries. Same as NRES 494, SOC 493 and UP 493. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 210, course work in social science, or consent of instructor.

GEOG 495 Advanced Topics in Geography credit: 3 or 4 Hours.

Explores special topics not covered in regularly scheduled Geography courses. 3 or 4 undergraduate hours. 3 or 4 graduate hours. May be repeated if topics vary in the same term to a maximum of 9 undergraduate hours or 12 graduate hours or in separate terms to a maximum of 12 undergraduate hours or 12 graduate hours.

GEOG 496 Climate & Social Vulnerability credit: 3 or 4 Hours.

Existing climate variability and likely climate change call for policies to protect vulnerable people who make their livelihoods in a changing environment. Students will explore: 1) causes of climate related stress and disaster; 2) theories of vulnerability and adaptation; 3) practices and policies designed to reduce economic loss, hunger, famine and dislocation in the face of climate trends and events. Focus on multiple policy scales affecting poor and marginal populations, who are disproportionately vulnerable when facing climate stress, drawing on case examples primarily from the developing world. Same as ATMS 446 and SOC 451. 3 undergraduate hours. 4 graduate hours. Prerequisite: GEOG 410, GEOG 466, GEOG 471, GEOG 520, or consent of instructor.

GEOG 520 Political Ecology credit: 4 Hours.

Political ecology integrates social and biophysical processes in the study of nature-society relations. Examination of the conceptual origins of the field of political ecology and identification of influential bodies of research and promising research directions. Readings focus on recent advances, debates, and the ongoing evolution of political ecology as an integrative approach to Geography and environment-development studies. 4 graduate hours. No professional credit. Prerequisite: One of the following courses, or consent of the instructor: GEOG 410, GEOG 466, SOC 447, HIST 460, or equivalent.

GEOG 556 Regional Science Methods credit: 4 Hours.

Examines models of regional growth and development, including export base, input-output and econometric, cohort component and spatial interaction; emphasizes socioeconomic impact analysis and forecasting subnational economic and demographic change. Same as UP 556. Prerequisite: Consent of instructor.

GEOG 557 Seminar in Regional Science credit: 4 Hours.

Discusses advanced topics in regional science; prepares students for dissertation and thesis research, applied study for public agency, or other student research. Same as UP 557. Prerequisite: GEOG 556 or consent of instructor.

GEOG 560 Spatial Epidemiology credit: 4 Hours.

Same as PATH 560. See PATH 560.

GEOG 561 Landscapes and Human Health credit: 3 Hours.

Same as CHLH 580 and LA 570. See LA 570.

GEOG 570 Advanced Spatial Analysis credit: 4 Hours.

Advanced techniques of spatial analysis, including spatial autocorrelation, trend surface analysis, grouping and regionalization procedures, and point pattern analysis.

GEOG 575 Alluvial Boundary Layer Dynam credit: 3 Hours.

Examination of the structure of turbulent boundary layers in rivers and how turbulent flow, sediment transport and channel forms interact over a wide range of spatial and temporal scales. Explores these interactions through critical analysis of contemporary research in fluvial geomorphology, fluid mechanics, hydraulics and sedimentology. Same as GEOL 575. Prerequisite: Consent of instructor.

GEOG 587 Qualitative Research Methods credit: 4 Hours.

Same as UP 587. See UP 587.

GEOG 594 Seminar in Social Geography credit: 4 Hours.

Advanced study of a current research topic in social geography. Topic varies from term to term; prepares students for dissertation and thesis research through study of advanced literature and the completion of a research paper. Prerequisite: GEOG 471 or equivalent; graduate coursework in social geography or in one of the social sciences.

GEOG 595 Advanced Studies in Geography credit: 0 to 8 Hours.

Seminar and directed individual investigation of selected problems or regions; designed to develop ability to conduct independent investigation. Scheduled seminars are detailed in each term's Class Schedule. Approved for both letter and S/U grading. May be repeated.

GEOG 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Geology (GEOL)

GEOL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GEOL>)

Courses

GEOL 100 Planet Earth credit: 3 Hours.

Introduces non-science majors to physical aspects (earthquakes, volcanoes, floods, tsunamis, mountains, plate tectonics) and historical aspects (formation of earth and life, dinosaurs, ice age, evolution of climate) in earth science. Presents information on earth resources, natural hazards, and development of natural landscapes. Focuses on humanistic issues; provides context for understanding environmental change. Optional lab demonstrations and field trips with co-registration in GEOL 110. Credit is not given for both GEOL 100 and GEOL 101, GEOL 103 or GEOL 107.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 103 Planet Earth QRII credit: 3 Hours.

Topics covered are very similar to those of GEOL 101. Emphasizes application of quantitative methods in deriving geological knowledge. A weekly computer laboratory is an essential component of the course. Credit is not given for both GEOL 103 and GEOL 100, GEOL 101 or GEOL 107.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

GEOL 104 Geology of the National Parks credit: 3 Hours.

Develops geologic background, concepts, and principles through study of selected national parks and monuments. Examines the geologic framework and history, modern geologic processes, and factors influencing the present day landscape for each park area. Same as ESE 104.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 107 Physical Geology credit: 4 Hours.

Introduces Earth phenomena and processes. Includes minerals and rocks, continental drift, plate tectonics, rock deformation, igneous and sedimentary processes, geologic time, landscape evolution, internal structure and composition of the earth, groundwater, seismology and earthquakes, and formation of natural resources. Emphasizes the chemical and physical aspects of the Earth, and the basis for geological inference. Field trip required. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 107 and GEOL 100, GEOL 101 or GEOL 103. Prerequisite: Intended for science and science-oriented students.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 110 Exploring Geology in the Field credit: 1 Hour.

Introduces practical techniques for identification of rocks, minerals, and fossils; interpretation of geologic maps and cross-sections; appreciation of Midwestern geologic history and geologic features and landforms in the field. Additional fees may apply. See Class Schedule.

GEOL 111 Emergence of Life credit: 3 Hours.

Examines important theoretical and practical questions regarding the origin and evolution of life, as well as the search for life elsewhere in the universe. Uses the pioneering work of Carl Woese, whose "Tree of Life" revolutionized our understanding of the fundamental structure and evolutionary relatedness of all living entities on Earth. Same as ESE 111. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

GEOL 117 The Oceans credit: 3 Hours.

Integrated introduction to oceanography and marine geology and geophysics. Topics include ocean-basin formation and evolution (in the context of plate tectonics), ocean ecology, the hydrologic cycle, water chemistry, currents and waves, the interaction of oceans with climate, coastal hazards, resources, pollution, and the Law of the Sea. Course is oriented toward students not majoring in science. Same as ESE 117.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 118 Natural Disasters credit: 3 Hours.

Introduces the nature, causes, risks, effects, and prediction of natural disasters including earthquakes, volcanoes, landslides, subsidence, global climate change, severe weather, coastal erosion, floods, mass extinctions, and meteorite impacts; covers scientific principles and case histories of natural disasters as well as human responses (societal impact, mitigation strategies, and public policy). Same as ESE 118 and GLOB 118.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GEOL 143 History of Life credit: 3 Hours.

Evolution of life from its beginning, illustrating changing faunas and floras through time; the invasion of land and of the skies; the effects of a changing atmosphere, changing climates, and continental drift. Emphasis on dinosaur evolution, ecology, and extinction; also other vertebrates, including mammal-like reptiles, mammals, and the emergence of humans, as well as plants and invertebrates. Same as ESE 143.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

GEOL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GEOL 201 History of Geology credit: 3 Hours.

Traces the development of key ideas in the science, beginning with musings of the ancient Greek and Roman philosophers and early observations of the Earth by European and Arab scholars. Considers advances in mapmaking that span thousands of years and examines the origins of the Geologic Time Scale, including determination of the ages of rocks. Looks at early geologists from around the world, in the US, in Illinois, and at the U of I. Reads some classic papers establishing the grand unifying theory of geology: plate tectonics. Prerequisite: A 100-level geology course (excluding GEOL 110 and GEOL 143). Intended for both non-science students and geology majors.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil

GEOL 208 History of the Earth System credit: 4 Hours.

Presents systematic analysis of formation and evolution of the Earth and its dynamic systems (lithosphere, hydrosphere, atmosphere, and biosphere). Also introduces methods of reconstructing Earth's history through use of geochronology, paleontology, and the stratigraphic records. Introduces the geological history of life evolution, mountain belts and continents, geochemical systems, climate, sea level, and the Earth's interior. Field trip required. Same as ESE 208. Additional fees may apply. See Class Schedule. Prerequisite: One of GEOL 100, GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

GEOL 333 Earth Materials and the Env credit: 4 Hours.

Studies the origin, identification, and environmental significance of earth materials (minerals, rocks, and soil). Environmental topics include: mineral resources; acid mine drainage; volcanic hazards; swelling soils; engineering strength, porosity/permeability, and architectural uses of earth materials; and asbestos. One day field trip is required. Same as ESE 333. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 333 and GEOL 432. Prerequisite: CHEM 102 and CHEM 103; GEOL 100 and GEOL 110, or one of GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

GEOL 350 Volcanoes credit: 3 Hours.

Explores volcanoes from a hazards standpoint by investigating case studies of volcanic disaster, evaluating important controls of volcanism such as magma viscosity and behavior of bubbles, and introducing the monitoring of active volcanoes with cutting edge methods such as seismicity, gravity, and remote sensing. Understanding the interactions among these complex parameters plays a critical role in assessing the evolution of shallow magma systems and investigating their potential for remaining stable or developing into hazardous eruptive systems, which can threaten nearby populations. Prerequisite: Any 100-level Geology course (excluding GEOL 106, GEOL 111, and GEOL 143).

GEOL 370 Water Planet, Water Crisis credit: 3 Hours.

Same as ESE 320 and GEOG 370. See ESE 320.

GEOL 380 Environmental Geology credit: 4 Hours.

Increases student understanding of environmental issues of water supply and pollution, waste disposal, energy, environmental health, global change, and land evaluation and use by emphasizing the role of geology and its relationships to human activities. Course requires a one-day field trip. Same as ENVS 380. Additional fees may apply. See Class Schedule. Credit is not given for both GEOL 380 and ESE 445. Prerequisite: CHEM 102 and CHEM 103; and GEOL 100 and GEOL 110, or one of GEOL 101, GEOL 103, GEOL 104 or GEOL 107; or consent of instructor.

GEOL 390 Individual Study credit: 1 to 4 Hours.

Research and individual study in geology. May be repeated. A maximum of 8 hours of GEOL 390 plus GEOL 391 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; consent of supervising faculty member; advance approval by Department of Geology.

GEOL 391 Individual Honors Study credit: 1 to 4 Hours.

Research and individual study in geology for honors credit. May be repeated. A maximum of 8 hours of GEOL 390 plus GEOL 391 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; consent of supervising faculty member and of departmental honors advisor; advance approval by Department of Geology.

GEOL 401 Geomorphology credit: 4 Hours.

History, origin, and characteristics of land forms produced by weathering, fluvial, glacial, wind, and wave processes or by a combination of these acting upon the major kinds of geologic materials and structures. Lectures, laboratory, and field trips. Same as ESE 411. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 208 or consent of instructor.

GEOL 406 Fluvial Geomorphology credit: 4 Hours.

Same as GEOG 406 and NRES 406. See GEOG 406.

GEOL 411 Structural Geol and Tectonics credit: 4 Hours.

Introduction to principles of rock deformation, stress, and strain; description and interpretation of geologic structures; study of methods for structural analysis; outline of geotectonic processes; three hours of lecture and a three-hour lab per week. Required four-day field trip. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 107 or consent of instructor.

GEOL 415 Field Geology credit: 2 to 8 Hours.

Group field study in a prominent geologic locality; includes in-class meetings, student-led presentation, and field trip; trips run during spring break, winter break, in mid-end May or intercession; dates depend on location. Additional fees may apply. See Class Schedule. 2 to 8 undergraduate hours. 2 to 8 graduate hours. May be repeated. Prerequisite: Consent of instructor.

GEOL 417 Geol Field Methods, Western US credit: 6 Hours.

Field course based in the mountains of the western United States. Provides intensive practical experience in geologic mapping, as well as instruction in field structural, stratigraphic, geomorphologic, and petrologic analysis. Offered during summer session only. Additional fees may apply. See Class Schedule. 6 undergraduate hours. 6 graduate hours. Prerequisite: Eight hours of 400-level credit in geology, or consent of instructor; GEOL 411, GEOL 432, and GEOL 440 are recommended.

GEOL 432 Mineralogy and Mineral Optics credit: 4 Hours.

Introduction to: crystallography; crystal optics; structure, composition, properties, stability and geological occurrences of minerals; and mineral identification. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for both GEOL 333 and GEOL 432. Prerequisite: GEOL 208 and CHEM 104 and CHEM 105.

GEOL 436 Petrology and Petrography credit: 4 Hours.

Study of the minerals, compositions, textures, structures, classifications, and origins of igneous and metamorphic rocks; lectures emphasize rock forming processes (petrology), and laboratories emphasize use of the petrographic microscope (petrography). Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 432.

GEOL 440 Sedimentology and Stratigraphy credit: 4 Hours.

Introduces dynamics of sedimentation, geology of sedimentary basins, the distribution of geologic processes through time, definition and correlation of stratigraphic units, principles of paleogeography, stratigraphy and tectonics. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: GEOL 208 or consent of instructor.

GEOL 450 Probing the Earth's Interior credit: 3 Hours.

Overview of how seismology, magnetics, gravity, geodesy, and surface geology can help us understand the Earth from its surface to its core as well as its temporal evolution. Topics include the internal composition and dynamics of Earth, generation of Earth's gravitational and geomagnetic fields, driving mechanisms for tectonic plate motion, continental deformation, and surface topography. Students wanting a more quantitative treatment of geophysics should enroll in GEOL 452. 3 undergraduate hours. 3 graduate hours. Credit is not given for both GEOL 450 and GEOL 452. Prerequisite: PHYS 102 or 212, GEOL 107 or 101, or consent of instructor.

GEOL 451 Env and Exploration Geophysics credit: 4 Hours.

Discusses geophysical methods to reveal subsurface structures. Topics include seismic methods, gravity, magnetics, electrical methods, ground penetrating radar, borehole geophysics, and their applications to hydrocarbon and mineral exploration as well as engineering and environmental investigations. 4 undergraduate hours. 4 graduate hours. Several required local trips for field experiments. Prerequisite: MATH 241 and PHYS 212; or consent of instructor.

GEOL 452 Introduction to Geophysics credit: 4 Hours.

Provides a broad overview of basic concepts and fundamental knowledge of the physics of the Earth. Topics include seismology, gravity, geomagnetism, Earth's thermal state, and geodynamics. Intended for undergraduates in the geophysics concentration and other students who want a more quantitative treatment of the subject than GEOL 450. 4 undergraduate hours. 4 graduate hours. Credit is not given for both GEOL 452 and GEOL 450. Prerequisite: MATH 241 and PHYS 211; or consent of instructor.

GEOL 454 Introduction to Seismology credit: 3 or 4 Hours.

Introducing the basic theory of seismic wave generation and propagation and its application to Earth structure and earthquakes, including body waves, surface waves, inference of Earth structure, seismic prospecting, earthquake mechanisms, and strong ground motions. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Students participating in optional class projects receive an additional hour of credit. Prerequisite: MATH 285 or consent of instructor.

GEOL 460 Geochemistry credit: 3 Hours.

Fundamental chemical and physical concepts applied to geological processes; topics include: origin, distribution, and geochemical behavior of elements; chemical evolution of the Earth; geochemistry of natural waters and sedimentary rocks; isotope geochemistry, crystal chemistry, trace element geochemistry and organic geochemistry. 3 undergraduate hours. 3 graduate hours. Prerequisite: GEOL 101 or GEOL 107; CHEM 104; CHEM 105; MATH 220 or MATH 221; or consent of instructor.

GEOL 470 Introduction to Hydrogeology credit: 4 Hours.

Introduction to environmental and economic aspects of the occurrence and movement of groundwater through the earth's crust; topics include the hydrologic cycle, groundwater contamination, petroleum migration, formation of mineral resources, and groundwater chemistry. Same as ESE 470. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or MATH 221; senior standing is recommended; or consent of instructor.

GEOL 481 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOG 421 and NRES 422. See ATMS 421.

GEOL 483 Challenges of Sustainability credit: 3 Hours.

Same as ESE 482 and GEOG 482. See ESE 482.

GEOL 484 Paleoclimatology credit: 4 Hours.

Survey of Earth's past climate variability, ranging from million-year to interannual time scales. Introduction to paleoclimate proxies including tree rings, marine and lake sediment cores, ice cores, corals, and speleothems. Focus on the drivers of climate change, major modes of climate variability, and how paleoclimate data can inform projections of future climate change. Same as IB 484. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing required.

GEOL 485 Risk Analysis in Earth Science credit: 3 or 4 Hours.

Same as ATMS 404. See ATMS 404.

GEOL 488 Environmental Stable Isotopes credit: 3 Hours.

Same as ATMS 422, NRES 478, and IB 488. See IB 488.

GEOL 490 Undergraduate Research credit: 1 to 3 Hours.

Students will conduct research under the direct supervision of a geology faculty member. Research topics will vary, and either a summary paper or a poster presentation at a regional or national science conference is required. 1 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated up to six hours. A maximum of 6 credit hours of GEOL 490 and GEOL 491 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; Consent of supervising faculty member; advance approval by Department of Geology. Intended primarily for sophomores and juniors; not available to freshman students.

GEOL 491 Honors Undergraduate Research credit: 1 to 3 Hours.

Students will conduct research for honors credit under the direct supervision of a geology faculty member. Research topics will vary, and either a summary paper or a poster presentation at a regional or national science conference is required. 1 to 3 undergraduate hours. No graduate credit. May be repeated up to 6 hours. A maximum of 6 credit hours of GEOL 490 and GEOL 491 may be counted toward graduation. Prerequisite: GEOL 208 or equivalent; Consent of supervising faculty member and of departmental honors advisor; advance approval by Dept. of Geology. Intended primarily for sophomores and juniors who are James Scholars or Chancellor's Scholars; not available to freshman students.

GEOL 492 Senior Thesis credit: 2 to 8 Hours.

Research in geology, with thesis; a thesis must be submitted for credit to be received. 2 to 8 undergraduate hours. No graduate credit. May be repeated. A maximum of 10 hours of GEOL 492 plus GEOL 493 may be counted toward graduation. Prerequisite: Consent of supervising faculty member.

GEOL 493 Honors Senior Thesis credit: 2 to 8 Hours.

Research in geology with honors thesis; a thesis must be submitted for credit to be received. 2 to 8 undergraduate hours. No graduate credit. May be repeated. A maximum of 10 hours of GEOL 492 plus GEOL 493 may be counted toward graduation. Prerequisite: Consent of supervising faculty member and of departmental honors advisor.

GEOL 497 Special Topics in Geology credit: 1 to 4 Hours.

Seminar or lectures in subjects not covered by regular course offerings; for advanced undergraduates and graduate students. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Consent of instructor.

GEOL 510 Integrated Graduate Geology credit: 3 Hours.

Study of broad range of disciplines in geology including geochemistry, geophysics, and geobiology relating to the deep Earth, the crust/lithosphere and hydrosphere through readings of classic papers and presentations by current department faculty. Prerequisite: Consent of Instructor.

GEOL 511 Advanced Structural Geology credit: 4 Hours.

Study of selected topics concerning rock deformation processes and products. Introduces current research literature and methods, and the techniques of structural analysis. May include an optional field trip. Additional fees may apply. See Class Schedule. Prerequisite: GEOL 411 or equivalent; consent of instructor.

GEOL 512 Geotectonics credit: 4 Hours.

Discussion of plate tectonics theory, and nature and distribution of regional-scale earth structures, such as mountain belts; includes study of geological and geophysical evidence that led to modern interpretations of evolution of earth's lithosphere. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: GEOL 411 or consent of instructor.

GEOL 515 Advanced Field Geology credit: 2 to 4 Hours.

Group field study in a prominent geologic locality; includes in-class meetings, student-led presentation, and field trip; trips run during spring break, winter break, mid-end May or intercession; dates depend on location. Additional fees may apply. See Class Schedule. May be repeated. Prerequisite: Consent of instructor.

GEOL 521 Topics in Paleontology credit: 4 Hours.

Selected topics in macro- and micropaleontology. Intensive study of a selected invertebrate or algal group; special problems in the taxonomy, evolution, skeletal diagenesis, ecology, biogeography, and biostratigraphy of selected fossil organisms. May be repeated. Prerequisite: Consent of instructor.

GEOL 531 Structural Mineralogy credit: 4 Hours.

Structure and crystal chemistry of minerals and survey of current knowledge of the properties and behavior of selected minerals and mineral groups. Prerequisite: GEOL 432 or consent of instructor.

GEOL 540 Petroleum Geology credit: 4 Hours.

Application of geoscience to understanding the nature and occurrence of hydrocarbon resources. Emphasizes: source-rock geology and geochemistry, process of petroleum migration, nature of reservoirs and traps, exploration and drilling procedures, interpretation of seismic-reflection profiles, cross-section and sub-surface map construction, classification and tectonics of petroleum-bearing sedimentary basins, application of sequence stratigraphy to exploration, and petroleum-related environmental issues. Prerequisite: GEOL 411 and GEOL 440, or equivalent.

GEOL 552 Geodynamics credit: 4 Hours.

Explores dynamic characteristics of the solid earth. Covers physical and mathematical theories of deformation occurring on the surface and within the lithosphere and mantle. Discusses observations that can help us understand past and ongoing earth dynamics; these observations include topography, gravity, heat flow, geology, mineral physics, and seismic and magnetotelluric images, as well as plate tectonics theory. Includes regular lectures and tutorials on geodynamic modeling. Prerequisite: MATH 285, PHYS 211, GEOL 452, or consent of instructor.

GEOL 553 Chemistry of Earth's Interior credit: 4 Hours.

The state of Earth's interior, emphasizing its chemical composition and mineralogy. Focuses on the interpretation of geochemical, petrologic, and laboratory geophysical data related to deep Earth composition, thermal state, structure, and evolution. Prerequisite: GEOL 450, GEOL 452, or consent of instructor.

GEOL 560 Aqueous Geochemistry credit: 4 Hours.

Introduction to geochemical processes occurring in natural waters, with emphasis on the thermodynamic and kinetic controls governing chemical speciation, surface complexation, redox cycling and mineral formation and stability. Applications to a variety of soil and groundwater systems will be presented. 4 graduate hours. No professional credit. Prerequisite: CHEM 104; CHEM 105; MATH 220 or 221; GEOL 460; or equivalents; or consent of instructor.

GEOL 561 Geomicrobiology & Geochemistry credit: 4 Hours.

Covers geomicrobiology as it relates to geochemistry with a primary focus on groundwater environments. Topics include energetics of microbial metabolism, influence of microorganisms on geochemistry, geochemical influences on microbial ecology, biogeochemical cycles and molecular biology tools in groundwater. Prerequisite: One year of college-level chemistry or consent of instructor required; one semester of college level biology recommended.

GEOL 562 Isotope Geology credit: 4 Hours.

Introduction to the theoretical basis for isotopic fractionation in nature; survey of isotopic variations in natural materials; and application of isotopic variations to problems of geological and environmental significance. Prerequisite: Consent of instructor.

GEOL 563 Analytical Geochemistry credit: 4 Hours.

Introduces principles and applications of chemical and isotopic analysis of geological materials, including x-ray spectroscopy, mass spectrometry and atomic spectroscopy. Lectures cover theory of analysis while practical laboratory based exercises focus on how instruments work and instrument operation. Individually tailored analysis project constitutes a major part of assessment. Prerequisite: Consent of instructor.

GEOL 571 Contaminant Fate and Transport credit: 4 Hours.

Quantitative study of the chemical, physical, and microbiological processes controlling the mobility, reaction, and transformation of pollutants in flowing groundwater. Prerequisite: GEOL 460 or GEOL 560 or CEE 443 or CEE 534; and GEOL 470 or GEOL 570 or CEE 457 or CEE 557; or consent of instructor.

GEOL 573 River Morphodynamics credit: 4 Hours.

Same as CEE 553. See CEE 553.

GEOL 575 Alluvial Boundary Layer Dynam credit: 3 Hours.

Same as GEOG 575. See GEOG 575.

GEOL 579 Isotope Hydrogeology credit: 4 Hours.

Application of isotope measurements in hydrogeology. Groundwater age dating, stable isotope ratios and anthropogenic radionuclides will be considered in the context of studying a broad range of hydrologic problems, from siting of nuclear waste disposal to understanding the migration of groundwater in sedimentary basins. Prerequisite: GEOL 470 or GEOL 562; CEE 457; or consent of instructor.

GEOL 591 Current Research in Geoscience credit: 1 Hour.

Brings students up-to-date with current research over a broad spectrum of geoscience; improves students' oral presentation skills by practice and example. Required for all graduate students in Geology. Approved for S/U grading only. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in Department of Geology or consent of instructor.

GEOL 593 Advanced Studies in Geology credit: 1 to 8 Hours.

Work may be taken in the following fields: (a) general geology; Field trip fee may be required for this section. (b) engineering geology; (c) geomorphology and glacial geology; (d) clay mineralogy; (e) ground-water geology; (f) geomicrobiology; (g) geological fluid dynamics; (h) mineralogy and crystallography; (i) paleontology; (j) geochemistry; (k) geophysics; (l) petrography and petrology; (m) sedimentology; (n) stratigraphy; (o) oceanography; (p) submarine geology; (q) structural geology and geotectonics; (r) mathematical geology; (s) sedimentary petrography; (t) petroleum geology; (u) coal geology; (v) isotope geology and geochronology; (w) electron beam analysis; (x) vulcanology; (y) environmental geology; and (z) planetology. Additional fees may apply. See Class Schedule. Approved for both letter and S/U grading. May be repeated.

GEOL 599 Thesis Research credit: 0 to 16 Hours.

Individual research under supervision of members of the faculty in their respective fields. Approved for S/U grading only. May be repeated.

German (GER)

GER Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GER>)

Courses

GER 101 Beginning German I credit: 4 Hours.

Oral practice, reading, and grammar for beginners.

GER 102 Beginning German II credit: 4 Hours.

Continuation of GER 101. Prerequisite: One semester of college German or equivalent.

GER 103 Intermediate German I credit: 4 Hours.

Continuation of GER 102. Prerequisite: Two semesters of college German or equivalent.

GER 104 Intermediate German II credit: 4 Hours.

Continuation of GER 103. Prerequisite: Three semesters of college German or equivalent.

GER 189 Living German - German Living credit: 1 Hour.

Practice in speaking German for students living in the German House. Approved for letter and S/U grading. May be repeated to a maximum of 3 hours. Prerequisite: Elementary speaking knowledge of German.

GER 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated once. Prerequisite: Consent of departmental honors advisor.

GER 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Credit: 1 to 5 hours. May be repeated.

GER 200 German Literature in Trans credit: 3 Hours.

Introduction to German literature for students with no knowledge of German. Same as CWL 224. May be repeated if topics vary.

GER 201 German Popular Culture credit: 3 Hours.

Introduction to the study of modern and contemporary German culture through examining examples of popular culture from the late-eighteenth century to the present. Looks at texts and films as a mirror and critique of modern German society. Topics to be discussed: nationalism, gender, ethnicity, minority cultures, Jewish life in Germany, German images of other cultures, etc. Course taught in English.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

GER 205 Germany and Europe credit: 3 Hours.

Introduction into major issues in contemporary German society with a special focus on Germany's functioning within Europe and the European Union through novels, films, essays, interviews etc. Course taught in English.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

GER 211 Conversation and Writing I credit: 3 Hours.

Prerequisite: GER 104 or equivalent, or consent of instructor.

GER 212 Conversation and Writing II credit: 3 Hours.

Continuation of GER 211. Prerequisite: GER 211 or equivalent, or consent of instructor.

GER 250 Grimms' Fairy Tales - ACP credit: 3 Hours.

Special attention is paid to the Grimms' tales in terms of traditional narrative genres, elements of life in early modern Europe, and versions from Italy and France as well as Germany. Course is conducted in English. Same as CWL 250 and ENGL 267. Credit is not given for both GER 250 and GER 251. Prerequisite: Completion of the Campus Composition I requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

GER 251 Grimm's Fairy Tales in Context credit: 3 Hours.

Special attention is paid to the Grimms' tales in terms of traditional narrative genres, elements of life in early modern Europe, and versions from Italy and France as well as Germany. Course is conducted in English. Same as CWL 254 and ENGL 266. Credit is not given for both GER 251 and GER 250.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

GER 260 The Holocaust in Context - ACP credit: 3 Hours.

Jewish contributions to German Literature from 1200 to the present day. Includes trips to the University Library's Rare Book Room. Same as CWL 271 and ENGL 268. Credit is not given for both GER 260 and GER 261. Prerequisite: Completion of the Campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Lit Arts

Cultural Studies - Western

GER 261 The Holocaust in Context credit: 3 Hours.

Examines cultural representations of the Holocaust in literature, film, and critical essays. Same as CWL 273 and ENGL 269. Credit is not given for both GER 261 and GER 260.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

GER 270 Sexuality and Literature credit: 3 Hours.

Examination of the historical contexts in which sexuality has been debated during the past three centuries, and to what extent sexuality is perceived differently in diverse cultures. Part one will look at the Western tradition, especially Germany. Part two will shift focus to the non-Western world, especially to the colonial history of Indonesia. Same as CWL 272 and GWS 270.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

GER 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in German language, literature, civilization, and in other academic areas appropriate to the student's course of study. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 18 hours; may be repeated in separate terms to a maximum of 36 hours. Prerequisite: GER 104 or equivalent; 2.75 overall average; 3.0 average in German courses.

GER 320 German for Business credit: 3 Hours.

Introduces German business language as used in basic operations in retail/wholesale, export/import, banking transactions. Prerequisite: GER 211 or consent of instructor.

GER 321 German for Economics credit: 3 Hours.

German language as used in professional contexts involving economic matters: texts and documents relating to forms of enterprises and their financing, to macroeconomic structures of domestic and foreign trade, and to reports on the economies of German-speaking countries. Prerequisite: GER 320 or consent of instructor.

GER 331 Intro to German Literature credit: 3 Hours.

Introductory study of representative works (prose, drama, lyric) by outstanding German, Austrian, and Swiss writers of the modern period. Prerequisite: Two years of college German or equivalent.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

GER 332 German Literature and Culture credit: 3 Hours.

In German. Seminar in the literature and culture of German-speaking countries since 1750. Topic varies. Format: lecture; discussion; film screenings. Prerequisite: GER 331 or equivalent.

GER 385 Politics of the European Union credit: 3 Hours.

Same as EURO 385, FR 385, and PS 385. See PS 385.

GER 396 Special Topics German Studies credit: 3 Hours.

Introductory study in such topics as individual authors, selected literary movements or periods, modes of inquiry in literary study, minor genres, subgenres, extraliterary influences, etc. Same as CWL 328. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Reading fluency in German beyond the fourth-semester college level.

GER 401 Global Issues in German credit: 3 Hours.

Introduction to global issues in German media. Taught in German. 3 undergraduate hours. 3 graduate hours. Prerequisite: GER 212 or equivalent.

GER 403 German-English Translation: Theory & Practice credit: 3 Hours.

Theory and practice of translating technical, commercial, scientific, and literary texts from German into English and vice versa. Same as TRST 403. 3 undergraduate hours. 3 graduate hours. Prerequisite: GER 401 or consent of instructor.

GER 405 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, ENGL 486, SLAV 430, SPAN 436, and TRST 431. See SLAV 430.

GER 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, ITAL 418, LING 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

GER 420 German Cultural History credit: 4 Hours.

A general introduction to German culture from the pre-Christian period to the twenty-first century, focusing on the tension between forces of history and modernization in German culture. Course materials include literary and philosophical texts, film, painting, and music. Particular attention will be paid to the role of art in society. 4 undergraduate hours. 4 graduate hours. Prerequisite: One 200-level German course and GER 331; or consent of instructor.

GER 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, ITAL 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

GER 465 Ling Structures of German credit: 3 Hours.

Survey of the linguistic structures of German in historical, geographic, and social context. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of college German or equivalent.

GER 470 Middle Ages to Baroque credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 750-1720. Same as MDVL 470. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 6 hours if topics vary. Prerequisite: GER 332 or equivalent.

GER 471 Enlightenment to Romanticism credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1720 to 1830. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 472 Realism to Expressionism credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1830 to 1920. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 473 1920s to Today credit: 3 Hours.

Literary, thematic, cultural, and bibliographical analysis of the major authors, works, genres, and movements in German literature from 1920 to the present. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 6 graduate hours if topic varies. Prerequisite: GER 332 or equivalent.

GER 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, ITAL 489, LING 489, PORT 489, and SPAN 489. See LING 489.

GER 491 Honors Senior Thesis credit: 1 to 4 Hours.

Intended primarily for candidates for honors in German, but open to other seniors. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; consent of instructor.

GER 493 German Cinema I credit: 3 Hours.

Focus on the rise of German film from its earliest beginnings until 1945. Same as MACS 493. 3 undergraduate hours. 3 graduate hours.

GER 494 German Cinema II credit: 3 Hours.

Study of German film from 1945 until the present. Same as MACS 494. 3 undergraduate hours. 3 graduate hours.

GER 496 Special Topics German Studies credit: 3 Hours.

Intensive study of restricted topics in German language, literature, and culture. 3 undergraduate hours. 3 graduate hours. May be repeated as topics vary to a maximum of 9 undergraduate hours or 8 graduate hours. Prerequisite: Three years of college German or equivalent.

GER 500 Readings in German Grads I credit: 4 Hours.

Introduction to the reading of German texts in the sciences and the humanities. Credit is not given towards a graduate degree.

GER 501 Readings in German Grads II credit: 4 Hours.

Designed for graduate students preparing for the German reading requirements for the Ph.D. Credit is not given towards a graduate degree. Prerequisite: GER 500 or equivalent.

GER 510 Introduction to Graduate Study credit: 4 Hours.

Bibliography and methodology of the study of the Germanic languages and literatures, with particular regard to German literature and Germanic linguistics; introduction to scholarship in general and the German profession in particular, including the modes and methods of scholarly endeavor.

GER 515 Middle High German credit: 4 Hours.

Same as MDVL 515.

GER 520 History of the German Language credit: 4 Hours.

Internal and external history of German from prehistoric times to the present. Prerequisite: GER 465 or equivalent.

GER 530 Old High German credit: 4 Hours.

Grammar and interpretation of the oldest literary documents. Same as MDVL 530. Prerequisite: GER 465.

GER 553 Professional/Academic Writing credit: 4 Hours.

Same as ITAL 573, PORT 573, and SPAN 573. See SPAN 573.

GER 570 Studies in Critical Theory credit: 4 Hours.

Critical introduction to the enterprise of reading, accompanied by an overview of this century's most important theories of literature and criticism. Same as CWL 570. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: GER 510 or equivalent, and reading knowledge of German, English, and one other modern European language.

GER 571 Medieval German Studies credit: 4 Hours.

Seminar in selected genres, themes, or authors of the Middle Ages. Epic, lyric, and didactic works in prose and verse are read in the original language. Same as MDVL 571. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: GER 510 and GER 515 or equivalent, or consent of instructor.

GER 572 Early Modern German Studies credit: 4 Hours.

Seminar in selected genres, themes, or authors of the early modern period (1500-1700). May be repeated to a maximum of 12 hours if topics vary. Prerequisite: GER 470.

GER 573 18thC German Studies credit: 4 Hours.

Seminar in selected genres, themes, or authors of the eighteenth century. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: GER 420 or GER 471.

GER 574 19thC German Studies credit: 4 Hours.

Seminar in selected genres, themes, or authors of the nineteenth century. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: Two 400-level courses in German literature or equivalent.

GER 575 20thC German Studies credit: 4 Hours.

Seminar in selected genres, themes, or authors of the twentieth century. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: Two 400-level courses in German literature or equivalent.

GER 576 Open Seminar in German Studies credit: 4 Hours.

Seminar in literary phenomena (such as movements, genres and forms, relations, themes and types, interdisciplinary studies, women's studies) that go beyond the confines of a particular century. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: GER 510.

GER 580 Classroom Lang Acquisition credit: 4 Hours.

Same as EIL 580, FR 580, ITAL 580, PORT 580, SLS 580, and SPAN 580. See SPAN 580.

GER 582 Theories of German Lang Tchg credit: 4 Hours.

In-depth exploration of fundamental concepts and problems of teaching German in college; designed for Teaching Assistants; topics include teaching approaches, lesson planning, reading, listening, speaking, writing, language testing, and instructional technology. Students are required to submit a research paper on a topic appropriate to the course content.

GER 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, EPSY 563, FR 584, ITAL 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

GER 588 Sem Second Lang Learn credit: 4 Hours.

Same as EALC 588, FR 588, ITAL 588, LING 588, PORT 588, and SPAN 588. See SPAN 588.

GER 593 Research in Special Topics credit: 1 to 8 Hours.

May be repeated to a maximum of 8 hours.

GER 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Germanic (GMC)

GMC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GMC>)

Courses

GMC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GMC 562 Germanic Linguistics credit: 4 to 8 Hours.

Varying topics dealing with problems in diachronic and synchronic Germanic linguistics. May be repeated if topics vary. Prerequisite: Consent of instructor.

Global Studies (GLBL)

GLBL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GLBL>)

Courses

GLBL 100 Intro to Global Studies credit: 3 Hours.

Foundation course for understanding a range of contemporary issues and learning to analyze them from multiple disciplinary perspectives. Students consider globalizing trends within themes of wealth and poverty; population, cultures, and human rights; environment and sustainability; and governance, conflict, and cooperation. Course objectives are to enhance knowledge of human cultures, their interactions and impacts on the world; develop skills for successfully negotiating realities of contemporary societies; and promote values for global learning, diversity, and sustainable futures.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

GLBL 118 Natural Disasters credit: 3 Hours.

Same as ESE 118 and GEOL 118. See GEOL 118.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

GLBL 199 Undergraduate Open Seminar credit: 0 to 6 Hours.

See Class Schedule for topics. Approved for Letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours.

GLBL 200 Foundations of Research credit: 3 Hours.

Introduction to the foundations of interdisciplinary, social science research. Topic include understanding the purpose for research, identifying researchable issues, finding evaluating and using sources effectively, recognizing methods associated with different types of data and disciplines, and writing a literature review. Prepares students for course-based research papers and advanced research methods courses. Guest faculty present their Global Studies-relevant research as students (b)log their own research interests.

GLBL 201 Energy Systems credit: 2 or 3 Hours.

Same as NPRE 201. See NPRE 201.

GLBL 215 Resource Conflicts credit: 3 Hours.

Same as ESE 215 and GEOG 215. See GEOG 215.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GLBL 220 Governance credit: 3 Hours.

Gateway course into the Governance thematic area for Global Studies majors providing an introduction to important themes, problems and approaches to global governance in a series of issue areas, including security, economics, migration, and the environment. Covers the historical development of the international system as well as contemporary controversies. Case studies are used to explore the strength and weaknesses of current governance approaches, and students will conduct independent research into existing structures. Prerequisite: GLBL 100.

GLBL 221 Geographies of Global Conflict credit: 3 Hours.

Same as GEOG 221. See GEOG 221.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

GLBL 225 Career Development: Internships credit: 1 Hour.

Teaches students with global studies academic interests how to identify internships and service-learning learning opportunities relevant to their major. Students prepare application materials, conduct informational interviews, participate in mock job interviews, explore networking strategies, and create a career narrative that represents their academic interests and skills. Prepares students on what to expect from their internships and how to develop and apply leadership skills.

GLBL 228 Terrorism, Past and Present credit: 3 Hours.

Same as HIST 257. See HIST 257.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

GLBL 240 Global Health credit: 3 Hours.

Introduction to issues and problems in global health. As the world becomes more and more interconnected it is important for students to be aware of health issues from a global perspective. We will consider a variety of issues that influence the health of different population and countries. The topics to be discussed include: the environment, nutrition, education, the medical system, culture, and agency involvement in health. Case studies will be used to demonstrate some successes at addressing these issues and problems that were encountered.

GLBL 250 Development credit: 3 Hours.

An interdisciplinary introduction to the theory and practice of international development. Topics include: defining development, how ideas have changed over time, and the interventions used in development work and their impacts.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

GLBL 251 Warfare Milit Insts & Soc credit: 3 Hours.

Same as HIST 251. See HIST 251.

GLBL 260 Global Human Rights credit: 3 Hours.

Examines how ideas about human rights are defined and how they are differentially deployed. Looks at human rights claims and crises, and examines how governmental and non-governmental individuals and organizations have sought to deal with human rights violations in order to address problems of justice, retribution, and reconciliation at personal, national, and international levels.

GLBL 270 Introduction to Global Markets and Society credit: 3 Hours.

Introduction to global markets and economic systems and their evolving relationship with societies in the global North and South. Presents interdisciplinary perspectives on business structures and conduct with emphasis on (1) the philosophical foundations of economic systems; (2) international business networks and technological innovation; (3) business environments in non-Western settings; (4) global workforce composition and divisions of labor; (5) the relationships between business, development and the environment; and (6) international organizations that support the spread of global business.

GLBL 280 Nuclear Weapons & Arms Control credit: 3 Hours.

Same as PHYS 280. See PHYS 280.

This course satisfies the General Education Criteria for:
Advanced Composition

GLBL 283 Intro to Intl Security credit: 3 Hours.

Same as PS 283. See PS 283.

GLBL 296 Global St Foundation Seminar credit: 1 Hour.

Examination of current controversies and larger ethical issues in today's global society. Topics could include: immigration, global environmental debates, and population issues. May be repeated in the same or separate terms to a maximum of 3 hours if topics vary.

GLBL 298 Global Studies Seminar Abroad credit: 3 or 6 Hours.

Seminars introduce students to aspects of globalization through a case study of a particular location abroad. On campus, students explore historical and contemporary aspects of the location abroad to prepare for their field visit. Abroad, students engage with local resources and people to better understand how the local site contributes to and is impacted by relevant global processes under focus. Course activities will include a field site visit abroad, discussions, lectures, short essays, student presentation, and final projects. Topics vary according to site location and instructor expertise. May be repeated in separate terms to a maximum of 6 hours.

GLBL 328 First Person Global credit: 1 Hour.

A writing workshop for students who have studied abroad and want to deepen their understanding of globalization and improve their nonfiction prose by writing about their own experiences. Writing in the first person raises fundamental questions about identity, power, cultural understanding, and representation. Students will read and discuss first person literary nonfiction by contemporary writers and chronicle their own global encounters in ethical, insightful, and creative ways. Prerequisite: A study abroad experience.

GLBL 340 Global Health: Policy & Governance credit: 3 Hours.

Identifies central and emerging global health issues and analyzes them through the lenses of governance, policy and gender. Focuses on structural, policy, and institutional perspectives on global health, with emphasis on how decisions are influenced and made. Prerequisite: GLBL 240.

GLBL 350 Poverty in a Global Context credit: 3 Hours.

Examines global poverty in the context of international development debates and practice. Despite global commitments (for example, the Millennium Development Goals), decades of research, and new and innovative policies, the "solution" to widespread and lasting poverty alleviation remains elusive. Class will define poverty and how it is measured, considered who is poor and why some people are more vulnerable to the negative effects of poverty than others, and examine what causes some countries to remain poor. Prerequisite: GLBL 250 or consent of instructor.

GLBL 356 Comparative Political Economy credit: 3 Hours.

Same as PS 356. See PS 356.

GLBL 357 Ethnic Conflict credit: 3 Hours.

Same as PS 357. See PS 357.

This course satisfies the General Education Criteria for:
Advanced Composition

GLBL 386 Arctic Environment & Society credit: 6 Hours.

Interdisciplinary study of the European Arctic for science and non-science students, providing an historical survey of the relationship between its environment and societies with the goal of understanding current and possible future conditions, in light of climate change. The course takes place in Scandinavia and includes a field site component in the Arctic.

GLBL 392 Int Diplomacy and Negotiation credit: 3 Hours.

Examines the complexities of international diplomacy and negotiations among states and other actors. Focuses on three main subject areas: negotiation analysis, applied negotiation, and the interaction of practical considerations that affect negotiations. Utilizes theoretical, case-based, and active-learning approaches during the semester as topics are explored in detail. Issues and topics include security, public health, economic development, human rights, and the environment.

This course satisfies the General Education Criteria for:
Advanced Composition

GLBL 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GWS 403, HIST 434, REL 403, and SAME 403. See REL 403.

GLBL 440 Global Health: Interventions & Evaluations credit: 3 Hours.

Focuses on the process of crafting a solution and evaluation plan related to a specific global health problem identified by students. Requires students to work in teams to integrate content learning on global health with applied project design skills developed in this course. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 340. Junior standing or higher required.

GLBL 450 Poverty Interventions and Evaluation credit: 3 Hours.

Over the last few decades a wide range of strategies and initiatives have been applied to alleviate poverty in developing countries. The record of these initiatives is mixed. While millions of people may have moved out of poverty, over a billion remain persistently impoverished. We will examine a range of anti-poverty approaches that have been implemented and evaluate their effectiveness. Students will gain a familiarity with the interventions and an understanding of the techniques used to evaluate them. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 250 and 350 or consent of instructor.

GLBL 480 Energy and Security credit: 3 Hours.

Same as NPRE 480 and PS 480. See NPRE 480.

GLBL 481 Writing on Technol & Security credit: 3 or 4 Hours.

Same as NPRE 481. See NPRE 481.

This course satisfies the General Education Criteria for:
Advanced Composition

GLBL 483 Seminar on Security credit: 1 Hour.

Same as NPRE 483. See NPRE 483.

GLBL 492 UG Research Assistance credit: 0 to 3 Hours.

Assist Global Studies and program-affiliated faculty in ongoing research. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. No more than 6 hours may be counted toward completion of the Global Studies major from any combination of GLBL 492 and other independent study, internship, or research assistance coursework. This includes coursework from other departments on campus or during study abroad. Prerequisite: GLBL 200; evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of Global Studies program. Global Studies majors only. Not available to freshman. Instructor approval required.

GLBL 494 Research Methods I credit: 3 Hours.

Optional Capstone experience for Global Studies students. Students will develop research, communication and presentation skills and develop a proposal for an independent research project, goals and timeline. The proposal will include a literature review and methods section for their final project. Topics include: research approaches, design and implementation, as well as methods, analysis and ethics of data collection. 3 undergraduate hours. No graduate credit. Prerequisite: GLBL 200.

GLBL 495 Research Methods II credit: 1 Hour.

Second semester of the optional Capstone experience for International/Global Studies students. Designed to guide the interpretation of the data, development of conclusions and implications. In addition to the final project, students will learn how to write a paper abstract and conference proposal, as well as acquire presentation skills. 1 undergraduate hour. No graduate credit. Prerequisite: GLBL 494.

GLBL 499 Special Topics credit: 1 to 4 Hours.

Selected reading and research in Global Studies. See schedule for current topics. 3 undergraduate hours. 1 to 4 graduate hours. May be repeated, if topics vary, in the same or separate terms to a maximum of 6 undergraduate or 8 graduate hours. Prerequisite: GLBL 100 or six hours of global studies, anthropology, social geography, political science, sociology, or economics; consent of instructor.

GLBL 500 Global Society credit: 4 Hours.

Students will examine three propositions: (1) the existence of a global society; (2) the flaws of its principal, global institutions ? the state, markets, and democracy; and (3) absent their reform, whether the global society is at risk. Prerequisite: Instructor Approval Required.

GLBL 501 Perspectives on Global Studies credit: 4 Hours.

Provides graduate students in a variety of fields with an understanding of key global concepts and methods, and introduces them to different perspectives on globalization and transnational social relations. 4 graduate hours. No professional credit. Prerequisite: Graduate Standing.

Graduate College (GC)

GC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GC>)

Courses

GC 295 URAP Research Apprenticeship credit: 3 Hours.

The Office of Undergraduate Research and the Graduate College offer the opportunity for freshmen, sophomore, and transfer students with little to no research experience to assist advanced graduate students with their research projects. Through an application, selection, and matching process, undergraduate students are provided a research experience with their graduate student mentor. In addition, regular class meetings will offer a comprehensive introduction to research methods and practices. Approved for S/U grading only. Prerequisite: Consent of instructor. Freshmen, Sophomores, and first-year transfer students by application only.

GC 498 Graduate Domestic Study Away credit: 0 to 12 Hours.

Provides campus credit for study at accredited domestic institutions outside the CIC. 0 to 12 graduate hours. Approved for both letter and S/U grading. May be repeated to a maximum of 12 graduate hours in separate terms. Credit received will depend on transfer approved from visited institution. Prerequisite: Registration will be controlled by Graduate Records.

GC 499 Graduate College Study Abroad credit: 0 to 18 Hours.

Provides campus credit for study at accredited foreign institutions or approved overseas programs. Final determination of credit granted is made after the student's successful completion of work. Credit will not count toward residence requirements. 0 to 18 undergraduate hours. 0 to 18 graduate hours. Approved for both letter and S/U grading. 0 to 18 hours fall and spring semesters. 0 to 12 hours summer term. Prerequisite: Full academic standing in the Graduate College and consent of major department and Graduate College.

GC 500 URAP Graduate Mentor Practicum credit: 0 Hours.

The Office of Undergraduate Research (OUR) and the Graduate College offer the opportunity for first and second-year undergraduate students to assist advanced graduate students with their research projects. Through a one-on-one research experience with their graduate student mentor, undergraduate students will have the opportunity to learn what it means to do research, create knowledge, and produce scholarship. This course will serve as a formal record of the graduate mentoring side of the apprenticeship (i.e., "practicum"). 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

GC 599 Thesis Research credit: 0 Hours.

For doctoral students who have a guaranteed student loan that needs deferral, have completed the credit requirements for the doctorate, have passed the preliminary examination, do not have any financial assistance that would cover tuition and fees, and are eligible to register for 599 in their own academic units. Approved for S/U grading only. May be repeated.

Grand Challenge Learning (GCL)

GCL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GCL>)

Courses

GCL 101 Introduction to Energy Sources credit: 3 Hours.

Explanation of energy technologies using an elementary approach presupposing no prior scientific or technical background. Coverage of all energy sources including fossil fueled, solar, hydro, and nuclear power. Integral demonstrations and a tour of the University's power plant. Discussion of energy related incidents with emphasis on environmental, economic, and social impact. Credit is not given for both GCL 101 and NPRE 101.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

GCL 124 Sustainable Earth credit: 3 Hours.

Provides an introduction to sustainability that explores how today's human societies can endure in the face of global change, ecosystem degradation, and limited resources. Emphasizes the fundamentals of the physical sciences and the scientific method while also exploring the special impact of sustainability challenges on minority cultures in the U.S.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Nat Sci Tech - Phys Sciences

GCL 125 Health and Wellness in Life Sciences credit: 3 Hours.

Grand Challenge Learning course in the Health & Wellness pathway. Introduces students to the fundamentals of life sciences with an emphasis on health & wellness and experiential learning through projects, design-based thinking, community-engaged scholarship, or field trips. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Health/Well
Nat Sci Tech - Life Sciences

GCL 126 Sustainability and Social Science credit: 3 Hours.

Grand Challenge Learning course in the Sustainability, Energy & the Environment pathway. Introduction to the fundamentals of social science with an emphasis on environmental sustainability and experiential learning through projects, design-based thinking, community-engaged scholarship, or field trips. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Social Beh Sci - Soc Sci

GCL 127 History and Philosophy of Sustainable Design credit: 3 Hours.

Grand Challenge Learning course in the Sustainability, Energy & the Environment pathway. Introduction to the history of sustainable design practices that prepares students to think about, act upon and share their growing knowledge. Focuses on environmental philosophy, and "systems thinking", with an on active, engaged participation in a variety of learning activities, design challenges, and field experiences. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Humanities - Hist Phil

GCL 128 Sustainability in Fiction credit: 3 Hours.

Grand Challenge Learning course in the Sustainability, Energy & the Environment Pathway. Exploration of how narrative fiction focused on sustainability – such as "cli-fi" (dystopian fiction about climate change) – shapes our relation to the natural world. Includes experiential learning projects. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Humanities - Lit Arts

GCL 129 Sustainable Design credit: 3 Hours.

Interdisciplinary Grand Challenge Learning pilot course in the Sustainability, Energy & the Environment pathway. Provides an introduction to sustainable art forms, media, and/or the social function of art as it relates to sustainability. Topics vary by section. Each section emphasizes experiential learning through design-based thinking and practice supplemented by field trips and community-engaged scholarship in comparative contexts.

This course satisfies the General Education Criteria for:

Grand Challenge-Sustainability
Humanities - Lit Arts
Cultural Studies - Non-West

GCL 137 Documenting Inequality credit: 3 Hours.

Exploration of how economic and social inequality affects the lives of children and minors in the U.S.–especially in minority communities–through the study of documentary film, photography and other kinds of socially conscious art. Students will watch and critique documentaries made by artists and filmmakers in the areas of Education, Housing, and Law Enforcement; go behind the scenes at the Krannert Art Museum to investigate the museum's documentary holdings; and make their own documentary projects. Final projects will be exhibited in the Krannert Art Museum at the end of the semester. Part of the Grand Challenge Learning Inequality & Cultural Understanding pathway.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Humanities - Lit Arts
Cultural Studies - US Minority

GCL 143 Mapping Inequalities credit: 3 Hours.

Grand Challenge Learning course in Inequality & Cultural Understanding. Immerses students in the history of Inequality in the United States through mapping the geographic, historical, and/or social movement of minority cultures using quantitative and social science methods. Topics vary by section, but each section emphasizes experiential learning through community-engaged scholarship, field-trips, or computer programming projects. No previous computer programming experience is required. No previous computer programming experience is required.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Quantitative Reasoning II
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

GCL 144 Stereotypes, Prejudice & Discrimination credit: 3 Hours.

Grand Challenge Learning course in Inequality & Cultural Understanding provides an interdisciplinary introduction to questions related to societal inequality. Each section emphasizes experiential learning through, for example, field trips or hands-on, community-based research projects.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci
Grand Challenge-Inequality
Cultural Studies - US Minority

GCL 145 Social Justice and the Arts credit: 3 Hours.

Interdisciplinary Grand Challenge Learning course in the Inequality & Cultural Understanding pathway. Provides an introduction to the social dimensions of art and its use in social justice movements. Each section emphasizes experiential learning through projects, design-based thinking, community-engaged scholarship, or field trips.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Humanities - Lit Arts
Cultural Studies - US Minority

GCL 146 Fundamental Causes of Disease: The HIV/AIDS Pandemic credit: 3 Hours.

Examination of the HIV/AIDS pandemic globally and locally. Introduces students to the fundamentals of the socio-demographic tradition, including risk behaviors and contexts and data skills associated with epidemiology. Upon completing the course, students will be better informed about the HIV/AIDS pandemic, familiar with core social science theories, and able to develop and assess public health measures and models in addition to enhanced core academic skills (critical reading skills, note taking, data analysis, and writing). Prerequisite: This course is intended for first and second year students.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Social Beh Sci - Soc Sci

GCL 147 Social Justice in the Social Sciences credit: 3 Hours.

Interdisciplinary Grand Challenge Learning course in the Inequality and Cultural Understanding Pathway. Exploration of causes and solutions to inequality from a variety of viewpoints, such as sociology, economics, political science, and journalism. Includes experiential learning projects. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

GCL 148 Historical Perspectives on Social Justice credit: 3 Hours.

Grand Challenge Learning course in the Inequality & Cultural Understanding pathway. Focuses on the historical dimensions of Inequality & Cultural Understanding from an interdisciplinary perspective and emphasizes experiential learning through projects, community-engaged scholarship, video conferences with experts and other collaborative classroom activities. Topics vary by section.

This course satisfies the General Education Criteria for:

Grand Challenge-Inequality
Humanities - Hist Phil

GCL 185 Health, Wellness, and the Black Experience credit: 3 Hours.

Exploration of issues relating to health in African American communities such as environment, lifestyle, chronic disease, intervention, research, policy, social justice and cultural experience. Includes experiential learning projects as part of the Grand Challenge Learning Initiative.

This course satisfies the General Education Criteria for:

Grand Challenge-Health/Well
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

GCL 186 Health and Society credit: 3 Hours.

Grand Challenge Learning course in Health & Wellness. Engages the social dimensions of Health & Wellness from an interdisciplinary perspective and emphasizes experiential learning through projects, design-based thinking, community-engaged scholarship or field-trips. Topics vary by section.

This course satisfies the General Education Criteria for:
Grand Challenge-Health/Well
Social Beh Sci - Soc Sci

GCL 187 Morality, Methods, and Medicine: Formal and Philosophical Approaches to Health in Society credit: 3 Hours.

Interdisciplinary, experiential Grand Challenge Learning course in Health & Wellness. Exploration of the ways methodological and moral principles interact to inform policy choices related to health and society; consideration of topics of ethical and public policy concern (e.g., abortion, animal experimentation, drug and trials, organ donation, vaccination, and provision of healthcare), with an emphasis on relevant formal, quantitative tools (e.g., probability, statistics, decision theory, modal logic, and graphical causal modeling).

This course satisfies the General Education Criteria for:
Grand Challenge-Health/Well
Humanities - Hist Phil
Quantitative Reasoning II

GCL 188 Health and Wellness in Literature credit: 3 Hours.

Grand Challenge Learning course in the Health & Wellness pathway. Exploration of creative, literary responses to the issue of Health & Wellness from an interdisciplinary perspective with an emphasis on experiential learning. Topics vary by section.

This course satisfies the General Education Criteria for:
Grand Challenge-Health/Well
Humanities - Lit Arts

GCL 195 Fictions of Equality credit: 3 Hours.

Grand Challenge Learning course in the Inequality & Cultural Understanding pathway. Introduces students to how fiction on the topic of Inequality shapes social and cultural understanding of the topic. Topics vary by section but each emphasizes experiential learning through, for example, projects, community engaged scholarship, field trips, archival work, or experimental writing.

This course satisfies the General Education Criteria for:
Grand Challenge-Inequality
Humanities - Lit Arts
Cultural Studies - Western

GCL 200 Frameworks for Inequality credit: 3 Hours.

Different disciplines approach issues of inequality in distinct ways. This course presents an interdisciplinary introduction to the study of social inequality. Co-taught by faculty from the arts, humanities, and social sciences, it addresses how inequality related to work, race and ethnicity, gender, urban space, incarceration, global debt and migration relate to one another and across disciplinary boundaries. Presentations by visiting activists will expose students to contemporary social justice efforts to address inequalities. Meets twice per week: on Tuesdays all students meet together, and on Thursdays the class breaks into small seminars, each led by one of the course's main instructors. Credit is not given for both GCL 200 and GCL 201.

This course satisfies the General Education Criteria for:
Grand Challenge-Inequality
Humanities - Hist Phil
Cultural Studies - US Minority

GCL 201 Frameworks for Inequality & Cultural Understanding - ACP credit: 3 Hours.

Frameworks for Inequality & Cultural Understanding introduces students to one of the most urgent social issues of our era: economic and racial inequality. As an innovative course in Grand Challenge Learning, GCL 201 gathers expert faculty from across campus—all renowned for excellent teaching and research. Students will explore inequality across the arts, natural sciences, humanities, and social sciences while earning General Education credit in US Minority Cultures and Humanities & the Arts.

GCL 201 meets twice per week: on Tuesday for a lecture that gathers all students and faculty, and Thursdays in seminars of up to 20 students. Through this unique structure, students benefit from the expertise of seven different faculty while joining a seminar with one professor and a small network of peers. Registration for GCL 201 includes the lecture as well as enrollment in one of the participating professor's seminars (for a total of 3 credit hours). Credit is not given for both GCL 201 and GCL 200. Prerequisite: Completion of campus Composition I requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Grand Challenge-Inequality
Humanities - Hist Phil
Cultural Studies - US Minority

GCL 210 Frameworks for Sustainability, Energy, & the Environment credit: 3 Hours.

Different disciplines approach issues of sustainability in different ways. This course presents an interdisciplinary introduction to the study of sustainability, energy and the environment. Co-taught by faculty from the humanities, social sciences, natural sciences, business, and engineering, it addresses how environmental and energy sustainability challenges are not only technical problems but are also social, political and economic ones. Students will be able to evaluate various problems and solutions to enhance energy and environmental sustainability. Meets twice per week: first for a lecture that includes all students and faculty, and next in individual faculty-led seminars. Through this structure, students benefit from the expertise of multiple faculty while participating in a seminar with one professor and a small network of peers.

This course satisfies the General Education Criteria for:
Grand Challenge-Sustainability
Humanities - Hist Phil
Cultural Studies - Western

GCL 220 Frameworks for Health & Wellness: Building Healthy Communities credit: 3 Hours.

Different disciplines approach issues of health and wellness in distinct ways. This class gathers faculty from the life sciences, humanities, and social sciences to help students build a deep understanding of distinct approaches to health that connect with particular lifestyles, families, cultures, and communities. Students will be able to evaluate goals and strategies to enhance health and wellness. Meets twice per week: first for a lecture that includes all students and faculty, and next in individual faculty-led seminars. Through this structure, students benefit from the expertise of multiple faculty while participating in a seminar with one professor and a small network of peers.

This course satisfies the General Education Criteria for:
Grand Challenge-Health/Well
Humanities - Hist Phil
Cultural Studies - Western

GCL 299 Interdisciplinary Research Experience credit: 3 Hours.

Introduces students to interdisciplinary research and the skills needed to become an effective researcher. Enables students to conduct authentic research in one of the campus's interdisciplinary research centers under the supervision and mentorship of faculty. Approved for S/U grading only. May be repeated in separate terms up to 6 credit hours if topics vary. Prerequisite: Registration by permission of instructor.

Greek (GRK)

GRK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GRK>)

Courses

GRK 101 Elementary Greek I credit: 4 Hours.

Introduces ancient Greek (both classical and koine), including the reading of simple prose. Same as REL 111.

GRK 102 Elementary Greek II credit: 4 Hours.

Continuation of GRK 101. Grammar and reading in classical and koine Greek. Same as REL 112. Prerequisite: GRK 101.

GRK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

GRK 201 Classical & Koine Greek I credit: 4 Hours.

Readings in classical Greek prose, and narrative and epistolary New Testament texts. Same as REL 200. Prerequisite: GRK 102.

GRK 202 Classical & Koine Greek II credit: 4 Hours.

Continuation of GRK 201. Further readings in classical Greek prose, and narrative and epistolary New Testament texts. Same as REL 204. Prerequisite: GRK 201 or equivalent.

GRK 251 Elementary Modern Greek I credit: 5 Hours.

Same as GRKM 201. See GRKM 201.

GRK 252 Elementary Modern Greek II credit: 5 Hours.

Same as GRKM 202. See GRKM 202.

GRK 401 Homeric Greek credit: 2 or 3 Hours.

Introduction to Epic Greek; readings of Homer. 3 undergraduate hours. 2 graduate hours. Prerequisite: GRK 202 or equivalent.

GRK 403 Intermediate Modern Greek I credit: 4 Hours.

Same as GRKM 403. See GRKM 403.

GRK 404 Intermediate Modern Greek II credit: 4 Hours.

Same as GRKM 404. See GRKM 404.

GRK 411 Greek Prose Composition credit: 3 Hours.

Practice in the writing of Greek prose. 3 undergraduate hours. 3 graduate hours. Prerequisite: GRK 201 or equivalent.

GRK 491 Readings in Greek Literature credit: 3 or 4 Hours.

Readings in authors or special topics chosen by the instructor from the entire extant literature in Greek. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: GRK 401 or equivalent.

GRK 492 Senior Thesis credit: 2 to 4 Hours.

Thesis and honors. Open to candidates for distinction in Greek. 2 to 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

GRK 493 Independent Reading credit: 1 to 4 Hours.

1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 undergraduate hours or 12 graduate hours. Prerequisite: GRK 401 and consent of instructor.

GRK 498 Senior Survey credit: 2 or 4 Hours.

For candidates for honors in Greek and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

GRK 511 Advanced Composition credit: 1 Hour.

Practice in writing continuous Greek prose, with special attention to stylistic problems.

GRK 520 Proseminar credit: 4 Hours.

Alternating poetry and prose, concentrates on a major author from one of the following areas: epic, history, lyric poetry, oratory, drama, or philosophy. Areas normally follow this sequence in successive years. May be repeated to a maximum of 20 hours if topics vary. Prerequisite: GRK 491 or equivalent.

GRK 531 Special Disciplines credit: 4 Hours.

Variable content course concentrating on an area such as comparative grammar, epigraphy, metrics, palaeography, or papyrology. Same as LAT 531. May be repeated if topics vary. Prerequisite: GRK 491 and LAT 491, or equivalent.

GRK 580 Greek Seminar credit: 4 Hours.

Research on special problems of Greek literature; required of all majors in classical philology. May be repeated if topics vary. Prerequisite: A Greek proseminar.

GRK 595 Intro to Classical Studies credit: 4 Hours.

Introductory survey for graduate students in classics; prepares students for work at the graduate level and surveys basic bibliography and methodology. Same as LAT 595. Prerequisite: Graduate standing in classics.

GRK 599 Thesis Research credit: 0 to 16 Hours.

Guidance in writing theses for advanced degrees. Approved for S/U grading only. May be repeated.

Hebrew, Modern and Classical (HEBR)

HEBR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HEBR>)

Courses

HEBR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HEBR 201 Elementary Modern Hebrew I credit: 5 Hours.

Acquaints students with the fundamental principles of the Hebrew language. Develops all four language skills; reading, writing, listening and speaking. Grammar and comprehension are exercised through the textbook, the audio-visual materials and the computer. Easy stories will be used during the term to strengthen reading comprehension. Participation in the language laboratory is required.

HEBR 202 Elementary Modern Hebrew II credit: 5 Hours.

Continuation of HEBR 201, with introduction of more advanced grammar, and with emphasis on more fluency in speaking and reading. Participation in the language laboratory is required. Prerequisite: HEBR 201 or equivalent.

HEBR 205 Intensive Biblical Hebrew credit: 5 Hours.

Same as REL 205. See REL 205.

HEBR 403 Intermediate Modern Hebrew I credit: 4 or 5 Hours.

Advanced examination of the fundamental principles of the Hebrew language. Develops all four language skills: reading, writing, listening and speaking. Grammar and comprehension are exercised through the textbooks, the audio-visual materials and the computer. Examples of Hebrew fiction, largely easy stories, will be used during the term to strengthen reading comprehension. Participation in the language laboratory is required. 5 undergraduate hours. 4 graduate hours. Prerequisite: HEBR 202 or equivalent.

HEBR 404 Intermediate Modern Hebrew II credit: 4 or 5 Hours.

Continuation of HEBR 403. Concentration on ability to engage in reasonable fluent discourse in Hebrew, comprehensive knowledge of formal grammar, and an ability to read easy Hebrew texts. Israeli television programs and movies are used to develop communicative skills and cultural knowledge. Participation in the language laboratory is required. 5 undergraduate hours. 4 graduate hours. Prerequisite: HEBR 403 or equivalent.

HEBR 405 Advanced Modern Hebrew I credit: 3 Hours.

For students who have mastered the fundamental principles of the Hebrew language. Develops competence through reading Hebrew fiction and studying Israeli newspapers and television programs. Communication skills are exercised by means of class discussions, oral presentations, compositions and written reports on stories. 3 undergraduate hours. 3 graduate hours. Prerequisite: HEBR 404 or equivalent.

HEBR 406 Advanced Modern Hebrew II credit: 3 Hours.

Course for advanced knowledge of spoken and written standard Modern Hebrew with emphasis on Modern Hebrew literature and language, Israeli newspapers and Israeli television programs. Communication skills are exercised by means of class discussions, oral presentations, compositions and written reports on stories. 3 undergraduate hours. 3 graduate hours. Prerequisite: HEBR 405 or equivalent.

HEBR 407 Topics Hebrew Lang & Lit I credit: 3 Hours.

Study of advanced topics in the Hebrew language, based upon a selection of Hebrew literature from either the Bible or the modern period. Historical and cultural background of the material will be stressed, together with literary analysis. In certain years, the course will be offered as a course using English translation of texts, with separate discussion section for students who want to read texts in the original. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: HEBR 205 or HEBR 406 or consent of instructor.

HEBR 408 Topics Hebrew Lang & Lit II credit: 3 Hours.

Study of advanced topics in the Hebrew language, based upon a selection of Hebrew literature from either the Bible or the modern period. Historical and cultural background of the material will be stressed, together with literary analysis. In certain years, the course will be offered as a course using English translation of texts, with separate discussion section for students who want to read texts in the original. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: HEBR 205 or HEBR 406 or consent of instructor.

HEBR 414 Advanced Biblical Hebrew credit: 3 or 4 Hours.

Same as REL 414. See REL 414.

Hindi (HNDI)

HNDI Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HNDI>)

Courses

HNDI 115 Language and Culture in India credit: 3 Hours.

Same as LING 115 and REL 115. See REL 115.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West

HNDI 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HNDI 201 Elementary Hindi-Urdu I credit: 5 Hours.

Introduction to the Hindi/Urdu language; includes conversation with a native Hindi/Urdu-speaking tutor under the direction of a linguist instructor, and a minimum of formal grammar and Devanagari writing; introduction to Arabic-Persian script by arrangement. Participation in the language laboratory is required.

HNDI 202 Elementary Hindi-Urdu II credit: 5 Hours.

Second term of spoken Hindi/Urdu; includes conversation with a native Hindi/Urdu-speaking tutor under the direction of a linguist instructor, formal grammar based on conversational materials, and work on written Hindi; concentration on written Urdu by arrangement. Participation in the language laboratory is required. Prerequisite: HNDI 201.

HNDI 403 Intermediate Hindi I credit: 4 Hours.

First term of second year of the Hindi language, including drill for more advanced conversational fluency; introduction to a greater variety of styles and levels of discourse and usage; and increasing study of the written language and more formal grammar. 4 undergraduate hours. 4 graduate hours. Prerequisite: HNDI 202 or equivalent.

HNDI 404 Intermediate Hindi II credit: 4 Hours.

Concentration on ability to engage in reasonably fluent discourse in Hindi, on comprehensive knowledge of formal grammar, and on ability to read ordinary texts in Hindi. 4 undergraduate hours. 4 graduate hours. Prerequisite: HNDI 403 or equivalent.

HNDI 405 Advanced Hindi I credit: 3 Hours.

Course for advanced knowledge of spoken and written Hindi. Participation in the language laboratory is required. 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 404 or consent of instructor.

HNDI 406 Advanced Hindi II credit: 3 Hours.

Course for advanced knowledge of spoken and written Hindi with emphasis on modern Hindi literature and language. Participation in the language laboratory is required. 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 405 or consent of instructor.

HNDI 408 Intro to South Asian Lit credit: 3 Hours.

Introduces selected literatures of South Asia in a cross-cultural and comparative perspective: emphasizes relating literary texts and trends to the historical, sociocultural, political, and literary contexts of the subcontinent. Texts for South Asian languages are offered in English translation; in addition, there will be texts by South Asian authors written in English. Knowledge of a South Asian language not required. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of course coordinator.

HNDI 412 Business Hindi credit: 3 Hours.

Study and analysis of Business Hindi in a wide variety of contexts and settings (from Metropolitan to rural). 3 undergraduate hours. 3 graduate hours. Prerequisite: HNDI 403 or higher or consent of instructor.

History (HIST)

HIST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HIST>)

Courses

HIST 100 Global History credit: 3 Hours.

Broad introduction to global history, by exploring the global structures and transnational forces that have shaped human history, from the emergence of agriculture and urban centers to our contemporary global village.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 101 History Now! credit: 3 Hours.

Teaches students how to apply historical thinking to present day problems. Each version starts with contemporary headlines about a current issue, moves to an investigation of its historical roots and legacies, and pivots back to the present to assess the impact of past history on present reality and to capture those relationships in a collaborative student project. It aims to show, in short, how and why history matters NOW.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 104 Black Music credit: 3 Hours.

What is black music, and how do we know what we think we know about it? Together, we will examine musical creations pioneered by Africans and individuals of African descent over several centuries and across hemispheres. Doing so will allow us to consider the unity of the African Diaspora and its music, and also examine internal differences and diversity. Special focus is given to Latin America and the U.S., but, depending on the semester, we will also read about, listen to, and talk about music and musicians in Asia, Africa, and Europe. Most course assignments are multi-media and interactive.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

HIST 105 Latin America to Independence credit: 3 Hours.

Survey of Latin American history from the discovery of America to 1824.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 106 Modern Latin America credit: 3 Hours.

History of the Latin American republics from their independence to the present; emphasis on Argentina, Brazil, Chile, Colombia, Cuba, and Mexico.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 110 History of Africa credit: 3 Hours.

Survey of the early history of the continent, nineteenth century developments, and the period of colonial occupation and independence, with particular focus on case studies from East Africa, South Africa and West Africa at the conclusion of the term.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 120 East Asian Civilizations credit: 3 Hours.

Surveys the three major East Asian civilizations from ancient and classical times, through the period of Western influence, political revolution, and modernization, to the contemporary age and the emergence of East Asian superpowers. Same as EALC 120. Credit is not given for both HIST 120 and EALC 135.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 130 History of South Asia credit: 3 Hours.

Multidisciplinary introduction to the history of modern South Asia from the consolidation of early modern state formations, the negotiation of religious, cultural and linguistic formations, European colonial interactions, and the rise of the modern nation states of Bangladesh, India, Pakistan and Sri Lanka. Same as ANTH 130.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 135 History of Islamic Middle East credit: 3 Hours.

Introduction to fourteen centuries of Middle East history from the rise of Islam to modern times. Examines the development of Islamic thought, and of religious, social, and political institutions; as well as the transformations of the 19th and 20th centuries in the area consisting of Egypt, the Fertile Crescent, Arabia, Turkey, and Iran.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Non-West

HIST 140 Western Civ to 1660-ACP credit: 4 Hours.

Course is identical to HIST 141 except for the additional writing component. See HIST 141. Credit is not given for both HIST 140 and HIST 141. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 141 Western Civ to 1660 credit: 3 Hours.

Fundamental developments in the history of Western societies from antiquity to early modern Europe; includes the Greek and Roman worlds, the influence of Christianity and Islam, the emergence of medieval monarchies, the rise of cities, the commercial and intellectual revolutions of the Middle Ages, the birth of the university, the conquest and colonization of the Atlantic world, the Renaissance and Reformation, the political and religious upheavals of the sixteenth and seventeenth centuries. Credit is not given for both HIST 141 and HIST 140.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

HIST 142 Western Civ Since 1660 credit: 3 Hours.

Fundamental developments - social, economic, cultural, intellectual, and political - in the history of mankind and Western society since 1660; includes the rise of modern science, the French and Industrial revolutions, the Romantic movement, the growth of nationalism and socialism, imperialism, urbanization, the Russian Revolution, Nazi Germany, the world wars, and the West and the developing world. Credit is not given for both HIST 142 and HIST 143.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - Western

HIST 143 Western Civ Since 1660-ACP credit: 4 Hours.

Course is identical to HIST 142 except for the additional writing component. Credit is not given for both HIST 143 and HIST 142. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 164 The Automobile credit: 3 Hours.

Interdisciplinary examination of the automobile industry, its production systems, its marketing strategies, and the way automobiles reflect the changing landscapes of consumer tastes and value over time.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 168 A History of Judaism credit: 3 Hours.

Same as REL 120. See REL 120.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

HIST 170 US Hist to 1877-ACP credit: 4 Hours.

Course is identical to HIST 171 except for the additional writing component. Credit is not given for both HIST 170 and HIST 171. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 171 US Hist to 1877 credit: 3 Hours.

Colonial foundations, movement for independence, and early years of the Republic. Credit is not given for both HIST 171 and HIST 170.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 172 US Hist Since 1877 credit: 3 Hours.

Evolution of an industrial, urbanized, and pluralistic society, grappling with domestic and global problems. Credit is not given for both HIST 172 and HIST 173.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 173 US Hist Since 1877-ACP credit: 4 Hours.

Course is identical to HIST 172 except for the additional writing component. Credit is not given for both HIST 173 and HIST 172. Prerequisite: Completion of campus Composition I General Education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

HIST 174 Black America, 1619-Present credit: 3 Hours.

Same as AFRO 101. See AFRO 101.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - US Minority

HIST 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated once. Prerequisite: Consent of departmental honors advisor.

HIST 198 Freshman Seminar credit: 3 to 4 Hours.

Through research, reports, and discussion in a selected field of historical study, the seminar provides a thorough understanding of the problems of that field and of the methods of history as a discipline. May be repeated to a maximum of 6 hours. Prerequisite: James Scholar standing or other designation as a superior student; consent of instructor.

HIST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HIST 200 Intro Hist Interpretation credit: 3 Hours.

Through the careful examination of a specific topic or theme, this course provides a thorough introduction to historical interpretation. Particular attention will be devoted to research strategies, writing practices, handling primary and secondary sources, and the analysis of historiography. May be repeated to a maximum of 6 hours with permission of the Director of Undergraduate Studies.

HIST 202 American Environmental History credit: 3 Hours.

Introduction to the historical study of Americans' relationship with the natural world. Examination of the ways that "natural" forces have helped to shape American history; the ways that human beings have shaped, altered, and interacted with nature over time; and the ways that cultural, philosophical, scientific, and political attitudes toward the environment have changed from pre-history to the present. Same as ESE 202 and NRES 202.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 203 Reacting to the Past credit: 3 Hours.

An introduction to history through participation in role-playing games set in the past. Topics will vary each time the course is taught. Students will take on the roles of historical figures (famous or obscure) engaged in difficult and complicated situations, and will be obliged to adhere to the beliefs and circumstances of those figures while attempting to pursue a course of action that will help them win the game – and possibly alter the course of history.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 205 LatAm Hist: Primary Accounts credit: 3 Hours.

Examining the history through the primary texts written by Latin Americans, this course introduces students to theories, contents and methods of historical inquiry, as well as the nuances and the complexities of Latin American history. Reading primary texts written by all strata of society, students will look through the eyes of the diverse populations in Latin America. Students will analyze the traditional narrative of Latin America and gain insight into the lived experience of Latin Americans. Together we will advance our individual and collective understanding of Latin America's rich and complex past.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 207 Publishing the Past credit: 3 Hours.

Introduction to the craft of publishing historical materials, with a special focus on how to publish the past in the digital age. Assignments will include historical and methodological readings, as well as hands-on instruction in digital publishing techniques. Skills taught include historical research, content development, project management, and copyright analysis.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 211 History of Southern Africa credit: 3 Hours.

Survey of major themes and events in Southern African history, with emphasis on the period after World War II: the inception and development of apartheid in South Africa, the growth of contests over African nationalism in the subcontinent, wars of liberation and the demise of white domination.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 212 History of Eastern Africa credit: 3 Hours.

Introduction to the history of Eastern Africa from the nineteenth century to the present. Attention to the region's pre-colonial history and institutions is stressed, in order to understand both the transformations brought by European colonialism as well as its limits. The final weeks of the course will examine the differing political, economic, and religious trajectories of the new nation-states since independence in the 1960s.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 213 African Muslim Cultures credit: 3 Hours.

Focuses on the history and historiography of Muslim societies in Africa. Investigates the dynamics of the spread of Islam in Africa, and explores differences in Islam in Africa from other areas of the Islamic world, with attention to the image in Western scholarship of Islam in Africa. Provides students with the knowledge and skills they need to understand this central phenomenon in modern world history. Same as AFST 213 and REL 215.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 219 History of the Prison credit: 3 Hours.

Same as AFRO 221 and LA 221. See LA 221.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 220 Traditional China credit: 3 Hours.

Historical background to the modern age, tracing the Chinese state and empire from the earliest times until 1644 A.D. Basic political, social, and economic patterns; cultural, intellectual, and technological achievements; and China's impact on Asia and the world. Same as EALC 220.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 221 Modern China credit: 3 Hours.

General introduction to the major themes of the Chinese Revolution from 1840 to the present, emphasizing the interplay between politics, ideas, and culture. Themes include the tension between cultural integrity and Western ideologies, between democratic participation and the tradition of centralized control, and the representation of cultural identity in high and mass cultures. Same as EALC 221.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

HIST 222 Chinese Thought Confucius to Mao credit: 3 Hours.

Same as EALC 222 and REL 224. See EALC 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 225 Southeast Asian Civilizations credit: 3 Hours.

Same as ANTH 286 and ASST 286. See ANTH 286.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 226 Premodern Japanese History credit: 3 Hours.

Introduction to the history of the Japanese people, their social and cultural systems, politics, and economy, from the earliest times to the sixteenth century. Same as EALC 226.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 227 Modern Japanese History credit: 3 Hours.

Introduction to the history of the Japanese people, their social and cultural systems, politics, and economy, from the mid-sixteenth century to the mid-twentieth century. Same as EALC 227.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

HIST 240 Ancient Greek Civilization credit: 3 Hours.

The history of ancient Greece and neighboring civilizations from the Archaic Period to the conquests of Alexander.

HIST 241 History of Ancient Rome credit: 3 Hours.

Survey of the political, social, economic, military, institutional, religious and cultural development of Rome from 753 BCE until 480 CE.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Examines the history of women and the evolution of concepts of gender in western Europe from roughly 400 to 1700. Topics include the interactions of class and ethnicity with women's experiences, the social construction of sexuality and gender, the misogynist tradition, and women's self-images. Same as GWS 245 and MDVL 245.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 247 Medieval Europe credit: 3 Hours.

From the fragmentation of the Roman Empire to the formation of territorial monarchies, this course surveys the events, innovations, crises, and movements that shaped western Europe in a pivotal era known as "the Middle Ages." Topics will include the spread of Christianity, the migration of peoples, fundamental changes in economic and social structures, the development of political institutions, the role of women, and the cultural achievements of different communities (the monastery, the town, the court). Same as MDVL 247.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 251 Warfare Milit Insts & Soc credit: 3 Hours.

History of warfare and its relationship to changing technologies, tactics, and political structures, with an emphasis on the ways that military institutions are integrated with society as a whole. Same as GLBL 251.

HIST 252 The Holocaust credit: 3 Hours.

Exploration of the Holocaust in historical perspective by examining European anti-Semitism, political developments in Germany, the rise to power of the Nazis, and the origins of the Holocaust with first-hand accounts, films, and historical texts, concluding with the legacy of the Holocaust in the contemporary world. Same as JS 252.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 253 Enlightenment to Existentialism credit: 3 Hours.

Survey of the major authors, ideas, events, and styles in the cultural and intellectual history of Europe from the seventeenth to the mid-twentieth centuries, focusing on the intellectual traditions of France, Germany, and Great Britain.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 254 Vikings to Volvos: Scandinavia credit: 3 Hours.

Same as SCAN 225. See SCAN 225.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

HIST 255 British Isles to 1688 credit: 3 Hours.

Survey of the political, social and economic, religious, and cultural history of the British people from the "prehistoric" era through the revolution of 1688. Same as MDVL 255.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 256 Britain and World Since 1688 credit: 3 Hours.

Historical survey of the British Isles and the British Empire since the late seventeenth century.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 257 Terrorism, Past and Present credit: 3 Hours.

Explores the history of terrorism, its goals and practices. We recognize that it is not specific to any one ideology, religion, or people. Terrorism is political violence, psychological warfare meant to manipulate a large target audience. Same as GLBL 228.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

HIST 258 20thC World to Midcentury credit: 3 Hours.

Economic, social, political, and cultural developments in twentieth-century world history from late nineteenth-century to Second World War era.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 259 20thC World from Midcentury credit: 3 Hours.

Economic, social, political, and cultural developments in twentieth-century world history from Second World War era to the present.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 260 History of Russia credit: 3 Hours.

Main themes and problems of Russian history from earliest times to the present.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 261 Intro Russian-Jewish Culture credit: 3 Hours.

Same as RUSS 261. See RUSS 261.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 263 US History of Medicine credit: 3 Hours.

Medicine and public health from the colonial period through the twentieth century; health care providers, patients, and public policy; incorporates issues of race and sex. Same as GWS 263.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 264 Technology in Western Society credit: 3 Hours.

Explores the role of technology as a transforming social force; examines innovations from the stirrup and heavy plow to the airplane and computer, that restructured economic and political life and realigned values; examines cultural representations of technology.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 265 Science in Western Civ credit: 3 Hours.

Topics in the intellectual and social history of science in the West.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 268 The Darwinian Revolution credit: 3 Hours.

The ideas of Charles Darwin initiated one of the most profound and provocative transformation in human thought, science, and culture. This course examines the intellectual origins, scientific content, and social, cultural, and religious impacts of Darwinian evolutionary theory in the 19th and 20th centuries, provides students with a historical case study in the development and diffusion of radical scientific ideas, and explores the origins of the most successful and comprehensive theory in the modern life sciences.

HIST 269 Jewish History Since 1700 credit: 3 Hours.

Explores how life was lived by Jewish women and men through the past three centuries. Will also focus on wider place of the Jews in European society, and the achievements and tragedies of the modern Jewish-non-Jewish relationship. Same as REL 269.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 270 United States History to 1815 credit: 3 Hours.

Social, economic, and political survey of the region and its relation to the evolving Atlantic community.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 271 Nineteenth Century America credit: 3 Hours.

History of the United States from 1815 to 1900.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 272 Twentieth Century America credit: 3 Hours.

One major emphasis on foreign policy, including the emergence of the United States as a great power after 1898; a second emphasis on the Progressive movement and recurrent attempts at the reform of American society; and racial and urban problems and the conservation of natural resources included.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 273 Illinois History credit: 3 Hours.

History of Chicago and Illinois from prehistoric times to the present, illustrating the jarring conflicts and great achievements of peoples from all over the world. Politics, economics, popular and high culture, education, mass media, racial problems, and ethnic diversity are especially featured. There is an emphasis on the relation of city, state, and region to one another.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 274 US & World Since 1917 credit: 3 Hours.

Over the course of the twentieth century the United States rose to superpower status, in the process profoundly shaping world affairs. Students will study the connections between U.S. and global history in this pivotal period. Explores the impact of the United States on world affairs from roughly 1917 through the end of the Cold War. Attention given to the perspectives of people affected by U.S. policies and the limits of U.S. power in the face of developments such as anticolonial nationalism and great power rivalries.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

HIST 275 Afro-American History to 1877 credit: 3 Hours.

History of Africans in the Americas, surveying the African slave trade, slavery in the European colonies of the Americas, early United States slavery, and the Afro-American in the Civil War and Reconstruction. Same as AFRO 275.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 276 Afro-American Hist Since 1877 credit: 3 Hours.

History of Afro-Americans in the age of white supremacy; the rise of modern protest organizations; the era of integration; and the black power movement. Same as AFRO 276.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 277 Encounters in Native America credit: 3 Hours.

An examination of pivotal events in the history of Native peoples in North America. Students will explore the complexity of encounters between American Indians and others through a focus on key moments. These will include religious encounters, military confrontations, and legal struggles as well as social and artistic interactions. Same as AIS 277.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 278 Native American History credit: 3 Hours.

A survey of the Native American experience in North America from the time of first contact to the present. The course will examine the dynamics and consequences of Native dispossession as well as the continuities in American Indian life and culture. Course materials will include writing and testimony by Native people as well as historical narratives, court decisions and government documents. Same as AIS 278.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 279 Mexican-American History credit: 3 Hours.

Same as LLS 279. See LLS 279.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 280 Caribbean Latina/o Migration credit: 3 Hours.

Study of the economic, political, and social forces which shaped migration, settlement, and community formation of Puerto Ricans, Cubans, and Dominicans living in the United States. Same as LLS 280.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 281 Constructing Race in America credit: 3 Hours.

Interdisciplinary examination of the historical, cultural, and social dimensions of race and ethnicity in the United States. Explores the complex and intricate pursuit of multiracial and multicultural democracy. Same as AAS 281, AFRO 281, and LLS 281.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 282 Nature and American Culture credit: 3 Hours.

Same as LA 242, NRES 242, and RST 242. See RST 242.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

HIST 283 Asian American History credit: 3 Hours.

Exploration of the migrations of peoples from the Asian continent into the United States, their attempts to build family and community, and their subsequent impact on American history. Same as AAS 283.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 284 Af Am Urban Hist Since 1917 credit: 3 Hours.

Same as AFRO 290. See AFRO 290.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 285 US Gender History to 1877 credit: 3 Hours.

Traces the experiences of North American women and men from the earliest encounters between Europeans and Native Americans; examines gender systems in the colonies, under slavery, during industrialization and westward expansion; assesses impact of the Civil War and Reconstruction on gender roles; considers gendered division of labor in factories and domestic environments and construction of gender ideologies. Same as GWS 285.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 286 US Gender History Since 1877 credit: 3 Hours.

Examines the experiences of women and men in modern America, focusing on variations according to class, race, ethnicity, religion, region, and sexual preference; considers the impact of social movements on gender politics; gender and the wars of the 20th century; gender, reform, and social welfare policy; and the place of popular culture in the production of gender ideologies. Same as GWS 286.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 287 African-American Women credit: 3 Hours.

Examines the history of African American women, beginning with the West African background during the transatlantic slave trading era, emphasizing the experiences of black women in the United States during slavery and their political, civic, community and reform activities from slavery to the present, analyzed within the context of racism, sexism, and economic deprivation. African women in the diaspora, and the impact of feminism/womanism, Afrocentrism, and multicultural diversity on the African American woman are considered. Same as AFRO 287 and GWS 287.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

HIST 288 American Indians of Illinois credit: 3 Hours.

Same as ANTH 288 and AIS 288. See ANTH 288.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

HIST 289 History of Religion in America credit: 3 Hours.

Same as REL 235. See REL 235.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

HIST 290 Religion, Violence & America credit: 3 Hours.

Same as REL 236. See REL 236.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

HIST 291 History of the Bible credit: 3 Hours.

Same as REL 203. See REL 203.

HIST 292 Latina/o Social Movements credit: 3 Hours.

Same as LLS 238. See LLS 238.

HIST 295 Honors Colloquium credit: 3 Hours.

Topics will vary. May be repeated. Prerequisite: Chancellor's Scholar or consent of department and director of Campus Honors Program.

HIST 300 Topics in Film and History credit: 3 Hours.

Examines films as a significant medium of commentary on society and history. Explores the motives and careers of moviemakers, the ways in which films are influenced by their audiences, and how audiences' perception of historical processes are affected by films. Topics will vary. Same as MACS 300. May be repeated to a maximum of 6 hours if topics vary. Students may register in more than one section per term. May be repeated to a maximum of 6 hours.

HIST 305 Andean Countries of S America credit: 3 Hours.

The history of Colombia, Ecuador, Peru, Bolivia, and Chile; emphasizes common problems and diverse responses, from European conquest in the sixteenth century to the struggles for development in the twentieth.

HIST 306 History of Central America credit: 3 Hours.

Major themes of Central American history since conquest: the colonial regimes, ethnic diversity, the independence movement, fragmentation in the nineteenth century, export economies and imperialism, 1880-1932, social movements and populism in the twentieth century, revolution and intervention since the 1950s.

HIST 310 Global Capitalism in History credit: 3 Hours.

Explores the historical relations between multinational corporations and host countries focusing on political and economic issues.

HIST 311 Global History of Intelligence credit: 3 Hours.

Examines the role of both diplomatic and military intelligence in the political history of major global events and developments from the nineteenth century to the present day. Studies the histories of several major intelligence organizations, as well as the roles played by smaller and non-institutional actors in the global production of intelligence. Focuses on the interplay between intelligence, state policy, and information environments to understand not only the role intelligence played in major events, but also how intelligence practices shaped and reflected political cultures across the world.

HIST 314 Material Culture credit: 3 Hours.

Historical and theoretical investigation of everyday objects, artifacts, structures, landscapes, built environments. Students will learn to question existing perceptions of material phenomena, will engage in the work of historicizing and contextualizing them, and will arrive at a more informed understanding of the ways that they influence, shape, and reflect human history.

HIST 315 Discovery, Tourism and Travel credit: 3 Hours.

History of discovery, travel and tourism in Western history from classical antiquity to the present. Focus on two themes: first is the history of discovery, Greek adventures in the Mediterranean, European missionary trips to China, or modern European expansion into the Americas and the Pacific; second is the psychological and spiritual transformations that may accompany travel to foreign places. Pays special attention to how people from different cultures are able to communicate with each other and how travel writings document globalization in the nineteenth and twentieth century. Readings include original source material by travelers, fictional travel accounts, and narratives by recent historians. Also makes use of visual materials, cultural artifacts, and music as sources with much to teach us about travel encounters between cultures. Same as RST 312.

HIST 325 History of Korea credit: 3 Hours.

Same as EALC 367. See EALC 367.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

HIST 334 Modern Palestinian History credit: 3 Hours.

Examines the main themes of Palestinian history since 1800. The Israeli-Palestinian conflict frames the latter part of this history, but it is not the central issue. The focus of the course is Palestinian political, social, and cultural history.

HIST 335 Middle East 1566-1914 credit: 3 Hours.

Political, social, cultural, and ideological developments in Egypt, Arabia, the Fertile Crescent, Iran and Turkey from the mid 16th century to the eve of World War I. Premodern society and institutions, the question of "decline" and "awakening", encounters with Europe and self-strengthening reforms, relations between Muslims, Christians, and Jews, the role of women and the family, class formation, and religion and nationalism. Same as JS 335.

HIST 337 Middle East Since World War I credit: 3 Hours.

Political-economic, social and ideological developments in Egypt, Arabia, and Fertile Crescent (including Israel), Iran and Turkey since 1918 to the present, including U.S. involvement.

HIST 339 The Early Russian Empire credit: 3 Hours.

Introduction to one of the most transformative events in early modern world history: the creation of the Russian Empire. We will study how Moscow, a modest medieval kingdom, suddenly expanded into the world's largest state, fated to play an outsized role in world politics and culture. Chronologically, the course extends from 1500-1750, and considers topics ranging from religion and rebellion to material culture and everyday life.

HIST 342 Cultural Hist of Technoscience credit: 3 Hours.

Addresses the myriad ways American culture interacts with scientific and technological artifacts, practices, and knowledge. Some of the issues addressed are: how science and technology are deployed and used for cultural ends; how cultural beliefs and ideologies are "built" into science and technology; how the interaction of cultural experience, science, and technology shapes the built environment; how science and technology privilege certain cultural communities in America. Course requirements include participation, leadership in class discussions, as well as a research project.

HIST 343 Technology & Sport credit: 3 Hours.

Traditionally sport has been a competition between humans or humans and nature. Recent technological developments have altered this arrangement. Now technology is a continuative component of sport and has changed modes of play. Examines the history of the evolving relationships between contemporary sport, emerging technology, and cultural experience. The fundamental question this course will address is: how has technology, in its multiple forms, reshaped sport? Same as RST 357.

HIST 345 Medieval Civilization credit: 3 Hours.

The architectural, artistic, philosophical, political, and religious components of medieval culture, thought, and patterns of behavior; includes monasticism and society and the individual. Same as MDVL 345 and REL 345.

HIST 346 The Age of the Renaissance credit: 3 Hours.

An introduction to the cultural history of Europe in the fifteenth and sixteenth centuries, embracing the Renaissance movements in Italy and in Northern Europe. Same as MDVL 346 and REL 346.

HIST 347 Protestant & Catholic Refs credit: 3 Hours.

New sources of secular power and spiritual authority define the age of the Protestant and Catholic Reformations. In this advanced European history course students expand their knowledge of the people, events, and ideas of the fifteenth and sixteenth centuries while deepening their understanding of a wide range of primary sources created by theologians and peasants, nuns and monarchs, and artists and rebels. Key works by Luther, Calvin, and Loyola are placed in their intellectual and social contexts. Same as REL 347.

HIST 348 Early Euro Absolut & Expansion credit: 3 Hours.

In the seventeenth and eighteenth centuries Europeans transformed political relations within Europe and their economic relationships with the wider world. This course examines continuities and change from 1600 to 1789, following the themes of authority and power. Topics include the rise of "absolute monarchy" and its alternatives in countries like, England and the Netherlands, as well as European trade and consumption, popular culture, the family, food, clothing, sexuality, and labor.

HIST 349 Age of Revolution, 1775-1815 credit: 3 Hours.

Comparative survey of domestic upheavals in the North Atlantic world: America, Haiti, England, Prussia, and France; the rise of Napoleon and the response of Europe; and the fate of innovation and reform in the immediate aftermath.

HIST 350 19thC Romanticism & Politics credit: 3 Hours.

Among the topics of this course will be Romanticism, which is still the basic form of modern culture today, with its emphasis on feeling, imagination, and self-expression; the nation-state, a new form of political organization; and the creation of a globalized world for the first time in human history.

HIST 352 Europe in the World credit: 3 Hours.

Colonial encounters between Europe and today's Third World viewed in comparative historical perspective. Equal emphasis placed on (colonizing) Europe and colonial experience of Asia, Africa, and South America.

HIST 353 European History 1918 to 1939 credit: 3 Hours.

Survey of European society from 1918 to 1939, with emphasis on the impact of World War I, the Russian Revolution, fascism, and the intellectual trends of the twenties and thirties.

HIST 354 Twentieth Century Europe credit: 3 Hours.

Cultural history of Europe in an age of global warfare and political, social, and economic upheaval.

HIST 355 Soviet Jewish History credit: 3 Hours.

An examination of how Jewish life and culture contributed to the creation of the world's first socialist society. Makes use of primary sources, scholarly essays and monographs, archival documents, literature, memoirs, film, and visual culture as a way of introducing students to Soviet Jewish History, from the reign of the last tsar, Nicholas II, to the dissolution of the Soviet Union in 1991. Special topics to be examined include: the breakup of the Pale of Settlement during the Great War; the role of Jews in revolution and revolutionary culture; Soviet nationality policy; shtetl culture; antisemitism; everyday life; the purges of the 1930s; the Jewish experience in World War II; the Holocaust; and mass emigration.

HIST 357 Modern France credit: 3 Hours.

The development of modern France, with special attention to social and cultural phenomena.

HIST 360 European Culture in a Global Context credit: 3 Hours.

Railways, steamships, telegraph, quinine, machine guns: these were some of the European innovations that created a unified world between 1850 and 1914. The transforming force of new technologies, global commerce and Western imperialism also had a profound impact on the arts. We will study this globalization of culture in world spectacles, the visual arts, music, and literature.

HIST 361 Euro Thght & Soc Since 1789 credit: 3 Hours.

Examines the reciprocal relationship between thought and society in western Europe from the French Revolution to the present.

HIST 362 Spain and Portugal to 1808 credit: 3 Hours.

Introduction to the history of the Iberian peninsula to 1808. After a brief overview of Roman and Visigoth Iberia, the course will study the cultural, technological, and intellectual accomplishments of Moorish Iberia and the imperial expansion of Christian Spain and Portugal in the early modern period.

HIST 365 Fict & Historical Imagination credit: 3 Hours.

Explores the relationship between history and fiction by focusing on specific cultural locations.

HIST 367 History of Western Medicine credit: 3 Hours.

Rise and development of medicine in the West since the sixteenth century; interrelations of physiology, pathology, and social demands with the theory and practice of medicine; pattern of professionalization; social role of the physician; conflict among ideas of medicine as an art, a science, and a social service; and problems of mental illness, medical ethics, and nontraditional forms of practice.

HIST 369 Spain and Portugal from 1808 credit: 3 Hours.

A modern history of Spain and Portugal.

HIST 370 Colonial America credit: 3 Hours.

An interpretive survey of American colonial history from 1492 through 1763. Themes include encounters between Natives and Europeans in the New World, contests for colonization, settler societies and the development of various colonial social patterns in North America and the Caribbean, the beginnings of slavery, and the gradual emergence of distinctive provincial cultures in the North American colonies of the British Empire. Throughout all of this, there is an examination of colonial American history as part of the larger Atlantic World, understanding early American history as a process of exchange and interaction which included Europe, Africa, the Caribbean, and North America.

HIST 371 The American Revolution credit: 3 Hours.

Examines the momentous founding age of United States history. Explores the growing estrangement of the American colonies from Great Britain and the culmination of this process in the Declaration of Independence. It then examines the controversial process of creating a new nation, and the government of the United States. Intense focus on primary source materials from the period.

HIST 372 America's Republic, 1780-1880 credit: 3 Hours.

A study of political life in the U.S. during the century following the Revolution. The course covers the appearance and evolution of republican government, the Constitution, the expansion of voting rights, the rise and fall of political parties, and the relationship of all these things to the development of economic and social relationships.

HIST 373 Origins of the Civil War credit: 3 Hours.

Examination of changes in economic, social, cultural, and political life in the United State that ultimately plunged the national into the bloodiest and most important war in its history. Particular attention is paid to the way in which diverse segments of the country's population - North and South, urban and rural, rich and poor, slave and free, black and white, male and female - affected and were affected by these changes.

HIST 374 Civil War and Reconstruction credit: 3 Hours.

The United States' civil war (1861-1865) and the years of postwar "reconstruction" (conventionally dated as 1865-1877). During this period as a whole, the nation underwent its second revolution -- a revolution more radical in its impact than the one that freed it from the British Empire. Much about U.S. history for the next century and more was decided during these critical years.

HIST 375 Soc History Indus Am to 1918 credit: 3 Hours.

The impact of industrialization, immigration, and urbanization on American society to the end of World War I.

HIST 376 Soc History Indus Am from 1918 credit: 3 Hours.

Study of the impact of industrial technology, business enterprise, immigration, and urbanization on American society.

HIST 377 United States since 1932 credit: 3 Hours.

Discusses the New Deal, the Cold War, Franklin D. Roosevelt and subsequent presidents, the structure of American imperialism, and America's role in world politics.

HIST 379 Latina/os and the City credit: 3 Hours.

Same as LLS 379. See LLS 379.

HIST 380 US in an Age of Empire credit: 3 Hours.

Study of the imperial dimensions of U.S. history from about 1877 to 1920. This was an era marked by an imperial world system, unprecedented levels of international trade and investments, massive labor migrations, significant missionary endeavors, and consolidation of U.S. power over Native Americans, and growing U.S. political and military assertion in the international arena. Considers how the United States and its peoples positioned themselves in an international context by investigating not only government policies but also commercial endeavors and cultural practices.

HIST 381 Urban History credit: 3 Hours.

Examines the history of urban centers, paying special attention to the relationship between the city and its surrounding territory, the impact of migration and immigration, the delineation of space and the transformation of the built environment, and the role of a city's inhabitants in creating social networks, political structures, and cultural institutions. May be repeated in separate terms to a maximum of 6 hours if topics vary.

HIST 382 Race and Migration in Chicago credit: 3 Hours.

Same as LLS 382. See LLS 382.

HIST 383 Hist of Blk Women's Activism credit: 3 Hours.

Same as AFRO 383 and GWS 383. See AFRO 383.

HIST 384 Class Politics & Blk Community credit: 3 Hours.

Same as AFRO 372. See AFRO 372.

This course satisfies the General Education Criteria for: Advanced Composition

HIST 385 Transnational Sexualities credit: 3 Hours.

Same as GWS 385. See GWS 385.

HIST 386 Public History credit: 3 Hours.

An examination of major genres historians have employed to present history in the public arena, including documentary films, public memorials, legal testimony and museum exhibits. Students will explore both the social dynamics of public commemoration and the techniques historians employ when communicating complex ideas and events to a general audience.

HIST 387 History of Sexuality in U.S. credit: 3 Hours.

Same as GWS 387. See GWS 387.

HIST 389 Race and Revolutions credit: 3 Hours.

Same as AFRO 378. See AFRO 378.

HIST 390 Sport and Society credit: 3 Hours.

In various societies, organized sport has operated as site of nation-building, the struggle for inclusion, and indicator of societal advancement. Examines the history of the roles that sport has played in society through a series of topical foci, as selected by the professor each semester. Course readings revisit popular and scholarly debates about sport and discuss the different actors and social forces that shaped those discussions. Same as KIN 345. May be repeated in separate terms to a maximum of 6 hours if topics vary.

HIST 391 Oral History Methods credit: 3 Hours.

Introduces students to the ethical discourses and practical methods in oral history. Its primary purpose is to prepare students with oral and archival research skills that are crucial for the examination of the history and memory of communities. Among the questions that the class will consider are: what is the connection between the historical record and the remembered past? How reliable are these memories and does reliability matter? How do people mobilize and manipulate accounts of the past for purposes of community building, historic preservation, and political development? Same as LLS 391.

HIST 392 The 1960s in the U.S. credit: 3 Hours.

A study of the history of the 1960s, a tumultuous decade in the social and political history of the United States. The class has two main goals: 1) Provide a solid knowledge of the history of this period and its social and economic developments. 2) Develop skills as an analytic reader and writer in U.S. history.

HIST 393 The World of Jewish Sepharad credit: 3 Hours.

Same as ANTH 393 and REL 393. See ANTH 393.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

HIST 395 Topics in Law and Society credit: 3 Hours.

Topics and problems in the history of laws, legal institutions, jurisprudence, concepts of justice, and their role(s) in shaping societies over time. Specific readings and foci will vary. May be repeated in the same or separate terms for a maximum of 6 hours if topics vary.

HIST 396 Special Topics credit: 3 Hours.

Topics are given on an experimental one-time-only basis. May be repeated if topics vary.

HIST 397 Sexuality in Modern Europe credit: 3 Hours.

What is sexuality? How is it practiced, policed, represented, liberated and controlled? How do religion, the state, the law and the media influence sexual identities and practices? Focusing on modern Europe, we will examine the history of sexuality from the late eighteenth century to the present in order to explore how historians have answered these questions. We will investigate topics from pornography, prostitution, sex and totalitarianism, queer sexualities, sex and colonialism, and masturbation, to sex education, sexual revolutions, hermaphroditism, sex surveys and AIDS. Same as GWS 397.

HIST 398 Internship in Public History credit: 1 to 3 Hours.

With a faculty sponsor, a qualified student will develop a program of study or research related to an internship or other relevant employment opportunity. Consult departmental undergraduate advisor or Director of Undergraduate Studies. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of faculty sponsor and Director of Undergraduate Studies required.

HIST 399 Independent Study credit: 1 to 3 Hours.

Readings in selected fields in consultation with the instructor resulting in a 20-30 page paper. May be repeated with permission of the Director of Undergraduate Studies. Prerequisite: Junior or senior standing pursuing a History major; written consent of instructor and History undergraduate advisor required.

HIST 400 War, Soc, Politics, & Culture credit: 2 to 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. 3 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours in the same or subsequent terms if topics vary.

HIST 401 History of Terrorism credit: 3 or 4 Hours.

Historical examination of strategies of terror, their relationship to conventional warfare, and their political, social, cultural, and religious contexts. 3 undergraduate hours. 4 graduate hours.

HIST 405 History of Brazil from 1808 credit: 2 to 4 Hours.

Problems of a neocolonial society; themes include family structure, slavery, imperialism, modernization, and the crisis of traditional institutions. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 406 History of Mexico from 1519 credit: 2 to 4 Hours.

Development of Mexico from the conquest to the postrevolutionary present. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 407 Slavery & Race in Latin Am credit: 2 to 4 Hours.

Selected topics on Indians and Spaniards, whites and blacks, emphasizing Mexico, the Caribbean, and Brazil. Same as AFRO 407. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 410 Decolonization in Africa credit: 3 or 4 Hours.

Almost all African countries fell under European colonial rule by the beginning of the 20th century, but formal colonialism did not last the century. Surveys the crucial ideological, political, social, and military strategies enlisted by African people and movements to shed colonial rule. Also examines the paradox of the coupling of "flag independence" with continuing economic dependence on Europe. 3 undergraduate hours. 4 graduate hours.

HIST 411 20thC Africa Intellectual Hist credit: 2 to 4 Hours.

The development of influential political and cultural ideas on the African continent over the course of the long 20th century, highlighting the interactions of individuals (as members of educated elites and of rural societies) and institutions (such as universities) in developing trademark African intellectualism. These concepts include: Pan-Africanism, the need for political independence, Negritude, feminism/womanism, calls for the promotion of indigenous languages and ubuntu; as well as the contested justifications for one-party rule. Students will gain an appreciation of the breadth, depth and creativity of African thought and activism. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 412 Southern Africa Race & Power credit: 3 or 4 Hours.

Interdisciplinary survey of both the internal and international dimensions of the changing situation in Africa south of the Zambezi; focuses on the historical background - and a political, economic, and social analysis of - current events in the Republic of South Africa, Mozambique, Namibia, and Zimbabwe, emphasizing the central significance of race and power in this region. Same as AFST 425. 3 undergraduate hours. 4 graduate hours.

HIST 420 China Under the Qing Dynasty credit: 2 to 4 Hours.

The period of Manchu domination in China (1644-1912); emphasis on Chinese reactions to Western influences during the nineteenth century. Same as EALC 420. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 422 Soc-Econ Hist Modern China credit: 2 to 4 Hours.

Disintegration of traditional social and economic systems during the nineteenth and twentieth centuries, and the political effects of that disintegration; examines changes in the agricultural economy, changing rural elites, urbanization, and emergence of new social classes. It is recommended that students take HIST 420 before registration in HIST 422. Same as EALC 421. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 425 Classical Chinese Thought credit: 3 or 4 Hours.

Same as CWL 478 and EALC 476. See EALC 476.

HIST 426 Early Modern Japan credit: 3 or 4 Hours.

Study of the people, culture, and society from 1600 to 1868. Traces the rise of Japan's first truly national culture. Same as EALC 426. 3 undergraduate hours. 4 graduate hours.

HIST 427 Twentieth-Century Japan credit: 3 or 4 Hours.

Study of the people, culture, and society of Japan from 1868 to the present. Traces Japan's transformation from an insular bastion of "centralized feudalism" into a cross-cultural crucible of post-industrial democracy. Same as EALC 427. 3 undergraduate hours. 4 graduate hours.

HIST 430 India from Colony to Nation credit: 2 to 4 Hours.

Mughal Empire and British Raj, Indian national awakening, and struggle for independence under Gandhi and Nehru. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 432 History of Early Judaism credit: 3 Hours.

Same as JS 442 and REL 442. See REL 442.

HIST 433 History of Jews in Diaspora credit: 3 or 4 Hours.

Deals with the history of the Jewish people from the destruction of the Jewish state by Rome to the reestablishment of a Jewish state in 1948. The emphasis is on the interaction between the Jewish and non-Jewish worlds as well as changes internal to the Jewish communities. Same as REL 434. 3 undergraduate hours. 4 graduate hours.

HIST 434 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLBL 403, GWS 403, REL 403, and SAME 403. See REL 403.

HIST 436 Jewish Life-Writing credit: 3 or 4 Hours.

Same as CWL 421, REL 420, SLAV 420, and YDSH 420. See YDSH 420.

HIST 438 Egypt Since World War I credit: 2 to 4 Hours.

Examines the twentieth-century history of Egypt, emphasizing the internal social, political, economic, and ideological developments, with attention to Egypt's role in regional and international politics. Readings include novels and short stories to introduce students to modern Egyptian culture. Same as AFST 437. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 439 The Ottoman Empire credit: 2 to 4 Hours.

Economy, society, law, and government; the Ottomans and Mediterranean society; Ottoman culture and Islamic tradition; minorities; trade, diplomacy, and capitulations; "decline" and dismemberment; and traditional and westernizing attempts at revival. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 440 Roman Republic to 44 B C credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of Rome from 753 BCE until 14 CE. Same as CLCV 440. 3 undergraduate hours. 4 graduate hours.

HIST 441 The Roman Empire credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of the Roman Empire from the reign of Augustus (27 BCE - 14 CE) through the fall of the Western Roman Empire ca. 480 CE. 3 undergraduate hours. 4 graduate hours.

HIST 442 Roman Law and Legal Trad credit: 3 or 4 Hours.

Examines Roman law and legal tradition in the context of historical, political, and social developments; origins of law in primitive and ancient classical societies; surveys development of precedent, codification, and preservation of Roman law, and the impact of Roman law on western legal traditions. 3 undergraduate hours. 4 graduate hours.

HIST 443 Byzantine Empire AD 284-717 credit: 3 or 4 Hours.

Examination of the political, social, economic, military, institutional, religious and cultural development of the early Byzantine Empire from the reign of Diocletian (AD 284-305) through the Heraclian Dynasty (AD 610-717). Same as MDVL 443. 3 undergraduate hours. 4 graduate hours.

HIST 444 European Education to 1600 credit: 2 to 4 Hours.

Same as EPS 403 and MDVL 403. See EPS 403.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

HIST 445 Medieval England credit: 2 to 4 Hours.

Key sources and topics of English history, from the end of Roman rule in Britain (c. 410) to the fifteenth century. Recurrent themes include the development of law, the role of women, the status of commoners, intellectual trends, and the importance of public media for the dissemination of ideas (writing, performance). Same as MDVL 444. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 446 Early Modern British Isles credit: 2 to 4 Hours.

Social, economic, cultural and political history of the "four Kingdoms" of England, Scotland, Wales, and Ireland between 1450 and 1800. Covers the Tudor and Stuart dynasties, Shakespeare, the English Civil War, the development of British colonial holdings across the globe, and the effects of empire at home. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 448 Modern Britain credit: 2 to 4 Hours.

History of modern Britain's social, economic, cultural and political life with a special emphasis on the role of empire in shaping its career as a global power and its "domestic" national culture at home. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 449 British Imperialism credit: 2 to 4 Hours.

Thematic approach to Britain's role as an imperial power, its impact on global issues and affairs, and the effect of colonies and colonial peoples on the history of its development as a Western "nation". 3 undergraduate hours. 2 or 4 graduate hours.

HIST 450 European Working Class History credit: 2 to 4 Hours.

Comparative study of the rise of the working class in European countries; formation, culture, and daily life; stratification within the working class; workers in organized labor and revolutionary movements. Same as LER 450 and SOC 422. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 456 Twentieth-Century Germany credit: 3 or 4 Hours.

Political upheavals of twentieth-century Germany; topics include the First World War's impact on German society, the war's revolutionary aftermath, the political struggles and cultural achievements of the Weimar Republic, the rise of Hitler, the Third Reich, the Holocaust, the Second World War, and the divided postwar Germanies; novels and films complement readings. 3 undergraduate hours. 4 graduate hours.

HIST 457 European Education since 1600 credit: 2 to 4 Hours.

Same as EPS 404. See EPS 404.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

HIST 458 Christians and Jews 1099-1789 credit: 3 or 4 Hours.

Same as REL 458. See REL 458.

HIST 459 Postcolonial/Queer credit: 3 or 4 Hours.

Same as GWS 459. See GWS 459.

HIST 461 Russia- Peter the Great to Rev credit: 2 to 4 Hours.

Culture, society, and politics in Imperial Russia, focusing on power and resistance, the lives and culture of ordinary Russians, and competing ideas about the state, the individual, community, nation, religion, and morality. 3 undergraduate hours. 2 or 4 graduate hours. For higher credit, graduate students will be required to do more reading and to write an additional paper.

HIST 462 Soviet Union Since 1917 credit: 2 to 4 Hours.

Political, social, and economic development of the USSR since the 1917 revolutions that brought the Bolsheviks to power; social change and social engineering; political struggles among Stalin and his rivals; the "Stalin revolution" from above and economic modernization; the USSR's emergence through World War II and the Cold War as a world power; "developed socialist" society. 3 undergraduate hours. 2 or 4 graduate hours. Graduate students will write an additional substantial paper and engage in special discussion sections.

HIST 463 The Modern Balkans through Literature and Film credit: 3 or 4 Hours.

History of the creation and development of the independent Balkan states during the 19th and 20th centuries. Special attention is given to Balkan nationalism, its roots, evolution and various manifestations. Other topics cover the modernization of the rural societies, ethnic conflict and/or accommodation, inter-Balkan relations, and the role of the great powers. Finally, a close look will be taken on contemporary developments in the Balkans, especially the Yugoslav crisis, the fall of communism and post-communist development. By discussing fictional work and films by Balkan authors, students will be introduced to the intellectual production of the region. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior or Senior standing, or consent of instructor.

HIST 466 The Balkans credit: 3 or 4 Hours.

The political, economic, and cultural history of this region's peoples, including the Rumanians, South Slavs, Greeks, and Albanians; the impact of Ottoman rule; the rise of nationalism and the formation of national states; and the Orthodox Church. 3 undergraduate hours. 4 graduate hours.

HIST 467 Eastern Europe credit: 3 or 4 Hours.

The political, economic, and cultural history of Poland, Czechoslovakia, Hungary, Rumania, Yugoslavia, Bulgaria, Greece, and Albania; particular emphasis upon the post-World War II era. 3 undergraduate hours. 4 graduate hours.

HIST 468 Locating Queer Culture credit: 3 Hours.

Same as GWS 467. See GWS 467.

HIST 470 Plantation Soc in Americas credit: 3 or 4 Hours.

Same as AFRO 453. See AFRO 453.

HIST 472 Immigrant America credit: 3 or 4 Hours.

History of immigration and immigrant groups in the United States from 1830 to 1980. Covers major waves of immigration and focuses on the diverse cultural heritage, social structure, and political activism of immigrants from Europe, the Americas, and Asia. 3 undergraduate hours. 4 graduate hours.

HIST 473 Crises of Political Tolerance credit: 2 to 4 Hours.

Investigates the character of American political tolerance and freedom in times of crisis, through a series of case studies: images of the American "enemy"; the Red Scare after World War I; the internment of Japanese-Americans in World War II; McCarthyism; and the resentments generated by protest movements in the late 1960's. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 475 Formation of US Public Health credit: 3 or 4 Hours.

Introduction to the history of American public health and health policy. Emergence of modern public-health institutions in America; relation of public health to conceptions of disease, social order, and the role of government; emergence and development of public policy issues in public health and medical care, of the environment for the formulation of policy, and the relation of policy to broader issues of social development, incidence of disease, and assumptions about the proper distribution of public and private responsibility. 3 undergraduate hours. 4 graduate hours.

HIST 476 History of the American West credit: 3 or 4 Hours.

Examines the changing image of the American West by focusing on the process of conquest and resistance present within the region's history. Same as LLS 475. 3 undergraduate hours. 4 graduate hours.

HIST 478 Black Freed Move, 1955-Present credit: 3 or 4 Hours.

Same as AFRO 474. See AFRO 474.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 479 19thC US Intel & Cultr Hist credit: 2 to 4 Hours.

Examines diverse strains of cultural and intellectual life in the US from the early Republic through the 1890s. Emphasizes popular culture, religious revivalism, educational institutions, reform movements, art, science, and literature and the roles of cultural elites, women, working-classes, African Americans, Native Americans and immigrants in shaping national, regional and local cultures. Same as REL 478. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 480 US Work Class Hist Since 1780 credit: 2 to 4 Hours.

Focuses on working class formation, culture, ideas, and organization; examines daily experience of work and community life; special emphasis on race, ethnicity, and gender in the process of class formation; labor relations and the changing patterns of working class protest and accommodation. Same as LER 480. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 481 20th Century US Culture Wars credit: 2 to 4 Hours.

What ideas does "American Culture" include? How does it incorporate diverse religious traditions as well as new scientific perspectives? How are ethnicity, gender and race important? Topics of current "cultural wars", these and other questions about cultural conflict in the US have been hotly debated for over a century. This course explores such culture wars in the 20th century US and helps students evaluate contested cultural concepts they have produced, including pragmatism, pluralism, religious diversity, scientific objectivity, economic equality, as well as "popular," "high" and "democratic" culture. Same as REL 479. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 482 Slavery in the United States credit: 3 or 4 Hours.

Same as AFRO 460. See AFRO 460.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 483 Race, Science, and Medicine credit: 3 or 4 Hours.

Same as AFRO 466. See AFRO 466.

HIST 486 Revivalism and Evangelicalism credit: 3 or 4 Hours.

Same as REL 435. See REL 435.

HIST 487 Great Books in History credit: 3 or 4 Hours.

An approach to History through a selection of prize-winning, influential, and lasting books, the point being to consider the role of the book in History and its relation to other forms of historical interpretation, including essays, web sites, films, lectures, and exhibits. It will hone students' composition abilities through careful attention to writing, craft, and genre. Each iteration of this course will focus on a particular theme. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary to a maximum of 6 undergraduate hours or 8 graduate hours.

HIST 490 Honors Independent Study credit: 3 Hours.

Independent reading, research, and writing under the supervision of an individual instructor. Seniors in the History Honors Program taking this course in place of the Honors Senior Thesis must complete a substantive research paper (25-30 pages). No graduate credit. May be repeated to a maximum of 6 hours. Each 3-hour class must be taken with a different instructor. Prerequisite: Admission to the History Honors Program; or junior or senior of high standing with the consent of the Director of Undergraduate Studies.

HIST 491 Directed Research in Digital History credit: 1 to 4 Hours.

Advanced projects in Digital History undertaken with a faculty supervisor. 1 to 3 undergraduate hours. 1 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: Consent of sponsoring faculty supervisor and Director of Undergraduate Studies or Director of Graduate Studies required for all students.

HIST 492 Historiography and Methodology credit: 3 Hours.

A seminar for all students in the History Honors Program, to be taken no later than the spring of the Junior year. Students will study the development of the historian's craft and will be exposed to new research methods and techniques. The course will culminate in the preparation of a research proposal for the Honors Senior Thesis, developed in consultation with an individual faculty advisor. The instructor of HIST 492 and the Director of Undergraduate Studies will assist students in the selection of an appropriate mentor. Even those students who may not be planning to write the Honors Senior Thesis must enroll in this course and prepare a research proposal. 3 undergraduate hours. No graduate credit. Prerequisite: Admission to the History Honors Program or consent of the Director of Undergraduate Studies.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 493 Honors Senior Thesis credit: 3 Hours.

Two-term independent research and writing project under the supervision of a faculty advisor. Students enrolled in this course must submit a completed Honors Senior Thesis at the end of the second term, for evaluation by the faculty advisor and a second reader. 3 undergraduate hours. No graduate credit. Must be repeated for a total of 6 hours. Students will receive separate grades for each semester's work. Prerequisite: Admission to the History Honors Program and consent of supervising professor; HIST 492 and HIST 495; concurrent enrollment in HIST 499 is required.

HIST 495 Honors Research & Writing Sem credit: 3 Hours.

A topic-specific course required of all students in the History Honors Program, and meeting with HIST 498. Each student's work will be evaluated and graded by the instructor of the HIST 498. In addition, students will complete a self-assessment exercise supervised by the Director of Undergraduate Studies. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: HIST 200 and admission to the History Honors Program.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 497 History of Historiography credit: 2 to 4 Hours.

An exploration of the different approaches to the conceptualization and narration of history in various times and places, with special emphasis on the social, cultural, and political role(s) of the historian. 3 undergraduate hours. 2 or 4 graduate hours.

HIST 498 Research and Writing Seminar credit: 3 Hours.

Capstone course required of all majors. Students will make history by researching and writing a work of original scholarship. Several of these seminars are offered each term and each focuses on a special topic, thus allowing students with similar interests to work through the process of gathering, interpreting, and organizing historical evidence under the direction of an expert in the field. The topics on offer each semester will be listed in the Class Schedule and described in the department's course guide at <http://www.history.illinois.edu>. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours.

This course satisfies the General Education Criteria for:

Advanced Composition

HIST 499 Thesis Seminar credit: 1 to 2 Hours.

A required seminar for all seniors writing Honor Theses in history, this course will meet throughout the year and will supplement individual students' meetings with their primary advisors. Provides an intellectually supportive environment in which students work together on common methodological problems, share the results of their research, and critique developing projects. 1 to 2 undergraduate hours. 1 to 2 graduate hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 3 hours. Prerequisite: Admission to the History Honors Program; HIST 492; and HIST 495. Concurrent enrollment in HIST 493 is required.

HIST 502 Prob in Comparative History credit: 4 Hours.

Intensive comparative examinations of particular issues in the histories of multiple countries, cultures or periods; emphasizes methodology, the discipline of comparative history, and the nature of historiography in a cross-cultural and interdisciplinary context. May be repeated to a maximum of 12 hours.

HIST 503 Prob in Comp Women's Hist credit: 4 Hours.

Examines major works in global women's history from about 1700 to 1950. Introduces students to major themes in women's history as well as major historiographical debates. Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as GWS 501. May be repeated to a maximum of 12 hours if topics vary.

HIST 504 Seminar in History of Science credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 505 Seminar in History of Medicine credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 507 Prob in Latin American Hist credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 508 Seminar in Latin American Hist credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 510 Problems in African History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as AFST 510. May be repeated to a maximum of 12 hours if topics vary.

HIST 511 Seminar in African History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as AFST 511. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: One upper-level African history course.

HIST 519 Colonialism & Postcolonialism credit: 4 Hours.

Same as ANTH 504. See ANTH 504.

HIST 520 Problems in Chinese History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as EALC 520. May be repeated to a maximum of 12 hours if topics vary.

HIST 521 Seminar in Chinese History credit: 4 Hours.

Research seminar in Chinese history designed to provide training to graduate students in research skills with an emphasis on the use of source materials in Chinese language. Same as EALC 522. May be repeated to a maximum of 8 graduate hours. Prerequisite: Proficiency in written Classical or Modern Chinese, EALC 500 for EALC graduate students, and HIST 520 for History graduate students, or the consent of instructor.

HIST 526 Problems in Japanese History credit: 4 Hours.

Period covered will alternate between the Early Modern (1550 - 1850) and Modern (1850 - present) eras. Same as EALC 526. May be repeated to a maximum of 8 hours.

HIST 527 Seminar in Japanese History credit: 4 Hours.

Period covered will alternate between the Early Modern (1550 - 1850) and Modern (1850 - present) eras. Same as EALC 527. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Graduate standing in HIST, EALC, or other related discipline and reading knowledge of Japanese, or consent of instructor.

HIST 535 Prob Middle Eastern History credit: 4 Hours.

Covers, in depth, major problems of specific periods and areas and the relevant literature of Near and Middle Eastern History, which will vary from term to term. May be repeated to a maximum of 8 hours if topics vary.

HIST 536 Seminar in Middle Eastern Hist credit: 4 Hours.

Investigates research topics in Near and Middle Eastern history in accordance with students' needs. Topics may vary from term to term. Students will prepare oral and written reports. May be repeated to a maximum of 8 hours.

HIST 542 Problems in Medieval History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as MDVL 542. May be repeated to a maximum of 12 hours if topics vary.

HIST 543 Seminar in Medieval History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. Same as MDVL 543. May be repeated to a maximum of 12 hours if topics vary.

HIST 545 Seminar in Early Modern Europe credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 546 Prob English Hist Since 1688 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 549 Sem Eng & Brit Emp Since 1688 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 550 Prob Early Mod European Hist credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 551 Prob European Hist Since 1789 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated in the same or subsequent terms as topics vary.

HIST 552 European Seminar Since 1789 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 560 Problems in Russian History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 561 Seminar in Russian History credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 570 Prob in American Hist to 1830 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 571 Seminar in Amer Hist to 1789 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 572 Prob in US Hist Since 1815 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated in the same or subsequent terms as topics vary.

HIST 573 Seminar Amer Hist Since 1789 credit: 4 Hours.

Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 574 Historiography of Religion in America credit: 4 Hours.

Same as REL 535. See REL 535.

HIST 575 Problems African American Hist credit: 4 Hours.

Covers in depth, major problems in the African American experience and in the historiography of that experience, including historical periods, themes and paradigms. Same as AFRO 501. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours.

HIST 591 History and Social Theory credit: 4 Hours.

Introduces recent historical work drawing upon theories and concepts from the social sciences; considers fields of inquiry which include family history, demographic history, labor history, prosopographical and entrepreneurial studies, local and regional studies, and others.

HIST 593 Approaches to History credit: 4 Hours.

Required course for entering history graduate students offering in initial foray into historiography, methods, and conceptual approaches for students in all fields. Provides experience dealing with three challenges that face all practitioners of the discipline: identifying the historical problem to be tackled, deciding what methodologies are best suited to that problem, and locating and then making use of the primary sources necessary for analyzing the subject at hand. Assigned materials, class discussions, and assignments will prepare students for the second semester required research seminar. Restricted to first-year graduate students in history.

HIST 594 Intro Historical Writing credit: 4 Hours.

Seminar for first-year graduate students and is the second half of the introductory graduate sequence. Focuses on the process of writing an original piece of historical scholarship. Topics to be discussed include: developing an argument, exploring sources, arriving at a research strategy, planning and structuring an article, presenting complex data, and producing scholarship that is a coherent representation of an author's perspective on the past. Over the course of the semester, each seminar participant will develop and write an original, article length research paper. Students will work with the assistance of the instructors and an advisor from her or his own research field. Prerequisite: HIST 593.

HIST 596 Individual Research Project credit: 4 Hours.

Directed research in special fields; may be taken in lieu of seminars in fields in which seminars are seldom offered. Topics will be listed in the department's course guide at <http://www.history.illinois.edu>. May be repeated to a maximum of 12 hours if topics vary.

HIST 597 Reading Course credit: 0 to 4 Hours.

Directed readings in special fields. Primarily, but not exclusively, for students with a master's degree or equivalent, who are preparing for the preliminary examination in history and who need instruction in areas not provided by current course offerings. Approved for letter and S/U grading. May be repeated in the same or subsequent terms as topics vary. Prerequisite: Consent of instructor.

HIST 598 Teaching of College History credit: 2 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Candidate for Ph.D. degree in history.

HIST 599 Thesis Research credit: 0 to 16 Hours.

Individual direction in research and guidance in writing theses for advanced degrees. Approved for S/U grading only. May be repeated.

Horticulture (HORT)

HORT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HORT>)

Courses

HORT 100 Introduction to Horticulture credit: 3 Hours.

Basic principles of plant growth and development as they apply to the production, marketing, and utilization of fruits, vegetables, and ornamental plants.

HORT 105 Vegetable Gardening credit: 3 Hours.

The science and art of growing vegetables and the connection between gardening and food. Topics include nutrient and pest management, history, folklore, growing requirements, and quality characteristics of vegetables. Lecture and laboratory. Additional fees may apply. See Class Schedule. Credit is not given to horticulture majors.

HORT 106 The Sustainable Home Garden credit: 3 Hours.

Create inviting and sustainable indoor and outdoor living spaces with plants, whether your landscape is several acres or a few containers on an urban balcony. This blended-format class meets 1 hour per week for lecture and discussion with additional instruction presented through independent learning activities including virtual field trips, on-line lectures, and instructional videos. Learn the fundamentals of environmentally sound resource use when designing with and maintaining flowering, fruit and vegetable plants, lawns, trees and shrubs around your home. Become a savvy horticultural consumer and develop a healthy lifestyle that supports positive physical and mental well-being by including greenspace activities in your daily life. Prerequisite: Not open to students in the Horticulture curriculum.

HORT 107 Introduction to Floral Design credit: 2 Hours.

Introduces the art of arranging flowers, foliages, and accessories according to the principles of design. Additional fees may apply. See Class Schedule.

HORT 180 Medicinal Plants and Herbology credit: 3 Hours.

The use of cultivated and wild plants in medicines and health products according to Eastern and Western medical traditions. Consideration of herbal medicine use from ancient times to the present, important medicinal chemicals produced by plants, and the evaluation of plant chemical products as potential human medicines. Same as CPSC 180.

HORT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in horticulture. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

HORT 205 Local Food Networks credit: 3 Hours.

Prepares students to be leaders and facilitators in local food networks. The focus is on providing the knowledge and skills to initiate and manage community food gardens, school gardens and curricula, institutional buying programs, farmers markets, community supported agriculture, and urban farm networks. Requires a group food network project and an experience with a local food organization. Prerequisite: An introductory course in HORT or CPSC or consent of instructor.

HORT 226 Introduction to Weed Science credit: 3 Hours.

Same as CPSC 226. See CPSC 226.

HORT 240 Plant Propagation credit: 3 Hours.

Examines theories and methods employed in propagation of plants, emphasizing anatomical, physiological, and ecological principles involved in sexual propagation (seeds) and asexual propagation (division, cuttings, budding, grafting, tissue culture, etc.) Prerequisite: IB 103.

HORT 246 Floral Design I credit: 3 Hours.

Applies principles of design to the composition and decorative use of flowers, foliages, and accessories. Additional fees may apply. See Class Schedule. Prerequisite: Enrollment in Horticulture, Human and Community Development, or Hospitality Management.

HORT 255 Multifunctional Landscapes credit: 3 Hours.

Introduction to research and technology in sustainable and multifunctional landscapes, within the context of plant science. Topics covered include: site inventory/analysis, plant biodiversity, stormwater management, green roofs, sustainable construction materials, and urban agriculture. This is a project-based course; students will develop sustainable solutions to landscape problems using multimedia applications, graphic design, written text, and video presentation.

HORT 261 Biotechnology in Agriculture credit: 3 Hours.

Same as CPSC 261. See CPSC 261.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

HORT 293 Professional Internship credit: 1 to 4 Hours.

Off-campus experience in a field directly pertaining to a subject matter in horticulture. Approved for S/U grading only. May be repeated to a maximum of 4 hours.

HORT 294 Resident Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for S/U grading only. May be repeated to a maximum of 4 hours. For registration in this course, students should contact the Department Teaching Coordinator.

HORT 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

HORT 298 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in horticulture. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing.

HORT 301 Woody Landscape Plants I credit: 4 Hours.

Systematic approach to the identification, ornamental characters, culture, and use of woody landscape deciduous trees and shrubs with special emphasis on cultivated varieties. Prerequisite: IB 103.

HORT 316 Landscaping with Native Plants credit: 4 Hours.

Herbaceous native plants suitable for home and commercial landscapes. Emphasis on native plant identification, landscape use, and culture. Prerequisite: HORT 100 or IB 103.

HORT 341 Greenhouse Mgmt and Production credit: 4 Hours.

The course focuses on how controlled environments can be managed to obtain optimal plant growth. Lectures cover greenhouse operations, management, and production, including: greenhouse design, location, glazing, heating, cooling, environmental control, irrigation systems, light control, root media, fertilization, watering, integrated pest management, and automation. The course also has a large laboratory component, in which students conduct experiments in the greenhouse. A required all-day field trip to nearby greenhouse operations rounds out the course experience. Additional fees may apply. See Class Schedule. Prerequisite: NRES 201 and HORT 100.

HORT 343 Herbaceous Plants I credit: 3 Hours.

Course includes identification, culture, and landscape use of herbaceous, frost-tender ornamental plants. Emphasis on flowering annuals, tropical foliage plants used for outdoor displays, and foliage plants used for interiorscaping. Elements of design will be addressed; design projects will integrate concepts. Prerequisite: IB 103.

HORT 344 Planting for Biodiversity and Aesthetics credit: 3 Hours.

As the demand for food increases, plants in ornamental landscapes will need to provide not only beauty but also species biodiversity critical for supporting sustainable food production. Course emphasizes species identification (predominantly herbaceous perennials), management, and planting design principles. Designing for multiple contexts, such as residential and community gardens, and large scale production sites, to provide multiple ecosystem services, especially supporting human aesthetic preferences, and habitat for pollinators. Prerequisite: IB 103.

HORT 355 Landscape Graphics & Design credit: 4 Hours.

Focuses on the development of graphic skills to represent the landscape, using both hand-drawn (pencil and color rendering) and introductory digital methods (e.g., AutoCAD and Photoshop). Students will learn basic principles for organizing space and designing for function, using plant materials that are appropriate for site conditions. A variety of drafting tools and access to specific design software programs are required. AutoCAD and Photoshop will be available for students to use in the classroom.

HORT 360 Vegetable Crop Production credit: 3 Hours.

Instruction on the commercial production of vegetable crops. The first part of the class focuses on broad issues important to all crops including methods of vegetable production, basic soil and nutritional management, irrigation, and weed, insect, and disease management. Both organic and conventional production are discussed with a focus on sustainability. Basic farm and business management topics, including postharvest handling, food safety, crop and farm budgets, business structures, marketing, insurance, and regulations are also discussed. The second part of the class focuses on specific crops, emphasizing their origin, production, growth and development, insects, and diseases as well as harvesting and postharvest handling. Prerequisite: HORT 100 or equivalent.

HORT 361 Small Fruit Production credit: 2 Hours.

Technological application of biological principles to the culture of strawberry, grape, blueberry, raspberry, blackberry, currant, gooseberry, and miscellaneous small fruits. Prerequisite: HORT 100 or IB 103.

HORT 362 Tree Fruit Production credit: 2 Hours.

Examines biological principles and cultural practices involved in the growth and production of apple, pear, peach, cherry, plum, apricot, almond, and miscellaneous citrus and nut crops. Offered every fall semester. Prerequisite: HORT 100 or IB 103.

HORT 363 Postharvest Handling Hort Crop credit: 2 Hours.

Provides theoretical and practical experience in the principles and practices of postharvest handling of cut flowers, ornamentals, fruits, and vegetables, emphasizing factors that impact quality, shelf-life, and safety. Requires two field trips, one to a local produce warehouse and the other to local supermarkets. Offered every fall semester. Prerequisite: HORT 100, CHEM 102, CHEM 103, IB 103.

HORT 396 Ug Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

HORT 421 Horticultural Physiology credit: 4 Hours.

Horticultural crop growth is examined in relation to plant structure, environment, and cultural practices. Emphasizes environmental control of whole plant growth as influenced by the supply of the raw materials required for growth: water, carbon dioxide, radiant energy, including the influence of temperature and photoperiod on plant growth and development. The shoot and root interactions with the environment are characterized relative to cultural practices. 4 undergraduate hours. 4 graduate hours. Prerequisite: HORT 100 or IB 103 and junior standing.

HORT 430 Children and Nature credit: 2 Hours.

Study of research theory and evidence suggesting the importance of children's contact with natural environments including, designed urban greenspaces, managed sustainable landscapes, and wilderness, for healthy child development, ecological literacy, and pro-environmental behavior as adults. Discussion of research implications and applications for redesigning our communities' outdoor spaces, societal values, public policies and education systems to foster children's access to, and bonding with, nature. Same as LA 430. 2 undergraduate hours. 2 graduate hours.

HORT 434 Designing Urban Agriculture credit: 2 Hours.

Emphasizes the design process and principles related to food production in urban environments. Lecture topics will include assessing, planning, and transforming the landscape at multiple scales from regional to neighborhood to specific site. In group discussions students will critically review readings from peer-reviewed and popular literature. Students will engage in analysis and design of an existing site to integrate multiple functions, emphasizing the permanent infrastructure and perennial vegetation. Access to a computer that can be loaded with appropriate software (Sketchup) is necessary for mapping and design projects. Online lecture/discussion course. 2 undergraduate hours. 2 graduate hours. HORT 100 or CPSC 112 or equivalent introductory course in plant science, one course in Humanities & the Arts, and one course in Social & Behavioral Sciences. Prerequisite: Junior standing required.

HORT 435 Urban Food Production credit: 3 Hours.

Explore opportunities and challenges for maximizing the productivity and sustainability of urban food production systems, considering agricultural, environmental, energy, social, and economic issues. Students will examine the science and practice of urban agriculture through scientific and popular literature, case studies, online discussion, and service-learning opportunities. Production systems covered will include both outdoor (e.g., vacant lot urban farms) and controlled environment (e.g., hydroponics and aquaponics) agriculture. 3 undergraduate hours. 3 graduate hours. Prerequisite: HORT 100 or CPSC 112 or equivalent introductory course in plant science.

HORT 441 Floral & Nursery Crops Productn credit: 4 Hours.

An intensive study of specific production technologies used to commercially grow landscape and floriculture crops. Emphasis will be on the growth and development of major floral and nursery crops as influenced by the environmental and cultural techniques. Field trip required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: HORT 240 and HORT 341.

HORT 442 Plant Nutrition credit: 4 Hours.

Mechanisms and factors affecting the absorption, transport, distribution, and functions of the essential elements required by higher plants. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: NRES 201 and IB 420.

HORT 447 Horticultural Plant Breeding credit: 3 Hours.

Methodology, objectives, and constraints of breeding for improved cultivars of flowers, woody ornamentals, turfgrasses, fruits, and vegetables. Emphasis on breeding objectives unique to horticultural commodities such as color, appearance, flavor, shelf-life, nutritional value, and other characteristics that determine product quality. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CPSC 352.

HORT 453 Principles of Plant Breeding credit: 4 Hours.

Same as CPSC 453. See CPSC 453.

HORT 456 Sustainable Landscape Design credit: 4 Hours.

This course will allow students from different disciplines to work together developing design alternatives for a multifunctional landscape. Students will learn to work at multiple scales, considering the surrounding context, the site itself, and detailed features within the large site. For some projects, students will work in teams, since most 'real-world' projects require participation among multiple experts. Instructor- and student-led discussions will focus on scientific and popular literature in horticulture, urban agriculture, ecological design, and landscape ecology, and students are encouraged to synthesize and translate the material into design solutions. 4 undergraduate hours. 4 graduate hours. Prerequisite: Introductory courses in Horticulture and Design.

HORT 464 International Hort Products credit: 3 Hours.

Survey of the international trade in and production of horticultural foods, beverages, herbs, spices, floricultural crops, interior plants, and landscape plants. Important export and import crops will be discussed. Legal and environmental issues are explored. Term project required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: CPSC 112, or HORT 100 or IB 103.

HORT 466 Growth and Dev of Hort Crops credit: 4 Hours.

Factors affecting growth, development, and quality of horticultural crops, such as photoperiodism, growth regulators, and carbon dioxide levels. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 104; HORT 421 or IB 420.

HORT 475 Permaculture & Agroforestry credit: 3 Hours.

Lecture/discussion course covering the scientific basis and design of permaculture (permanent agriculture) and temperate agroforestry systems. Lecture topics will include: permaculture principles, site assessment, soil remediation, water management, agroforestry case studies, urban food forests, and integration of livestock, among others. Education resources will be provided from peer-reviewed literature and popular sources. Students will work on projects to critically review the principles of permaculture and to design a multifunctional agroforestry system for a temperate site. 3 undergraduate hours. 3 graduate hours. Prerequisite: HORT 100 or CPSC 112 or equivalent introductory course in plant science and one course in ecology, environmental sciences, or natural resources. Junior standing required.

HORT 482 Plant Tissue Culture credit: 4 Hours.

Survey, description, and applications of cell and tissue culture strategies for plant research and production. Topics include culture environment, media composition, tissue manipulation, organogenesis, embryogenesis, somatic hybridization, bioreactors and use of these techniques for plant propagation and physiological and biochemical research. Independent research project is conducted by each student. Same as CPSC 482. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 232 and IB 103.

HORT 499 Special Topics credit: 1 to 4 Hours.

Experimental course on a special topic in Horticulture. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 hours as topics vary.

HORT 566 Plant Gene Regulation credit: 4 Hours.

Same as CPSC 566. See CPSC 566.

HORT 588 Plant Biochemistry credit: 4 Hours.

Same as CPSC 588 and IB 524. See CPSC 588.

HORT 598 Experimental Graduate Courses credit: 1 to 4 Hours.

Experimental course on a special topic in Horticulture. May be repeated in the same or separate terms to a maximum of 12 hours as topics vary.

Human Dev and Family Studies (HDFS)

HDFS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HDFS>)

Courses

HDFS 101 Issues & Careers in HDFS credit: 1 Hour.

Introduction to career opportunities related to human development and family studies, academic and other preparation for different fields, and emerging issues for practitioners and researchers.

HDFS 105 Intro to Human Development credit: 3 Hours.

Systematic overview of the psychological, biological, familial, and cultural factors related to human growth and development across the life span. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

HDFS 120 Intro to Family Studies credit: 3 Hours.

Overview of current concepts, theories, and substantive issues in family studies from an interdisciplinary perspective. Gives attention to variation in family form and function across different social/cultural contexts and how family experience is structured by gender. Examines issues of family development (marriage, parenting, divorce, remarriage, aging family) and explores the links between families and other social institutions. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

HDFS 140 Intro Gender & Women's Studies credit: 3 Hours.

Same as GWS 100 and SOC 130. See GWS 100. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

HDFS 143 Biology of Human Behavior credit: 3 Hours.

Same as ANTH 143. See ANTH 143. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

HDFS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in human development and family studies. Approved for both letter and S/U grading. May be repeated in the same or subsequent terms as topics vary.

HDFS 206 Early Childhood Curriculum Dev credit: 4 Hours.

Introduces development of curriculum for children from birth to age five; integrates child development theory and principles with programming for young children in preschool and childcare setting. Prerequisite: HDFS 105.

HDFS 208 Child Fam with Special Needs credit: 3 Hours.

Multi-disciplinary approach to the study of issues related to exceptional children and their families. Explores social, emotional, and economic aspects of exceptionality for both children and families; examines processes of identification, intervention, and integration of children who deviate significantly from developmental norms. Designed for students studying child development, early childhood education, special education, social work, nursing and other disciplines involved with children who have special needs and their families. Recommended for students preparing for internships and careers as Child Life Specialists. Prerequisite: HDFS 105.

HDFS 220 Families in Global Perspective credit: 3 Hours.

Explores economic, political, cultural and social factors affecting families in different countries; examines variations among families in developed and developing nations and their historical, political and cultural contexts. Same as ANTH 210.

This course satisfies the General Education Criteria for: Cultural Studies - Non-West
Social Beh Sci - Soc Sci

HDFS 221 Asian Families in America credit: 3 Hours.

Same as AAS 297 and SOCW 297. See SOCW 297. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci
Cultural Studies - US Minority

HDFS 225 Close Relationships credit: 3 Hours.

Initiation, development, and dissolution of committed relationships with same- or opposite-sex partners within familial, cultural, and societal contexts. Prerequisite: Sophomore standing.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

HDFS 259 Motor Development and Control credit: 3 Hours.

Same as KIN 259. See KIN 259.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

HDFS 261 Self-Help Group Dev & Process credit: 3 Hours.

Defines nature and use of self-help groups in different contexts. Includes role of professionals in group formation and maintenance and develops group planning and management skills. Includes practice in group formation and visits to working groups in the community.

HDFS 262 Motor Develop, Growth & Form credit: 3 Hours.

Same as KIN 262. See KIN 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

HDFS 263 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.

Same as KIN 230 and RST 230. See RST 230.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

HDFS 290 Intro to Research Methods credit: 4 Hours.

Introduction to quantitative and qualitative research methods used to study human development and families. Provides experience conducting observations and survey interviews, evaluating research results, and writing research reports. Prerequisite: HDFS 105.

This course satisfies the General Education Criteria for:
Advanced Composition

HDFS 291 HDFS Career Planning & Preparation credit: 1 Hour.

Overview of job opportunities, graduate, and professional school programs that prepare students for careers in health care, counseling, social work, higher education, policymaking and other fields related to Human Development and Family Studies. Examines types of jobs, graduate and professional opportunities and the preparation they require. Students develop personal job, graduate/professional school preparation plans. Approved for S/U grading only.

HDFS 293 Off-Campus Internship credit: 1 or 2 Hours.

Supervised, off-campus experience in a field directly pertaining to subject matter in Human Development and Family Studies. Intended primarily for students seeking supervised internship experience needed for certification as a Child Life Specialist. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: Prior or concurrent enrollment in HDFS 408 and consent of instructor.

HDFS 294 Research Internship credit: 1 to 4 Hours.

Students work one-on-one or in a small group with a faculty member engaged in research. Students must arrange this research experience with a professor prior to registering for the course. A list of possible research projects can be found at: <http://hdfs.illinois.edu/undergraduate/research-opportunities>. Once you have found a project that interests you, email the professor and ask to participate in his or her research opportunity. Approved for Letter and S/U grading. May be repeated in the same or separate terms to a maximum of 10 hours. Prerequisite: Consent of instructor; not open to students on probation.

HDFS 295 Independent Study or Research credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms.

HDFS 301 Infancy & Early Childhood credit: 4 Hours.

Reviews development during the first five years of life, including cognitive, social, and biological aspects of early development; includes first-hand observation of young children to supplement and extend lecture material. Prerequisite: HDFS 105 or PSYC 216.

HDFS 305 Middle Childhood credit: 3 Hours.

Systematic overview of the normative changes that occur in the physical, cognitive, social, emotional, and moral domains during the middle childhood period as well as current social issues that confront many of today's children (such as school violence or poverty). Prerequisite: HDFS 105.

HDFS 310 Adult Development credit: 3 Hours.

Focuses on adult development as a means for understanding the quality of family relationships and community functioning. Uses current theoretical approaches to understand adult development and evaluate each approach's usefulness for adults in the contexts of family, health, work, leisure and challenges over the life course. Prerequisite: HDFS 105 or equivalent.

HDFS 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, RST 314, PSYC 314, and REHB 314. See CHLH 314.

HDFS 322 US Latina and Latino Families credit: 3 Hours.

Explores a variety of topics and provides a basic overview of issues relevant to the understanding of Latina/Latino families and children in the United States. Examines recent demographic changes in the U.S. population and their implications for the socialization and education of Latina/Latino children and their families. Course content looks at such areas as who are Latina/Latino families; how are those families different from others; what are the similarities and differences within Latinas/Latinos; how does acculturation and language fit into our understanding of these families; and what are the implications for the education success of current and future Latina/Latino children. Same as LLS 322.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

HDFS 324 African Amer Families in Film credit: 3 Hours.

Same as AFRO 382. See AFRO 382.

HDFS 340 Gender, Relationships & Society credit: 3 Hours.

Explores the production of gender through social interaction within families and other specific interpersonal and institutional relationships that change over time. Gender is also linked to race, class, ability, and sexuality. Same as GWS 340 and SOC 322. Prerequisite: HDFS 105 or SOC 100.

HDFS 341 Asian American Youth credit: 3 Hours.

Same as AAS 346. See AAS 346.

HDFS 361 Creative Dance for Children credit: 3 Hours.

Same as ARTE 350 and DANC 350. See DANC 350.

HDFS 379 HDFS Study Abroad Experience credit: 1 to 4 Hours.

International experience in areas related to human development and family studies involving foreign travel and study without enrollment in another institution. Experience must be planned and approved in advance via consultation with an HDFS faculty member. May be repeated in the same or separate terms to a maximum of 8 hours as topics vary.

HDFS 396 Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. Prerequisite: Junior standing, admission to the ACES Honors Program.

HDFS 398 Undergraduate Seminar credit: 1 to 3 Hours.

Special topics in a field of study directly pertaining to subject matter in human development and family studies. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary. Prerequisite: Junior standing.

HDFS 401 Socialization and Development credit: 4 Hours.

Presents and uses theories of socialization to evaluate and analyze current issues and socialization practices; delineates historical and philosophical trends in socialization, and discusses the implications of these trends for generating social policy affecting the developing individual. 4 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 301 and HDFS 290.

HDFS 404 Gerontology credit: 3 or 4 Hours.

Same as CHLH 404. See CHLH 404.

HDFS 405 Adolescent Development credit: 3 Hours.

Examines paths of experience and individual development within the family, the peer group, and other domains through this socially-defined stage of life. 3 undergraduate hours. 3 graduate hours. Prerequisite: HDFS 105 and PSYC 100.

HDFS 406 Child Dev Class Supervision credit: 5 Hours.

Examines the relationships between child development theories and developmentally appropriate and individualized instruction techniques, discipline and guidance strategies, and the role of the family in child development programs. Emphasizes program supervision. Includes direct experience with children and families in a laboratory setting. 5 undergraduate hours. 5 graduate hours. Prerequisite: HDFS 206, HDFS 220, and junior standing.

HDFS 408 Hospitalized Children credit: 3 or 4 Hours.

Examines the developmental needs and stress reactions of children and families in a hospital/medical setting; examines responses of family and staff facing terminal illness and the death of a family member; familiarizes students with general hospital procedures, medical terms, and illnesses; introduces the role of Child Life programs and the Child Life Specialist. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 105 or consent of instructor.

HDFS 420 Inequality, Public Policy, and U.S. Families credit: 3 or 4 Hours.

Examines influence of economic, demographic and social changes on families in the U.S. and on the opportunities of individual family members. Explores interactions of social class, poverty, race and gender and their effects on family life and on child and adolescent development. Includes critical analysis of health care, employment, immigration, family leave, welfare and other social policy options that affect family life and well-being. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120.

HDFS 424 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as AFRO 421, EPS 421, and SOC 421. See EPS 421.

HDFS 425 Critical Family Transitions credit: 4 Hours.

Life-span development approach to the study of normative changes and non-normative events and their impact on marriage and family relationships; attention to variations in the socio-economic contexts of family transitions, and to methods for reducing the negative effects of such transitions. 4 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120 and HDFS 290.

HDFS 426 Family Conflict Management credit: 3 or 4 Hours.

Examines processes of conflict management in family and community disputes; emphasizes negotiation and mediation as modes of dispute settlement. 3 undergraduate hours. 4 graduate hours. Prerequisite: HDFS 120.

HDFS 427 Family Adaptation & Resilience credit: 3 Hours.

Examines complex factors, including culture, economy, and values conflicts, that challenge families and the range of adaptive strategies that families deploy amid various challenges and stressors. Activities include developing a research or action proposal related to developing family resiliency. 3 undergraduate hours. 3 graduate hours. Credit is not given for both HDFS 427 and HDFS 527. Prerequisite: HDFS 425 or consent of instructor.

HDFS 444 LGBT Indiv, Fam & Community credit: 3 or 4 Hours.

Examines contemporary sexual and gender minority experiences in the context of societal inequality. Of particular interest to students pursuing educational, human service, legal, and/or health profession careers. Same as CHLH 444. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 100 or an introductory course on gender issues.

HDFS 450 Practicum in HDFS credit: 1 to 12 Hours.

Supervised on- or off-campus learning experience related to human development or family studies, supervised in cooperation with an appropriate agency or institution. Not available to students on probation. 1 to 12 undergraduate hours. 1 to 12 graduate hours. Only 6 hours of the course may be applied to the total required for a graduate degree in Human and Community Development or a bachelor's degree in Human Development and Family Studies. Prerequisite: Human Development and Family Studies major; junior standing.

HDFS 459 Physical Activity & Aging credit: 3 or 4 Hours.

Same as KIN 459. See KIN 459.

HDFS 461 Family Life Education credit: 3 Hours.

Examines the theory and practice of designing family life education programs for children, youth, and/or families. Introduces strategies for translating science-based information into learning experiences. Family life education topics such as parenting (including managing difficult children and children with special needs), relationships (dating, marriage), family transitions (becoming new parents, divorce, & stepfamilies), and health and well-being (obesity, stress) will be reviewed. Principles of effective program design will be explored along with online program delivery skills. 3 undergraduate hours. No graduate credit. Credit is not given for both HDFS 461 and HDFS 561. Prerequisite: HDFS 120 or consent of instructor.

HDFS 494 Applied Research Methods credit: 1 to 4 Hours.

Participation in faculty-supervised research as a member of a transdisciplinary team investigating questions related to the health and well-being of children and families. Students propose their own research questions and present findings developed from data gathered by the team. 1 to 4 undergraduate hours. No graduate credit. May be repeated in the same term to a maximum of 6 hours. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

HDFS 499 Seminar credit: 1 to 4 Hours.

Special topics in human development, family studies, or community development. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent terms to a maximum of 12 hours as topics vary.

HDFS 500 Professional Development credit: 1 Hour.

Overview of issues in professional development in the field of human development and family studies; focuses on both academic and applied career paths. Approved for S/U grading only. May be repeated to a maximum of 4 hours.

HDFS 501 Human Development Theories credit: 4 Hours.

Overview of basic theories and theoretical perspectives on human development; focuses on major concepts, issues, and questions in the field.

HDFS 503 Social-Emotional Development credit: 2 Hours.

Theory and research related to social and emotional development from infancy through middle childhood. Key topics include emotional regulation and social-emotional understanding, with special attention to the interpersonal contexts of social-emotional development, including parent-child, sibling and peer relationships. Prerequisite: HDFS 501.

HDFS 505 Advanced Adolescence credit: 2 Hours.

Advanced interdisciplinary examination of current research on adolescence as a life course stage and developmental period; focuses on principal contexts of adolescents' lives, such as family, peers and school, and examines how experience in these contexts relates to preparation for adulthood. Designed for students with prior course work on adolescence or related topics who plan to do research, teaching, or policy work pertinent to this age period. Prerequisite: Prior course work in human development, developmental psychology or life course sociology.

HDFS 521 Family Theories credit: 4 Hours.

Contemporary family theories and their application in family research.

HDFS 523 Ethnic Families credit: 4 Hours.

Historical, social, economic, contextual (neighborhood), and subcultural factors that influence the organization and dynamics of ethnic-racial family life in the United States: family and group immigration and migration histories, acculturation, identity development, family organization, gender roles, parent-child relations, family rituals, neighborhood influences on family life and child-adolescent development, and the relationship between social class and ethnicity-race. Particular emphasis is given to qualitative studies that detail the first-hand experiences of families.

HDFS 525 Family Interaction credit: 4 Hours.

Observation and qualitative analysis of the family as a system; how family organization emerges, is maintained, and changes through social interaction.

HDFS 526 Intimate Partner Violence credit: 2 Hours.

Extent, nature, causes, and consequences of intimate partner violence in the United States. Examines the complexities of intimate partner violence, including individual, societal, and historical factors that contribute to violence, the implications of making distinctions in types of violence and perpetrators, and the relationship between institutional responses and individual decision-making. Also examines theoretical methodological and ethical issues related to violence research.

HDFS 527 Family Resiliency credit: 4 Hours.

Examines complex factors, including culture, economy, and values conflicts, that challenge families and the range of adaptive strategies that families deploy amid various challenges and stressors. Activities include developing a research or action proposal related to developing family resiliency. Credit is not given for both HDFS 527 and HDFS 427. Prerequisite: HDFS 521 or HDFS 525 or equivalent.

HDFS 528 Parenting credit: 2 Hours.

Explores how parenthood has been conceptualized and investigated in human development, family studies, and related disciplines. Major theoretical perspectives and emerging line of research will be reviewed including parental style, beliefs and cognition, identity, fathering and diverse parenting contexts. Prerequisite: HDFS 501 or HDFS 521.

HDFS 529 Youth and Family Acculturation credit: 2 Hours.

Examines acculturation in youth and families related to immigration and globalization (e.g., via media, trade). Covers theory regarding individual acculturation styles such as assimilation or integration/biculturalism, and explores societal influences. Also examines how youth and families adapt, including psychological and social adjustment, parent-child acculturation gaps, and risk/protective factors for family resilience. Films and discussions cover different types of acculturating individuals (e.g., immigrants, refugees, non-migrants) and span several world regions. Prerequisite: Prior coursework in family studies, child/adolescent development or related topics, or consent of instructor.

HDFS 533 Community In American Society credit: 4 Hours.

Classic U. S. community studies are paired with current journal articles to examine how people in rural, suburban, and urban places go about making, maintaining or losing "community" in the context of societal change. The community studies provide a window on change at the local level including: urbanization, suburbanization, ethnic group interactions, inner-city poverty concentration, household structure variation, economic restructuring, and environmental impacts. Community studies are also critically evaluated both theoretically and as a research strategy. Same as SOC 572 and UP 533. 4 graduate hours. No professional credit.

HDFS 534 Neighborhoods and Human Dev credit: 4 Hours.

Theories, methodological issues, and current empirical research on the impact of neighborhoods on human development and family welfare across the life course including how neighborhoods characteristics, e.g., poverty, racial and ethnic composition, and geographic space, influence child and adolescent development, health, and employment opportunities and success in adulthood. Key mechanisms include: family conditions, local environment, social networks, and spatial mismatch. 4 graduate hours. No professional credit.

HDFS 539 Youth, Culture and Society credit: 4 Hours.

Examines youth as a historically and culturally specific social formation; examines discursive and material positioning of youth within broader intersecting racial, cultural, socio-economic, gender and political contexts to situate youth and youth cultural practices within global and local processes. Specific topics include youth cultures, juvenile justice, education, labor, consumerism, politics, sexuality and activism, as well as methodological considerations of conducting research on youth. Same as AAS 539 and EPS 539. 4 graduate hours. No professional credit.

HDFS 540 Gender & Sexuality credit: 2 Hours.

Highlights key approaches to gender and sexuality within the multidisciplinary field of family studies; examines how gender and sexuality organize the accomplishment of family life through both social structure and social performance, and their attendant historical, economic and political contexts.

HDFS 541 Social Ent in Diverse Society credit: 4 Hours.

Same as LLS 554 and SOCW 554. See SOCW 554.

HDFS 543 Ethnography Urban Communities credit: 4 Hours.

Same as AFRO 552, SOC 578, and UP 578. See AFRO 552.

HDFS 550 Advanced Practicum in HDFS credit: 4 Hours.

Practicum providing graduate students with supervised experience in the design, implementation, and/or evaluation of outreach programs, policy development, or consultation models designed to meet the needs of children, families and/or communities. Prerequisite: HDFS 450.

HDFS 551 Childhood Obesity I credit: 3 Hours.

Same as CHLH 530, FSHN 530, KIN 530, NUTR 530, SOCW 570. See NUTR 530.

HDFS 552 Childhood Obesity II credit: 4 Hours.

Same as CHLH 531, FSHN 531, KIN 531, NUTR 531, SOCW 571. See NUTR 531.

HDFS 561 Child and Family Program Dev credit: 4 Hours.

Theoretical and practical aspects of planned efforts to influence the development of children, youth, and families in the context of communities, particularly efforts to promote competence and well-being of children and youth, positive parenting, and well-being and adjustment of adults. Examines literature from four approaches: family life education, youth development, prevention/applied developmental science, as well as health promotion and community health.

HDFS 562 Child & Family Program Eval credit: 4 Hours.

Introduces practical skills for evaluating service, intervention, and educational programs, including needs assessment, program monitoring and impact assessment, with emphasis on outcome measure selection, randomized and quasi-experimental designs, statistical power analysis, and ethical issues.

HDFS 590 Advanced Research Methods credit: 4 Hours.

Overview of positivist, interpretive, and critical research paradigms and their quantitative and qualitative methodologies; critical evaluation of current social science literature; students develop their own research proposals. 4 graduate hours. No professional credit.

HDFS 591 Qualitative Methods credit: 4 Hours.

Qualitative methods in the social sciences: epistemological context; data collection and relationships with participants; data management, analysis and evaluation; writing strategies. Specific content emphasis alternates annually between field research and grounded theory. 4 graduate hours. No professional credit. May be repeated to a maximum of 8 hours.

HDFS 592 Advanced Statistical Analysis credit: 4 Hours.

Introduction to the conceptual bases and uses of advanced statistical techniques in human development and family research, including factor analysis, cluster analysis, multilevel modeling, and logistic regression. Special attention given to the longitudinal and dyadic analyses and to techniques for handling missing data. Students use common statistical packages and their own data set to produce a journal-style manuscript. 4 graduate hours. No professional credit. Prerequisite: HDFS 594 or a graduate-level course in multivariate statistical analysis.

HDFS 594 Intermed Statistical Analysis credit: 4 Hours.

Overview of common quantitative research methods and statistical analyses used in human development, family, and community research; covers sampling, data management, bivariate analyses, multivariate regression. Students frame a research question and use a common data set and statistical analysis software to prepare methods and results sections of a manuscript suitable for publication. 4 graduate hours. No professional credit. Prerequisite: HDFS 590 or equivalent.

HDFS 595 Seminar credit: 1 to 4 Hours.

Discussion and evaluation of current literature on selected topics in human and community development. 1 to 4 graduate hours. No professional credit. May be repeated in the same or subsequent terms.

HDFS 596 Advanced Studies in HDFS credit: 1 to 4 Hours.

Library or experimental research on specific problems of limited scope. May be taken in addition to 32 hours required for a master's degree by students who do not write a thesis. For non-thesis students only. May be repeated to a maximum of 4 hours.

HDFS 598 Special Problems in HDFS credit: 1 to 4 Hours.

Research or independent study on a special problem that is not part of thesis work. 1 to 4 graduate hours. No professional credit. May be repeated in the same or separate terms to a maximum of 8 hours.

HDFS 599 Thesis Research credit: 0 to 16 Hours.

Individual thesis research under supervision of faculty in specialized fields of human and community development. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

Human Dimensions of Env Sys (HDES)

HDES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HDES>)

Courses

HDES 410 Neighborhoods and Politics credit: 3 or 4 Hours.

Same as PS 410. See PS 410.

HDES 595 Res Sem Human Enviro credit: 2 Hours.

Trains students to propose, conduct, communicate, and evaluate research in the human dimensions of environmental systems. Participants present and receive feedback on work in progress in formal seminars and in small multidisciplinary groups. May be repeated to a maximum of 20 hours. Prerequisite: HDES Scholar status or consent of instructor.

HDES 598 Special Topics in HDES credit: 1 to 4 Hours.

Special topics in the human dimensions of environmental systems (HDES), with a focus on contemporary environmental and sustainability issues. An introduction course for graduate students who wish to explore the interdisciplinary studies offered through the Program in HDES. Approved for both letter and S/U grading. May be repeated in the same term to a maximum of 8 hours as topics vary. May be repeated in separate terms to a maximum of 12 hours as topics vary.

Human Resource Development (HRD)

HRD Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HRD>)

Courses

HRD 400 Principles of HRE credit: 3 or 4 Hours.

Study of the basic concepts and practices of education for and about work: its philosophical foundations and historical development, mission and goals, structure and function, curricular areas of emphasis, learner audiences served and settings in which programs are conducted, and issues and trends affecting program change. 3 undergraduate hours. 4 graduate hours.

HRD 401 Training in Business/Industry credit: 3 or 4 Hours.

Study of the status of education, training and development within business and industry; includes an overview of the systemic process for planning, delivery, and evaluation of training programs; and explores major problems, trends, and issues associated with the field. 3 undergraduate hours. 4 graduate hours.

HRD 402 Business Principles for HRD credit: 3 or 4 Hours.

Study of essential business understandings, knowledge, and skills required for HRD professionals to interact effectively with others in the business community. 3 undergraduate hours. 4 graduate hours.

HRD 411 Training System Design credit: 3 or 4 Hours.

Provides instruction and practice in the selection, organization, and preparation of content for instructional programs in business and technical settings. Provides students with a theoretical orientation to instructional design as well as the opportunity to experience the instructional design process as it applies to business and technical settings through the development of instructional materials. 3 undergraduate hours. 4 graduate hours.

HRD 412 Instructional Techniques credit: 3 or 4 Hours.

Provides a research-based exploration of effective teaching techniques for instructors of business, industry, and community college technical programs. Equips students with a conceptual framework for instruction and provides guidance and experience in the planning, delivery, and evaluation of instruction. 3 undergraduate hours. 4 graduate hours.

HRD 414 Facilitation Skills credit: 3 or 4 Hours.

Provides an in-depth examination into the body of research of effectively facilitating groups, including the nature of groups, the dynamics of individuals within groups, effective planning, role clarification, identification of intervention points in groups, and effective use of tools and techniques. The theoretical foundations for the course reside in theories of human values, group dynamics, decision-making, communication, managing conflicts, and effective group intervention. Course emphasis is on experiential learning, with students practicing self-reflection and self-directed facilitations. 3 undergraduate hours. 4 graduate hours.

HRD 415 Diversity in the Workplace credit: 3 or 4 Hours.

Assists educators, as well as trainers and managers in business and industry, to effectively recognize and understand diversity in school and work settings. Activities focus on understanding the nature of diverse populations, their unique learning needs, and potential collaborative efforts between educators and work place personnel. 3 undergraduate hours. 4 graduate hours.

HRD 440 Work Analysis credit: 3 or 4 Hours.

The ability to analyze work is a fundamental skill for individuals interested in human resource development. Work analysis is necessary for identifying job standards, designing training programs, performance support systems, evaluating work performance, and perhaps most importantly improving performance. This course will provide students with the opportunity to learn and use range of work analysis techniques and to apply this information in service to an organization. 3 undergraduate hours. 4 graduate hours. Prerequisite: HRD 400 or consent of instructor.

HRD 470 Designing and Evaluating E-Learning Systems credit: 3 or 4 Hours.

This course surveys and examines models and theories for designing e-learning systems across disciplines and organizations. Particular emphasis is given to topics on designing instructor-led and/or autonomous learning systems for individual learners and for organizations in contemporary technology-enabled environments. In addition, this course covers introductory methodologies for evaluating the efficacy of various e-learning system. The guiding philosophy of the course is that intended learning outcomes by any e-learning system should be achieved through systematic and pedagogically grounded design and evaluation processes while considering various individuals' and organizations' needs. 3 undergraduate hours. 4 graduate hours.

HRD 472 Learning Technologies credit: 3 or 4 Hours.

The course addresses two important needs of educators. First, educators should be aware of recent developments in the area of instructional technology. Second, educators must be able to select, develop, and effectively use appropriate instructional technologies to enhance learning and communication. To meet these needs, this course covers a wide range of instructional technologies that are used for instructional and administrative purposes. Traditional instructional media are considered in the course although significant emphasis is placed on more recent developments that involve the use of the computer and its applications in education. Instructional technologies such as computer-based instruction, computer-based testing, distance learning, interactive video, and intelligent instructional technologies are covered. Through course readings, discussions, and projects, students in the course are expected to gain skills in choosing appropriate instructional technologies, designing effective presentations that rely on those technologies, and properly using instructional technologies to enhance communication with an audience. Same as CI 484. 3 undergraduate hours. 4 graduate hours. Prerequisite: HRD 411 or equivalent course in instructional design.

HRD 474 Evaluating Learning Technology credit: 4 Hours.

Same as EPSY 474. See EPSY 474.

HRD 475 Project Management for Human Resource Development credit: 3 or 4 Hours.

Effective project management skills are essential for successful professional development. This course, in particular, studies the basic principles, techniques, and best practices related to managing personnel, time, and resources in education and training projects. Through a variety of learning activities, including case study review and project simulation, students will apply project management concepts and tools in various training and education-related project development. 3 undergraduate hours. 4 graduate hours.

HRD 480 Introduction to eLearning credit: 3 or 4 Hours.

The course seeks to build foundational knowledge in areas associated with online teaching and learning and distance education in both higher education and workplace learning settings. Major areas of interest include the overview of online teaching and learning strategies, digital learning system design, digital media for learning, and evaluation online teaching and learning. 3 undergraduate hours. 4 graduate hours. Prerequisite: Open to all graduate students.

HRD 490 Issues and Developments in HRD credit: 3 or 4 Hours.

Special course for experimentation or for seminar on topics not treated by regularly scheduled courses. Topics vary; consult Class Schedule for specific section offerings. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours.

HRD 491 Professional Skill Development credit: 3 or 4 Hours.

Designed to teach practitioner-oriented skills in specialized areas of human resource education. Topics vary; consult Class Schedule for specific section offerings. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours.

HRD 492 Supervised Internship in HRE credit: 2 or 4 Hours.

While employed in approved cooperating organizations, students observe the relationship between HRE and organizational performance. 2 or 4 undergraduate hours. 2 or 4 graduate hours.

HRD 495 Special Study & Investigation credit: 2 or 4 Hours.

Offers opportunity for an individual to study, on or off campus, selected problems, trends, and new developments or to conduct specialized investigations for the improvement of instructional programs in areas related to education and training. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours.

HRD 501 The Community College credit: 4 Hours.

Same as EOL 573. See EOL 573.

HRD 509 Advanced Theories in HRD credit: 4 Hours.

Provides a reading of advanced texts related to Human Resource Development from a variety of applied social science disciplines. Targeted towards doctoral students in the later stage of their course work who are interested in HRE theory and social science foundations. Prerequisite: HRD 400, HRD 411, HRD 530.

HRD 517 Community College Program Dev credit: 4 Hours.

Synthesizes selected sociological, psychological, and epistemological foundations for curriculum development in education and training; application of theories from fundamental disciplines to practice in existing and emerging curricula involving perceptual and psychomotor learning.

HRD 530 Organization Development credit: 4 Hours.

Addresses the history, concepts, theories, and techniques of Organization Development as applied in Human Resource Education; emphasis on creating, managing, and sustaining system-wide change in public and private organizations; organized around diagnosis, implementation, and evaluation of individual, team, and organization-wide interventions.

HRD 531 Quality Process Improvement credit: 4 Hours.

Examines quality and process improvement philosophies, theories, and strategies as they apply to the practice of professionals in human resource education. Based on a critical analysis of the historical antecedents, theoretical foundations, and empirical research results of Total Quality Management (TQM) and Continuous Process Improvement (CPI), students will be able to apply improvement strategies and evaluate the merits and limitations in public and private settings. Same as EOL 587.

HRD 532 Strategic HRD credit: 2 or 4 Hours.

Study of the theories, research, and applications of strategic human resource development in a variety of organizational settings.

HRD 533 Management of HRD credit: 4 Hours.

Study of management fundamentals related to planning, organizing, staffing, leading, and controlling the HRD function in organizations.

HRD 534 Economics of Human Resources credit: 4 Hours.

Same as LER 545. See LER 545.

HRD 535 Consulting in HRD credit: 4 Hours.

Analysis of key elements of consulting in the human resource development profession. Emphasis is placed on subject matter expertise, consulting skills, marketing, organization, business management, communication, and life/work balance. The course examines both the internal and external consulting practices. Issues of education and training of consultants for work in industry, business, government, and non-profit sectors are covered in detail.

HRD 536 International HRD credit: 4 Hours.

Course is designed to provide insights into international HRD at macro and micro levels. Course will cover: cross-cultural issues in international HRD; design and delivery of international HRD programs; HRD practices and programs in different regions of the world; national HRD programs; expatriate training and training in multinational corporations.

HRD 540 Learning on the Job credit: 4 Hours.

Research and practice suggest that individuals learn most of what they know and can do while on-the-job, not in a corporate classroom or some other formal learning setting. This seminar will provide opportunity to examine the literature on this topic and consider how they also might contribute to the literature through their own research. The seminar will also provide the opportunity to experience how to design a workplace learning system, such as structured on-the-job training. Prerequisite: HRD 400 and HRD 411 or consent of instructor.

HRD 550 Adult & Professional Education credit: 4 Hours.

This course takes a broad look at the philosophy, theory, research, and practice of adult education, along with additional considerations for the development of professionals. The broad perspective includes the social, cultural, and political factors that affect the research, planning, development, and implementation of adult education. You may explore the major adult learning theories, the practice of adult education, and the aims and challenges of professional education that match you scholarly and practical interests.

HRD 572 e-Learning Ecologies credit: 4 Hours.

An examination of emerging environments of e-learning, some setting out to emulate the heritage social relationships and discourses of the classroom, others attempting to create new forms of learning. Aims to push the imaginative boundaries of what might be possible in e-learning environments. Explores the ways in which assessments can be constructed and implemented which are integral to the learning process, with the assistance of today's new media, 'big data' and other information technologies. 4 graduate hours. No professional credit.

HRD 575 Innovation in E-Learning credit: 4 Hours.

Designed to provide an in-depth look at ongoing innovations in Web-based electronic technologies that can be used to deliver e-Learning content and to enhance learning experiences in e-Learning environments. Students will acquire and synthesize advanced content knowledge and critically review research on ongoing innovations that are integrated with targeted content in today's eCommunication and e-Learning environments. Prerequisite: Open to all graduate students.

HRD 580 Disciplined Inquiry in Educa credit: 4 Hours.

Provides an analysis and synthesis of disciplined inquiry in human resource education including an historical perspective, formulation of the research process, and the utilization and communication of research.

HRD 585 Program Evaluation credit: 4 Hours.

Theory and techniques of evaluation in cognitive, affective, and psychomotor domains at different educational levels and settings; development and analysis of activities and instruments for students and program evaluation, follow-up studies, and interpretation of results for self-evaluation and for administrative decision making.

HRD 590 Seminar for Advanced Students credit: 0 to 8 Hours.

Seminar open to persons who have been admitted for doctoral study in human resource education. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours.

HRD 592 Special Topics in HRE credit: 4 Hours.

Introduction to significant problems, points of view, and trends in the field; explores significant research relating to organization, content, and techniques. Topics vary; consult Class Schedule for specific section offerings. May be repeated with approval.

Humanities Courses (HUM)

HUM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/HUM>)

Courses

HUM 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated one time.

Prerequisite: Consent of departmental honors adviser.

HUM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

HUM 387 French & Comparative Cinema I credit: 3 Hours.

Same as CWL 387, FR 387, and MACS 382. See FR 387.

HUM 389 French & Comparative Cinema II credit: 3 Hours.

Same as CWL 389, FR 389, and MACS 383. See FR 389.

HUM 390 Individual Study credit: 2 to 4 Hours.

Supervised reading and research on interdisciplinary humanities topics chosen by the student in consultation with a faculty member. May be repeated to a maximum of 8 hours. Prerequisite: Consent of humanities adviser (An approved Learning Agreement must be submitted to 2002 Lincoln Hall, 702 S. Wright Street, Urbana, not later than the second week of the semester or the first week of the summer session).

HUM 395 Special Topics credit: 3 Hours.

Interdisciplinary topics in the humanities; topics vary, but are normally related to one of the options in the humanities major. May be repeated if topics vary. Students may register in more than one section per term.

HUM 397 Special Topics Junior credit: 3 Hours.

Interdisciplinary seminar and tutorial in selected topics related to one of the options in the humanities major. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing and consent of humanities adviser (Tutorial students must submit an Approved Learning Agreement to 2002 Lincoln Hall, 702 S. Wright Street, Urbana, not later than the second week of the semester or the first week of the summer session).

HUM 492 Senior Thesis credit: 2 to 4 Hours.

Individual research for majors in humanities leading to the completion of a thesis. 0 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 8 hours. Prerequisite: Senior standing, a declared option in humanities major, and consent of advisor.

HUM 495 Special Advanced Topics credit: 3 or 4 Hours.

Offers interdisciplinary topics in the humanities; topics vary, but normally relate to the interdisciplinary areas of study within the humanities major or to the special humanities facilities (e.g., the Language Learning Laboratory). 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Will vary according to topic. See Class Schedule.

HUM 498 Special Topics Senior credit: 3 Hours.

Interdisciplinary seminar and tutorial in selected topics related to one of the options in the humanities major. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing and consent of humanities adviser (Tutorial students must submit an approved Learning Agreement to 2002 Lincoln Hall, 702 S. Wright Street, Urbana, not later than the second week of the semester or the first week of the summer session).

I-Health (IHLT)

IHLT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IHLT>)

Courses

IHLT 101 Introduction to i-Health credit: 1 Hour.

Introduction to the interdisciplinary major in Health. The course is designed to familiarize students with the concepts of interdisciplinary health, campus resources, academic policies, and program requirements.

IHLT 102 Survey of Interdisc Health credit: 1 Hour.

Introduction to topics in interdisciplinary health with particular emphasis on the five dimensions of health: physical, emotional, social, intellectual and spiritual. Students will explore their personal health beliefs and patterns and discuss the benefits of studying health within an interdisciplinary curriculum.

IHLT 230 Leadership in Health credit: 3 Hours.

Develops a framework to understand practices of exemplary leadership. Topics include: 1) Modeling behavior, 2) Inspiring a shared vision, 3) Challenging processes, 4) Enabling others to act, and 5) Encouraging passionate leadership. Case studies of individuals who are recognized leaders in health and well ?being at local, regional, national and global levels will be explored. Through various assignments, students identify their own leadership style and understand the important role they can play as leaders to address local and global health challenges. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

IHLT 232 Health Disparities in the U.S. credit: 3 Hours.

Provides an overview of health disparities in the United States, including existence and magnitude of health disparities, theories that explain health disparities, strategies to address their complexity, and solution required to eliminate them. Disparities are examined related to groups of diverse racial/ethnic backgrounds, socio-economic status, gender, age, and ability level. This course satisfies the General Education Criteria for: Cultural Studies - US Minority

IHLT 240 Aging and Health Policy credit: 3 Hours.

Provides an understanding of the policies that affect service delivery to older adults including key historical and current policies such as the Older Americans Act, Medicare, Medicaid, and Social Security. Theories of public policy and involvement of older adults in the political process will be introduced. Challenges of issues such as chronic disease prevention, housing, transportation, nutrition, and elder abuse will also be explored. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

IHLT 375 Interdis Collab in Health Serv credit: 4 Hours.

Provides scholarly knowledge and field experiences for interdisciplinary collaboration in the health services. Topic include health service delivery systems, vulnerable populations, models of health and health promotion, communication, policy and ethics in health care. Emphasis on introducing students to the importance of working with individuals from a variety of health disciplines to best address issues of health in society.

IHLT 474 Pre-Field Experience in Health credit: 1 Hour.

This is an independent study course that expands student's knowledge of health professions and prepares them for field work in an applied setting with a variety of health professionals. 1 undergraduate hour. 1 graduate hour.

IHLT 475 Field Experience in i-Health credit: 4 Hours.

Designed to emphasize field/research experiences that facilitate working with individuals from a variety of health disciplines. Field experience/research placements will be selected to best prepare students address issues of health within their concentrations areas. In class sessions will focus on interdisciplinary collaboration, professionalism and important global health issues. Serves as the capstone course for i-Health majors. 4 undergraduate hours. 4 graduate hours. Prerequisite: Restricted to senior i-Health majors.

IHLT 498 Interdisciplinary Health Study Abroad credit: 1 to 6 Hours.

An advanced-level study abroad experience where students complete assigned scholarly readings; participate in facilitated discussions prior to, during, and/or after the trip; and write a final paper. The on-campus and abroad activities are supervised and facilitated by campus faculty. 1 to 6 undergraduate hours. No graduate credit. May be repeated in separate terms for a total of 12 undergraduate hours, if the countries differ between terms. Prerequisite: Social & Behavioral Sciences General Education requirement fulfilled, and sophomore or higher standing.

Industrial Engineering (IE)

IE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IE>)

Courses

IE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

IE 297 Independent Study credit: 1 to 4 Hours.

Individual investigations of any phase of Industrial Engineering. May be repeated in separate terms. Prerequisite: Consent of instructor.

IE 300 Analysis of Data credit: 3 Hours.

Nature of probabilistic models for observed data; discrete and continuous distribution function models; inferences on universe parameters based on sample values; control charts, acceptance sampling, and measurement theory. Credit is not given for both IE 300 and CEE 202. Prerequisite: MATH 241.

IE 310 Deterministic Models in Optimization credit: 3 Hours.

Linear Optimization - Simplex method, duality, and sensitivity analysis, Transportation and Assignment Problems, Network Optimization Models, Dynamic Programming, Nonlinear optimization, and Discrete optimization. Credit is not given for both IE 310 and CEE 201. Prerequisite: Credit or concurrent registration in MATH 415.

IE 311 Operations Research Lab credit: 1 Hour.

Applications of OR models with the use of software tools. Prerequisite: Concurrent registration in IE 310.

IE 330 Industrial Quality Control credit: 3 Hours.

Contemporary concepts and methods for quality and productivity design and improvement; philosophies of Deming, Taguchi, and others leading the quality management and engineering movement; Shewhart's methods for statistical process control; process capability analysis; statistical methods for tolerance assessment; process control methods employing attribute data; design of experiments, concepts, and methods. Prerequisite: IE 300.

IE 340 Human Factors credit: 4 Hours.

Introduction to human factors, ergonomics, engineering psychology, history of ergonomics, human-machine relations, displays and controls, human-computer interaction, industrial and aviation systems, physiology of work and anthropometrics, cognitive ergonomics, human reliability, human as manual controller, human-machine systems design, prototyping, professional practice and ethics, laboratory exercises. Same as PSYC 358. Prerequisite: PSYC 100, PSYC 103, or consent of instructor.

IE 360 Facilities Planning and Design credit: 3 Hours.

Facility planning, plant layout design, and materials handling analysis; determination of facilities requirements, site selection, materials flow, use of analytical and computerized techniques including simulation, and applications to areas such as manufacturing, warehousing, and office planning. Prerequisite: Credit or concurrent enrollment in IE 310.

IE 361 Production Planning & Control credit: 3 Hours.

Scope of production systems and activities involved in their design, establishment, management, operation, and maintenance; mathematical and computer models for planning and control of facilities, human resources, projects, products, material, and information in production systems. Prerequisite: IE 310.

IE 370 Stochastic Processes and Applications credit: 3 Hours.

Introduction to stochastic processes with applications in decision-making under uncertainty. Topics include news vendor problem, discrete-time Markov chain (including classification of states, stationary distribution, absorbing states), Poisson processes (including time-homogenous, time-nonhomogeneous, thinning Poisson), continuous-time Markov chain (including Markov property, generator matrix, stationary distribution), queuing theory (including M/M/k queue, open Jackson network), and Markov decision processes (including finite-horizon models, infinite-horizon models). Prerequisite: IE 300 and IE 310.

IE 397 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phase of Industrial Engineering. May be repeated in separate terms. Prerequisite: Consent of instructor.

IE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in industrial engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

IE 400 Design & Anlys of Experiments credit: 3 or 4 Hours.

Concepts and methods of design of experiments for quality design, improvement and control. Simple comparative experiments, including concepts of randomization and blocking, and analysis of variance techniques; factorial and fractional factorial designs; Taguchi's concepts and methods; second-order designs; response surface methodology. Engineering applications and case studies. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

IE 410 Stochastic Processes & Applic credit: 3 or 4 Hours.

Modeling and analysis of stochastic processes. Transient and steady-state behavior of continuous-time Markov chains; renewal processes; models of queuing systems (birth-and-death models, embedded-Markov-chain models, queuing networks); reliability models; inventory models. Familiarity with discrete-time Markov chains, Poisson processes, and birth-and-death processes is assumed. Same as CS 481. 3 undergraduate hours. 4 graduate hours. Prerequisite: IE 310.

IE 411 Optimization of Large Systems credit: 3 or 4 Hours.

Practical methods of optimization of large-scale linear systems including extreme point algorithms, duality theory, parametric linear programming, generalized upper bounding technique, price-directive and resource-directive decomposition techniques, Lagrangian duality, Karmarkar's algorithm, applications in engineering systems, and use of state-of-the-art computer codes. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 310 and MATH 415.

IE 412 OR Models for Mfg Systems credit: 3 or 4 Hours.

Operations research techniques applied to problems in manufacturing and distribution. Single and multi-stage lot sizing problems, scheduling and sequencing problems, and performance evaluation of manufacturing systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 310.

IE 413 Simulation credit: 3 or 4 Hours.

Use of discrete-event simulation in modeling and analysis of complex systems. Data structures and event-list management; verification and validation of simulation models; input modeling, including selection of probability distributions and random variate generation; statistical analysis of output data. Same as CS 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: CS 101 and IE 310.

IE 420 Financial Engineering credit: 3 or 4 Hours.

Introduction to the theory and practice of financial engineering: basics of derivative securities and risk management; Markowitz portfolio theory and capital asset pricing model; interest rate and bonds; forward and futures contracts, hedging using futures contracts; option contracts and arbitrage relationship; binomial model, no-arbitrage pricing, risk-neutral pricing, and American options pricing; Brownian motion, Black-Scholes-Merton model, delta hedging, Greek letters, implied volatility, and volatility smile. 3 undergraduate hours. 4 graduate hours. Prerequisite: IE 300.

IE 430 Economic Found of Quality Syst credit: 3 or 4 Hours.

Total quality systems for planning, developing, and manufacturing world-class products. Economic foundations of total quality. Product value, cost, pricing, environmental quality, activity-based costing, design for assembly, organization structure, lead time, innovation, Taguchi methods, simulation-based significance testing, Strategic Quality Deployment, statistical process control, and conjoint analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

IE 431 Design for Six Sigma credit: 3 Hours.

Quality Engineering principles and the Six Sigma Define-Measure-Analyze-Improve-Control (DMAIC) process. Application of concepts and methods of statistical process control, designed experiments, and measurement systems analysis to cases of quality and productivity improvement; application of the fundamentals of quality engineering and the Six Sigma to areas of produce development, service enterprise, and manufacturing processes. 3 undergraduate hours. 3 graduate hours. Prerequisite: IE 300.

IE 445 Human Performance and Cognition in Context credit: 3 or 4 Hours.

Same as EPSY 456 and PSYC 456. See EPSY 456.

IE 497 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to industrial engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

IE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in industrial engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 hours.

IE 510 Applied Nonlinear Programming credit: 4 Hours.

Optimization of nonlinear systems; survey of classical methods and concepts such as the Lagrangian method, the Jacobian method, and Kuhn-Tucker conditions; modern algorithms; numerical methods for digital computers; applications in engineering design; use of state-of-the-art computer codes. Prerequisite: IE 310.

IE 511 Integer Programming credit: 4 Hours.

Optimization of linear systems over discrete decision domains. Topics to be covered include Modeling, Polyhedral theory, Integral Polyhedra, Totally Unimodular Matrices, Total Dual Integrality, Computational Complexity, Cutting plane method, Branch and Bound method, and Lagrangian Dual. Structured integer programs involving Matchings, Knapsack, Cuts and Matroids will be studied as applications. 4 graduate hours. No professional credit. Prerequisite: IE 411 or MATH 482.

IE 512 Network Analysis of Systems credit: 4 Hours.

Basic concepts, theories, and techniques of systems analysis, including modeling of large scale systems, forecasting, planning, control, and information handling; modeling of systems with network techniques, including distance, flow, and project networks; advanced network topics such as out-of-kilter algorithm and project resource analysis. Prerequisite: IE 361 or CEE 201.

IE 513 Optimal System Design credit: 4 Hours.

This course is designed to address the fundamental mathematical theories for complex engineering system (product) design optimization in multidisciplinary environment. The course starts with the basics of nonlinear programming (continuous optimization), then expands to the area of multidisciplinary design optimization (MDO) in depth. Analytical Target Cascading (ATC) - a well-established hierarchical optimization method - is covered in-depth with assignments in written and programming forms. After a successful completion of the course, the students will be able to model and solve basic MDO problems and apply MDO in a research-based semester project. Prior experience in coding (in Matlab or similar) will be helpful but not required. 4 graduate hours. No professional credit. Prerequisite: IE 310.

IE 515 Stochastic Simulation credit: 4 Hours.

Random variable generation; sample path generation; variance reduction; simulation optimization; introduction to Sequential Monte Carlo and MCMC; applications in finance. Prerequisite: IE 410 and STAT 410.

IE 520 Variational Inequalities credit: 4 Hours.

Finite dimensional variational inequality and complementarity problems; characterization of solutions; nonsmooth Newton methods; interior-point methods; projected gradient schemes; applications of variational inequalities in game theory. Prerequisite: One of ECE 490, IE 510, IE 521, MATH 484.

IE 521 Convex Optimization credit: 4 Hours.

Finite dimensional convex optimization problems; characterization of optimal solutions; iterative algorithms for differentiable and nondifferentiable problems; distributed optimization algorithms; robust problems and solutions; applications of convex optimization models. Prerequisite: ECE 490 or IE 411; MATH 415; MATH 444.

IE 522 Statistical Methods in Finance credit: 4 Hours.

Methods of statistical modeling of signals and systems with an emphasis on finance applications. Review of linear algebra, probability theory, and spectral analysis; Linear Time Invariant (LTI) and ARX models; least-squares, maximum-likelihood, non-parametric, and frequency-domain methods; convergence, consistency and identifiability of linear models; asymptotic distribution of parameter estimates; techniques of model validation; Principle Component Analysis (PCA) for dimension reduction; ARCH and GARCH processes and their related models; implementation, application, and case-studies of recursive identification; Monte Carlo simulation. Credit is not given for both IE 522 and GE 524. Prerequisite: MATH 415.

IE 523 Financial Computing credit: 4 Hours.

Visual Basic (VB) types and loops, macros, arrays, and objects; C++ structures, classes, overloading, inheritance, and I/O; C++ standard libraries; financial computing case studies; illustrations of financial engineering topics using VB and illustrations of the same topics for financial markets using .NET. Prerequisite: CS 225.

IE 524 Optimization in Finance credit: 4 Hours.

Basic optimization models, theory and methods for financial engineering including linear, quadratic, nonlinear, dynamic integer, and stochastic programming; applications to portfolio selection, index fund tracking, asset management, arbitrage detection, option pricing and risk management; optimization software for classes of optimization problems. Projects requiring building optimization models based on financial market data and solutions using optimization solvers. Prerequisite: FIN 500 and MATH 415.

IE 525 Numerical Methods in Finance credit: 4 Hours.

Numerical methods of the pricing and risk management of financial derivatives: Monte Carlo simulation; variance reduction techniques; quasi-Monte Carlo methods; finite difference methods for partial differential equations; time discretization schemes; free boundary problems for American options. Prerequisite: FIN 500.

IE 526 Stochastic Calculus in Finance credit: 4 Hours.

Stochastic calculus approach to the pricing and risk management of derivative securities; no arbitrage pricing; Brownian motion; stochastic calculus; the Black-Scholes-Merton model; risk neutral valuation; Feynman-Kac theorem; transform methods; exotic derivatives; change of numeraire; term structure interest rate model; stochastic volatility and jump models. Prerequisite: IE 525.

IE 527 MSFE Professional Development credit: 1 Hour.

This course is required to encourage participation in professional development activities. Students will be required to be in attendance for at least 70% of the Practitioner Speaker Series in addition to other sanctioned MSFE Events. The Practitioner Speaker Series is an essential part of the MSFE curriculum. It allows firsthand interaction with Quantitative Practitioners. Exposure to insights on how the financial world is changing; regarding new products and needs, evolving data and information systems, and much more. Other events might include but are not limited to special seminars, workshops and conversation groups. 1 graduate hour. No professional credit. Approved for S/U grading only. May be repeated in separate terms up to 2 hours. Note that this course is for 1 credit hour during your first and second semester and will require a mandatory final paper. Prerequisite: Graduate MS: Financial Engineering Students only.

IE 528 Computing for Data Analytics credit: 4 Hours.

Hands-on programming course on select topics in data science and big data with major emphasis on a semester long project. Course will cover a variety of topics and tools in big data including Hadoop MapReduce Framework, HBase, and Storm; Machine Learning; and Optimization. 4 graduate hours. No professional credit. Prerequisite: CS 242, CS 446. All ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MSAA) are eligible to take the course.

IE 529 Stats of Big Data & Clustering credit: 4 Hours.

This course will cover various foundational topics in data science. Parametric and non-parametric methods. Hypothesis testing; Regression; Classification; Dimension reduction; and Regularization. Unsupervised and semi-supervised learning, along with a few case studies. 4 graduate hours. No professional credit. Prerequisite: MATH 415 and IE 300 or equivalent. All ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MSAA) are eligible to take the course.

IE 530 Optimization for Data Analytics credit: 4 Hours.

Basic optimization methods for data analytics, optimization modeling languages such as AMPL and GAMS, and optimization software including the NEOS server. Linear and integer, and their applications to compressed sensing, data mining, and pattern classification. 4 graduate hours. No professional credit. Prerequisite: IE 411. All ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MSAA) are eligible to take the course.

IE 531 Algorithms for Data Analytics credit: 4 Hours.

This course will introduce the student to a set of algorithms for data analytics which include: hashing, indexes, caching; algorithms for structured datasets; streaming data modes; PageRank algorithms for market-basket models; clustering algorithms; and case studies. 4 graduate hours. No professional credit. Prerequisite: IE 411, CS 225. ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MCAA) are eligible to take the course.

IE 532 Analysis of Network Data credit: 4 Hours.

This course will focus on statistical aspects analyzing network data. It will review illustrative problems relating to aggregation of information, decision-making, and inference tasks over various graphical models and networks. 4 graduate hours. No professional credit. Prerequisite: MATH 412. ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MCAA) are eligible to take the course.

IE 533 Big Graphs and Social Networks credit: 4 Hours.

This course will cover the fundamentals of graph theory and network optimization. It will focus on algorithmic challenges associated with big graphs and intertwine the Hadoop Framework for solving example problems like shortest paths, link analysis, graph association and inexact graph matching. Applications in social network analysis will include study of network types, random graph models, exact and approximate computation of centrality measure, finding high value individuals, community detection, diffusion processes and cascading models, and influence maximization. 4 graduate hours. No professional credit. Prerequisite: MATH 213, IE 300, IE 411. ISE graduate students and students enrolled in the Master of Science in Advanced Analytics (MCAA) are eligible to take the course.

IE 534 Deep Learning credit: 4 Hours.

This course provides an introduction to neural networks and recent advances in deep learning. Topics include training and implementation of neural networks, convolution neural networks, recurrent neural networks (LSTM and gated recurrent), residual networks, reinforcement learning, and Q-learning with neural networks. A part of the course will especially focus on recent work in deep reinforcement learning. The course will also cover deep learning libraries (e.g., Chainer, Tensorflow) and how to train neural networks using GPUs and GPU clusters. 4 graduate hours. No professional credit. Prerequisite: CS 446 or equivalent. Graduate students only.

IE 542 Cooperative Problem Solving credit: 4 Hours.

Advanced graduate seminar on problem-solving models and taxonomies, models of coordination of activity and communication among multiple agents, design of human-machine cooperative problem-solving systems, adaptive automation, and intelligent decision support. Readings drawn from work in pragmatics, distributed artificial intelligence, cognitive engineering, and related areas. 4 graduate hours. No professional credit. Prerequisite: Credit or concurrent registration in either CS 440 or PSYC 527.

IE 546 Human Factors in HCES credit: 4 Hours.

Same as EPSY 546. See EPSY 546.

IE 547 Healthcare Operations & Sys credit: 4 Hours.

Delivers an introduction of healthcare systems and strategic issues in their operations, and a background of healthcare, health systems, hospitals and elements of care centers. The course blends quantitative and qualitative material, modeling and practical perspectives, and includes demand management, forecasting methods, workforce planning, inventory and materials planning, supply chain management in healthcare, process improvement and patient flow, facility design and planning, and operations scheduling. Financial performance and metrics, as well as case studies and project work will be included. 4 graduate hours. No professional credit. Prerequisite: The student should have a Bachelors Degree in Industrial Engineering, Operations Management, or closely related disciplines. Specifically, they should have: (1) Basic Calculus sequence (Calc I, II and III at UIUC these are MATH 220, MATH 231, and MATH 241; MATH 234 can also be used); (2) Elementary Probability and Statistics (IE 300 or STAT 400, MATH 463 or equivalent); (3) Notions or Linear Algebra (MATH 415) and preference for Linear Programming (IE 310/IE 311). Priority will be given to students enrolled in the Healthcare Engineering Systems Concentration of M.Eng. degree program.

IE 590 Seminar credit: 0 Hours.

Presentation and discussion of significant developments in industrial engineering. Approved for S/U grading only. May be repeated.

IE 597 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to industrial engineering. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours. Prerequisite: Consent of instructor.

IE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in industrial engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. Approved for letter and S/U grading. May be repeated in the same or separate terms if topics vary.

IE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Informatics (INFO)

INFO Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/INFO>)

Courses

INFO 102 Little Bits to Big Ideas credit: 4 Hours.

Broad introduction to the nature, capabilities, and limitations of computing. Topics range from the way data is represented and stored, to the way today's computers work, to the general ideas of algorithms and computational efficiency, to the future of computing. Covers "Great Ideas" across various areas of the field, including, for example, cryptography and internet security, problem solving, modeling and simulation, and artificial intelligence. Same as CS 102.

This course satisfies the General Education Criteria for: Quantitative Reasoning I

INFO 199 Undergraduate Open Seminar credit: 1 to 3 Hours.

May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of instructor.

INFO 202 Social Aspects Info Tech credit: 3 Hours.

Explores the way in which information technologies have and are transforming society and how these affect a range of social, political and economic issues from the individual to societal levels. Same as IS 202 and MACS 202. Prerequisite: Sophomore standing.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

INFO 303 Writing Across Media credit: 3 Hours.

The ability to communicate effectively in multiple types of media is a crucial part of literacy in our society. In this course, students will explore the intersections of various media: print, film, images, sound, etc. Students will consider the ways in which writing—as an object and as a practice—is shaped by multimodal interactions. Also integrates practical activities with broader theoretical issues in order to provide effective strategies for designing multimedia presentations, projects, and texts that integrate photography, video, and sound. Same as WRIT 303.

This course satisfies the General Education Criteria for: Advanced Composition

INFO 310 Computing in the Humanities credit: 3 Hours.

Same as IS 310. See IS 310.

INFO 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, LAST 325, REES 325, and SAME 325. See EPS 325.

INFO 326 New Media, Culture & Society credit: 3 Hours.

Same as MACS 326. See MACS 326.

INFO 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, MACS 345, and SOC 345. See GWS 345.

INFO 390 Special Topics credit: 1 to 3 Hours.

Explores a variety of informatics topics. Topics and prerequisites vary by section; see current Class Schedule for details. May be repeated up to 6 hours if topics vary.

INFO 399 Individual Study credit: 0 to 3 Hours.

Individual study in a subject related to informatics not covered in normal course offerings. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of instructor.

INFO 403 Game Design: Virtual Worlds credit: 3 Hours.

Principles of game design, game theory, and current video game technologies. Topics include theory of game design (interaction, play, etc.), story crafting, game engines, graphics, physics simulations, AI simulation, world design, play testing, multi-player interaction models, and user interface design. Students will apply theoretical concepts taught during lectures to a semester-long video game design project of their choosing. All students must participate in the completion of a group design project. The project involves the design and creation of a multi-player, 3D video game using an existing platform/framework/engine. Students must work in groups (of 4-6 students) on the project. Groups will need to meet outside of class, as well as in class, to complete the project. Groups will present their game projects for workshops during the semester and at the end of the course. The class format is lecture, labs, individual and group activities, and discussion. Class participation is required. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

INFO 490 Special Topics credit: 1 to 4 Hours.

Topics of current interest. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Consent of instructor. Other prerequisites as specified for each topic offering. See Class Schedule.

INFO 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Introduces the field of bioinformatics and computational biology. Same as CPSC 491 and IS 483. 0 to 2 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated in separate terms to maximum of 2 undergraduate hours. Prerequisite: Consent of instructor.

INFO 500 Orientation Seminar credit: 0 or 1 Hours.

A broad introduction to faculty research in each Informatics Area. Consists of weekly presentations by Informatics faculty highlighting their recent research, practice, and related concepts. Approved for S/U grading only. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Graduate standing in any field.

INFO 510 Research Practicum credit: 4 Hours.

A one semester directed research project supervised by a member of the informatics faculty in the student's area of specialization or closely related area. These are intended to be practical research, not just literature surveys, and must have a definite output such as a paper or demonstration project. The research should be relevant to the thesis work or preparatory work to support the thesis. Informatics students must take two semesters, usually each semester should be under a different Informatics faculty member, but with the concurrence of their advising committee both may be taken under a single faculty member. Approved for S/U grading only. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Graduate standing in any Informatics.

INFO 590 Advanced Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in Informatics, intended to augment existing curriculum. See Class Schedule for specific topics and prerequisites. 1 to 4 graduate hours. No professional credit. May be repeated if topics vary. Prerequisite: Graduate Student Standing.

INFO 591 Grad Bioinformatics Seminar credit: 1 to 2 Hours.

This seminar series focuses on research in the field of bioinformatics and computational biology. Same as CPSC 591 and IS 583. 1 to 2 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor.

INFO 597 Individual Study credit: 2 to 4 Hours.

Individual study in a subject related to informatics not covered in normal course offerings. May be repeated in same term for a maximum of 8 hours or separate terms for a maximum of 16 hours if topics vary. Prerequisite: Consent of instructor.

INFO 599 Thesis Research credit: 0 to 16 Hours.

Research for Ph.D. thesis. May be repeated in separate terms. Prerequisite: Instructor approval required.

Information Sciences (IS)

IS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IS>)

Courses

IS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Undergraduate Open Seminar. May be repeated.

IS 202 Social Aspects Info Tech credit: 3 Hours.

Same as INFO 202 and MACS 202. See INFO 202. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

IS 310 Computing in the Humanities credit: 3 Hours.

Explores use and application of technology to scholarly activity in the humanities, including projects that put classic texts on the web or create multimedia application on humanities topics. Same as INFO 310. Prerequisite: Sophomore standing.

IS 351 The Design of Usable Information Interfaces credit: 3 Hours.

Examines issues of Human Computer Interaction and the design of better computer interfaces. Prerequisite: Sophomore standing.

IS 390 Special Topics in Information Studies credit: 1 to 3 Hours.

Directed and supervised investigation of selected topics in information studies that may include among others computers and culture; information policy; community information systems; production, retrieval and evaluation of scientific or social science knowledge; computer-mediated communication; and computer-supported cooperative work. May be repeated. Prerequisite: Sophomore standing.

IS 403 Literature and Resources for Children credit: 2 to 4 Hours.

Evaluation, selection and use of books and other resources for children (ages 0-14) in public libraries and school media centers; explores standard selection criteria for print and nonprint materials in all formats and develops the ability to evaluate and promote materials according to their various uses (personal and curricular) and according to children's various needs (intellectual, emotional, social and physical). 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: For undergraduates, junior or senior standing and consent of instructor.

IS 404 Literature and Resources for Young Adults credit: 2 to 4 Hours.

Evaluation, selection and use of books and other resources for young adults (ages 12-18) in public libraries and school media centers; explores standard selection criteria for print and nonprint materials in all formats and develops the ability to evaluate and promote materials according to their various uses (personal and curricular) and according to young adults' various needs (intellectual, emotional, social and physical). 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: For undergraduates, junior or senior standing and consent of instructor.

IS 409 Storytelling credit: 2 to 4 Hours.

Fundamental principles of the art of storytelling including techniques of adaptation and presentation; content and sources of materials; methods of learning; practice in storytelling; planning the story hour for school and public libraries and other public information settings; and audio, video, and digital media. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: For undergraduates, junior or senior standing and consent of instructor.

IS 418 Community Engagement credit: 3 or 4 Hours.

Community engagement refers to the multiple ways that information professionals in libraries and other settings learn about, collaborate with, and provide service and outreach to community members. Provides an introduction to, and overview of, community engagement theory and practice. A significant portion of coursework will take the form of service learning or community-based research via approved projects that match students' interests. 3 undergraduate hours. 4 graduate hours.

IS 445 Information Books and Resources for Youth credit: 2 to 4 Hours.

Evaluation, selection and use of information books and other resources for young people (ages 0-18) in public libraries and school media centers; explores standard selection criteria for factual print and nonprint materials in all formats and develops the ability to evaluate and promote nonfiction books and resources according to their various uses (personal and curricular) and according to young people's various needs (intellectual, emotional, social and physical). 3 undergraduate hours. 2 or 4 graduate hours.

IS 446 Fantasy Literature and Media for Youth credit: 2 to 4 Hours.

The selection and evaluation of historical and contemporary fantasy literature and media for library collections aimed at children and young adults. Texts examined will include books, movies, and games. 3 undergraduate hours. 2 or 4 graduate hours.

IS 451 Introduction to Network Information Systems credit: 4 Hours.

Hands-on introduction to technology systems for use in information environments. The course steps students through choosing, installing, and managing computer hardware and operating systems, as well as networking hardware and software. The course also explores alternatives for administering IT and how to assess emerging technologies and their applicability to library settings. While students are expected to have basic computer competencies per the School of Information Sciences admissions requirements, the goal of the course is to provide practical detailed knowledge of the technology for all levels of competency. The primary objective is to provide a conceptual understanding of the topics of the day through concrete hands-on examples of implementation. By learning the underlying concepts, students will be better prepared to help design networked systems that not only work well today, but also develop systems that can be easily adapted for the needs and technologies of tomorrow. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours.

IS 452 Foundations of Information Processing credit: 2 or 4 Hours.

Covers common data, document processing, and programming constructs and concepts. Focuses on problem solving and abstraction with a programming language. By the end of the course students will be able to design, develop and test a moderately complex computer program to manage full text, bibliographic records or multimedia. The course prepares students for working with applications in data analytics, data science, digital libraries, text mining and knowledge management. No prior programming background is assumed. 4 undergraduate hours. 2 or 4 graduate hours.

IS 453 Systems Analysis and Management credit: 3 or 4 Hours.

Covers how to evaluate, select and manage information systems that will be used in the daily operation of libraries and information centers. Includes the systems used by technical staff and the information consumers. Course will focus on information as a product. Attention is given to the operation of an organization as a whole and the impact of change on the integration of resources, work flow and usability. Formal methods for modeling systems, and industry practice techniques of analysis are used to address these problems and opportunities. 3 undergraduate hours. 4 graduate hours.

IS 456 Information Storage and Retrieval credit: 3 or 4 Hours.

Introduces problems of document representation, information need specification, and query processing. Describes the theories, models, and current research aimed at solving those problems. Primary focus is on bibliographic, text, and multimedia records. 3 undergraduate hours. 4 graduate hours.

IS 457 Introduction to Data Science credit: 4 Hours.

This course introduces students to data science approaches that have emerged from recent advances in programming and computing technology. They will learn to collect and use data from a variety of sources, including the web, in a modern statistical inference and visualization paradigm. The course will be based in the programming language R, but will also use HTML, regular expressions, basic unix tools, XML, and SQL. Supervised and unsupervised statistical learning techniques made possible by recent advances in computing power will also be covered. 4 undergraduate hours. 4 graduate hours.

IS 458 Instructional Strategies and Techniques for Information Professionals credit: 2 to 4 Hours.

Provides an introduction to learning theories and instructional methods used in a variety of information settings, including libraries, archives, museums, online, and educational environments. Includes an overview of theoretical and applied research and discusses relevant issues and concepts. Students will have an opportunity to design and present an instructional program. 3 undergraduate hours. 2 or 4 graduate hours.

IS 461 Museum Informatics credit: 4 Hours.

The course examines various ways that information technologies are and might be used in museums and other cultural heritage settings. Museum websites, visitor apps, interactive exhibits, and uses of digitized and federated collections are explored. Students gain an introduction to Design Thinking by working on a final project that involves the development of a novel computational resource. Students are encouraged to approach class topics from their individual backgrounds in the humanities, sciences, or social sciences. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior or senior standing and consent of instructor for undergraduates; consent of instructor for non-iSchool graduate students for on-campus sections.

IS 462 Information Assurance credit: 3 or 4 Hours.

The course provides an introduction to the concepts, technologies, practices and challenges of Information Assurance. It takes a broad view of Information Security and Privacy and covers the essential principles for the protection of information systems; the relevant technologies; organizational concerns; policies, human aspects; legal approaches; criminology; and ethical issues. Students will gain an appreciation for the difficulty of designing, developing, deploying and maintaining information systems, services and software products that are secure and comply with expectations of security and privacy. 3 undergraduate hours. 4 graduate hours.

IS 482 Writing Technologies credit: 3 or 4 Hours.

Same as ENGL 482. See ENGL 482.

IS 483 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours.

Same as CPSC 491 and INFO 491. See INFO 491.

IS 490 Advanced Topics in Information Studies credit: 2 to 4 Hours.

Directed and supervised investigation of selected topics in information studies that may include among others the social, political, and historical contexts of information creation and dissemination; computers and culture; information policy; community information systems; production, retrieval and evaluation of knowledge; computer-mediated communication. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated. Prerequisite: For undergraduates, junior standing and IS 202, or consent of instructor.

IS 501 Information Organization and Access credit: 4 Hours.

Emphasizes information organization and access in settings and systems of different kinds. Traces the information transfer process from the generation of knowledge through its storage and use in both print and non-print formats. Consideration will be given to the creation of information systems: the principles and practice of selection and preservation, methods of organizing information for retrieval and display, the operation of organizations that provide information services, and the information service needs of various user communities. 4 graduate hours. No professional credit. Required M.S. in library and information science degree core course.

IS 502 Libraries, Information and Society credit: 2 or 4 Hours.

Explores major issues in the library and information science professions as they involve their communities of users and sponsors. Analyzes specific situations that reflect the professional agenda of these fields, including intellectual freedom, community service, professional ethics, social responsibilities, intellectual property, literacy, historical and international models, the socio-cultural role of libraries and information agencies and professionalism in general, focusing in particular on the interrelationships among these issues. 2 or 4 graduate hours. No professional credit. Prerequisite: Required M.S. in library and information science degree core course.

IS 503 Use and Users of Information credit: 4 Hours.

Explores information needs and uses at a general level, addressing formal and informal information channels, barriers to information, issues of value, and impacts of technology. Examines information seeking practices of particular communities and within various environments, introducing recent approaches to user-centered system design and digital library development. Provides an overview of methods that can be used to study information needs, information seeking behavior, and related phenomena. 4 graduate hours. No professional credit. Prerequisite: IS 501.

IS 504 Reference and Information Services credit: 4 Hours.

Explores reference and information services in a variety of settings, introduces widely used print and online sources, and develops question negotiation skills and search strategies. 4 graduate hours. No professional credit.

IS 505 Administration & Management of Libraries and Information Centers credit: 4 Hours.

Designed to explore the principles that govern how organizations and institutions work, this course provides a foundation for and introduction to the theories, practices and procedures involved in the management and administration of libraries and information centers. 4 graduate hours. No professional credit.

IS 506 Youth Services Librarianship credit: 4 Hours.

Theory and techniques in planning, implementing and evaluating library programs/services for youth (age 0-18) in public and school libraries/media centers; the knowledge base, skills, and competencies needed by the library media professional in the development of all aspects of young people's reading/viewing/listening and information literacy skills. 4 graduate hours. No professional credit.

IS 507 Introduction to Bibliographic Metadata credit: 4 Hours.

Introduction to basic principles and concepts of descriptive and subject cataloging in the context of information service needs for various user communities. Explores principles, structures, standards, technologies and practices relating to organizing and creating access to print and non-print media. Includes coverage of subject analysis and descriptive practices. Introduces controlled vocabularies. 4 graduate hours. No professional credit. Prerequisite: IS 501, or concurrent enrollment in IS 501 and IS 507.

IS 508 Collection Development credit: 4 Hours.

Examines issues affecting the development and management of collections for academic, public, special, and school libraries: collection development policies, collection assessment, the marketplace, publishing, legal issues, and budget allocation; document delivery; collaboration and cooperation. 4 graduate hours. No professional credit. Prerequisite: IS 501, or concurrent enrollment in IS 501 and IS 508.

IS 510 Adult Public Services credit: 4 Hours.

The literature, history, and problems of providing library service to the general adult user; investigation of user characteristics and needs, and the effectiveness of various types of adult services. 4 graduate hours. No professional credit.

IS 511 Bibliography credit: 2 or 4 Hours.

Covers enumerative bibliography, the practices of compiling lists; analytical bibliography, the design, production, and handling of books as physical objects; and historical bibliography, the history of books and other library materials, from the invention of printing to the present. 2 or 4 graduate hours. No professional credit. Prerequisite: Consent of instructor.

IS 512 History of Libraries credit: 2 or 4 Hours.

The origins, development, and evolution of libraries and related institutions, from antiquity to the twentieth century, as a reflection of literacy, recognition of archival responsibility, humanistic achievement, scientific information needs, and service to society. Same as MDIA 512. 2 or 4 graduate hours. No professional credit.

IS 514 History of Children's Lit credit: 2 or 4 Hours.

Interpretation of children's literature from the earliest times, including the impact of changing social and cultural patterns on books for children; attention to early printers and publishers of children's books and to magazines for children. 2 or 4 graduate hours. No professional credit.

IS 515 Media Literacy for Youth credit: 2 or 4 Hours.

Provides students with theoretical knowledge and practical methods useful to librarians and other professionals working with young people and media. Building on traditional understandings of literacy, media literacy explores the consumption and production of diverse types of texts including print, images, games, and music. Topics for this course may include the role of race in media, media literacy as a catalyst for social change, and intellectual property issues related to media education. 2 or 4 graduate hours. No professional credit.

IS 516 School Library Media Center credit: 2 or 4 Hours.

School Library Information Specialists serve children and young adults (ages 5-18) in K-12 school library media centers. Students will acquire specific knowledge, skills and competencies needed to design, develop, integrate and assess curriculum and instruction with an emphasis on the information needs of K-12 students. Readings and projects provide students with opportunities to apply the practical knowledge and skills they have learned about building reading literacy, teaching information literacy skills, collaborating with teachers and integrating resources into teaching and learning. 2 or 4 graduate hours. No professional credit.

IS 518 Community Informatics credit: 4 Hours.

Survey of an emerging field that studies how local, historical communities use information and communication technologies or otherwise access, create, organize, and share information. Covers key principles for working in libraries or the wider non-profit/public sectors as individuals, organizations, and communities harness new technologies and media. Prepares both professionals and researchers, whatever their technology background. Especially useful for those interested in public or community libraries, youth services, university public engagement, social work, education, and anyone interested in working with or studying underserved communities. 4 graduate hours. No professional credit.

IS 519 Soc Sc Research in LIS credit: 4 Hours.

Introduces students to the fundamentals of doing social science research in LIS. Students will learn how to frame a research problem, choose an appropriate research method, apply it, and write up the research for presentation and publication. 4 graduate hours. No professional credit.

IS 522 Information Sources and Services in the Sciences credit: 2 or 4 Hours.

Overview of the information needs and practices of researchers, practitioners, and the general public. Detailed consideration of disciplinary literatures and print and electronic reference materials. Advanced training in addressing reference questions and research problems in the sciences. 2 or 4 graduate hours. No professional credit. Prerequisite: IS 504 or consent of instructor.

IS 523 Information Sources and Services in the Social Sciences credit: 2 or 4 Hours.

Overview of the information needs and practices of researchers, practitioners, and the general public. Detailed consideration of disciplinary literatures and print and electronic reference materials. Advanced training in addressing reference questions and research problems in the social sciences. 2 or 4 graduate hours. No professional credit. Prerequisite: IS 504 or consent of instructor.

IS 524 Information Sources and Services in the Arts and Humanities credit: 2 or 4 Hours.

Overview of the information needs and practices of researchers, practitioners, and the general public. Detailed consideration of disciplinary literatures and print and electronic reference materials. Advanced training in addressing reference questions and research problems in the arts and humanities. 2 or 4 graduate hours. No professional credit. Prerequisite: IS 504 or consent of instructor.

IS 525 Government Information credit: 4 Hours.

Aims to acquaint students with government publications, their variety, interest, value, acquisition, and bibliographic control, and to develop proficiency in their reference and research use; considers publications of all types and all governments (local, national, international) with special emphasis on U. S., state and federal governments, and on the United Nations and its related specialized agencies. 4 graduate hours. No professional credit. Prerequisite: IS 504 or consent of instructor.

IS 526 Searching Online Information Systems credit: 2 or 4 Hours.

Explores the state-of-the-art in online information retrieval systems, with particular emphasis on their use as part of reference service in libraries; acquaints students with the characteristics of both bibliographic and nonbibliographic databases; and trains students in the use of at least one currently available online retrieval system. 2 or 4 graduate hours. No professional credit. Prerequisite: IS 504 or consent of instructor.

IS 527 Literacy, Reading, and Readers credit: 4 Hours.

Reading and literacy play a central role in all areas of LIS, as well as in education, communication, literature, and writing studies. This course considers reading as a physical, social, and educational activity that is historically and culturally situated. It provides a multidisciplinary investigation into different forms of literacy and how people acquire them. Drawing upon scholarship in LIS, education, literature, history, sociology, psychology, and anthropology, and with special consideration given to age, gender, class, religion, and culture, we will expand upon traditional notions of literacy and explore the range of scholarly approaches to the study of literacy, reading, and readers. For assignments, students choose between an experiential track, which offers practical experience through volunteer work in a literacy tutoring position, or a scholarship track, which features a research project without a volunteer component. All students have the same weekly readings and share knowledge gained from their volunteer placement and research. 4 graduate hours. No professional credit.

IS 528 Adult Popular Literature credit: 2 or 4 Hours.

A survey of genre fiction, readers' advisory services, the promotion of fiction, narrative nonfiction & media collections in libraries, the social effects of reading, and publishing as a business. Course objectives include: understanding why adults read for pleasure; gaining familiarity with popular fiction genres and their authors; understanding principles and tools of readers' advisory services; examining the issues of popular fiction publishing including the impact of technology in creating new formats; and the process of acquisition, maintenance, and marketing of popular fiction in libraries. 2 or 4 graduate hours. No professional credit.

IS 530 Information Needs of Particular Communities credit: 2 or 4 Hours.

Special topics sections for in-depth study of the characteristics and information needs of specialist users of libraries; goals and objectives, policies, and services; reference and bibliographical aids; and effective services that satisfy these special needs. 2 or 4 graduate hours. No professional credit. May be repeated. Prerequisite: IS 504 or consent of instructor.

IS 531 Foundations of Data Curation credit: 4 Hours.

Data curation is the active and on-going management of data through its lifecycle of interest and usefulness to scholarship, science, and education; curation activities and policies enable data discovery and retrieval, maintain data quality and add value, and provide for re-use over time. This course provides an overview of a broad range of theoretical and practical problems in the emerging field, examining issues related to appraisal and selection, long-lived data collections, research lifecycles, workflows, metadata, and legal and intellectual property issues. 4 graduate hours. No professional credit.

IS 532 Theory & Practice of Data Cleaning credit: 4 Hours.

Data cleaning (also: cleansing) is the process of assessing and improving data quality for later analysis and use, and is a crucial part of data curation and analysis. This course identifies data quality issues throughout the data lifecycle, and reviews specific techniques and approaches for checking and improving data quality. Techniques are drawn primarily from the database community, using schema-level and instance-level information, and from different scientific communities, which are developing practical tools for data pre-processing and cleaning. Same as CS 513. 4 graduate hours. No professional credit.

IS 534 Data Policy Seminar credit: 4 Hours.

This course will survey recent policy changes and the literature regarding scientific data, including archiving, repositories, legal encumbrances and access, the lifecycle of data, and strategies for reporting data 4 graduate hours. No professional credit.

IS 537 Race, Gender, and Sexuality in the Information Professions credit: 2 Hours.

This course examines how issues of race, gender and sexuality are represented in information professions and will study how they affect, and are affected by, information technologies. Socially constructed (mis)representations (or lack of representations) of race, gender and sexual identity will be critically examined in different settings as they intersect, overlap, and impact the information use, technology practices, and the design of information resources and services in the library and information science and related fields. 2 graduate hours. No professional credit. Prerequisite: Restricted to LIS graduate students.

IS 538 Competitive Intelligence & Knowledge Management credit: 4 Hours.

This course examines two of the most popular practices of business research: Competitive Intelligence (CI) & Knowledge Management (KM). This course provides theoretical foundations and conceptual framework of CI & KM, as students acquire skills in translating research data into actionable intelligence and managing organizations' intellectual capital systematically. This course will introduce concepts of strategic analyses of businesses, and students will also explore key KM technologies widely used in the industry. 4 graduate hours. No professional credit.

IS 539 Information Consulting credit: 4 Hours.

This course is designed to provide fundamental knowledge in providing research services and also introduce the latest trends and innovative approaches in research services. Information professionals are increasingly being challenged to provide not just data but insights and recommendations that are critical for strategic decision making. Using methodologies widely adopted by professional firms and researchers, this course will cover basics of research consulting including framing research problems, developing deliverables, and presenting professionally. 4 graduate hours. No professional credit.

IS 540 Applied Business Research credit: 4 Hours.

As an experiential learning class, this course covers advanced techniques of business research with an emphasis on managing real-world client projects. Students will be assigned to teams and work with clients to identify research requirements and construct recommendations. Students will acquire critical skills in creating professional deliverables through client engagements. Students will build professional research portfolios at the conclusion of their projects. 4 graduate hours. No professional credit. May be repeated in separate terms up to 8 hours if topics vary. Prerequisite: Instructor approval required.

IS 542 Data, Statistical Models and Information credit: 4 Hours.

An introduction to statistical and probabilistic models as they pertain to quantifying information, assessing information quality, and principled application of information to decision making, with focus on model selection and gauging model quality. The course reviews relevant results from probability theory, parametric and non-parametric predictive models, as well as extensions of these models for unsupervised learning. Applications of statistical and probabilistic models to tasks in information management (e.g. prediction, ranking, and data reduction) are emphasized. 4 graduate hours. No professional credit. Prerequisite: Graduate standing.

IS 543 Sociotechnical Information Systems credit: 4 Hours.

The character, success, and costs/benefits of information technologies are socio-technical matters. Because of this, best practice for IT design and integration relies on participants' ability to understand and create for the totality of those settings, including social and technical dimensions. This course provides students with analytic tools for examining socio-technical settings and experience in applying that knowledge in IT modeling, design and management. 4 graduate hours. No professional credit.

IS 544 Library Cooperation & Networks credit: 4 Hours.

Development of library systems, with special reference to public libraries as a norm for the development of library services; detailed treatment of library standards, the growth and development of county and regional libraries, and the role of the state library and of federal legislation. 4 graduate hours. No professional credit. Prerequisite: IS 505 or consent of instructor.

IS 545 Social Justice in the Information Professions credit: 2 Hours.

This course is intended to provide a historic and contemporary overview of social justice and advocacy work in librarianship. The course will be primarily focused on activities in the United States, though international movements and perspectives will be addressed. Topics include: desegregation of libraries and professional associations; recruitment and retention of library workers from traditionally underrepresented populations; library outreach; intellectual freedom; and emerging critical theories and issues in the field. 2 graduate hours. No professional credit. Prerequisite: Graduate student.

IS 546 Intellectual Freedom and Censorship credit: 2 Hours.

Examines intellectual freedom issues throughout the United States and the world. Approaches intellectual freedom as an ethical issue based in interpretations of the First Amendment and the United Nations Declaration of Human Rights. The course encourages information professionals to view commitment to intellectual freedom as a core professional value and gives students the opportunity to develop skills and strategies needed to navigate censorship controversies in the workplace. 2 graduate hours. No professional credit. Prerequisite: IS 502 or consent of instructor.

IS 547 Information Services for Diverse Populations credit: 2 or 4 Hours.

This course is designed to prepare future information professionals to develop and provide inclusive services to underrepresented populations, and to analyze and evaluate services to ensure equality of access to information in a range of institutional settings. Through readings, discussion, guest lectures, and site visits, students will explore diversity issues that impact information services and develop skills for planning, implementing, and evaluating programs and services for addressing these issues. Specific diversity issues include race and ethnicity; education; language; literacy; disability; gender and sexual orientation; social class; national origin; physical, psychological, and learning ability; and age. 2 or 4 graduate hours. No professional credit.

IS 548 Library Buildings credit: 2 or 4 Hours.

Studies the library's physical plant in the light of changing concepts and patterns of library service; analyzes present-day library buildings (both new and remodeled), and their comparison with each other as well as with buildings of the past; examines the interrelationship of staff, collections, users, and physical plant; discussion supplemented by visits to new libraries and conference with their staffs. A two-day field trip is required. Additional fees may apply. See Class Schedule. 2 or 4 graduate hours. No professional credit.

IS 549 Economics of Information credit: 4 Hours.

The various definitions of information in economic and social terms as discussed in library and information science as well as other literatures are related to government public policies and social policies. Issues such as information as a commodity and as a public good are explored. The impact of the economics of information and related public policies on libraries and information centers is discussed from a national and international perspective. 4 graduate hours. No professional credit.

IS 555 Usability Engineering credit: 4 Hours.

The course provides an introduction to: issues in Human Computer Interaction; analysis of interfaces and their use; the interface design process as an engineering activity; designing usable interfaces under constraints; and the rapid prototyping and evaluation cycle. The course covers interface design in multiple contexts including websites, web-based applications, smartphone apps, regular computer apps and new contexts of interacting with computers. Elective course for the CAS in Digital Libraries concentration. 4 graduate hours. No professional credit.

IS 556 Implementation of Information Storage and Retrieval Systems credit: 4 Hours.

Engages the design, deployment and evaluation of information retrieval systems in a variety of environments. Emphasis is twofold. First, students will study advance methods of query and document representation and related formalisms for performing retrieval. Second, students will work with a variety of data sets and several open-source information retrieval and information analysis software suites. The course is intended to extend students' understanding of state-of-the-art search and retrieval methods. 4 graduate hours. No professional credit. Prerequisite: IS 452 (either the 2 credit hours or the 4 credit hours are acceptable) and IS 456.

IS 559 Network Analysis credit: 4 Hours.

Network Analysis has become a widely adopted method for studying the interactions between social agents, information and infrastructures. The strong demand for expertise in network analysis has been fueled by the widespread acknowledgement that everything is connected and the popularity of social networking services. This interdisciplinary course introduces students to fundamental theories, concepts, methods and applications of network analysis in a practical manner. Students learn and practice hands-on skills in collecting, analyzing and visualizing network data. 4 graduate hours. No professional credit.

IS 560 Digital Libraries credit: 4 Hours.

A comprehensive examination of the history and state-of-the-art in digital library research and practice. Focuses upon the theoretical, technological, human factors and evaluative components of digital library research and practice. Course includes an intensive reading of the literature, review of existing technologies and proof-of-concepts implementation projects. Students should have access to a personal computer on which they can experiment on their own with downloaded software tools. Students must be competent in basic computing including the installation and configuration of software packages. 4 graduate hours. No professional credit. Prerequisite: IS 501 or consent of instructor; previous or concurrent enrollment in IS 452 (either the 2 credit hours or the 4 credit hours of IS 452 are acceptable), or proof of competency in programming.

IS 561 Information Modeling credit: 4 Hours.

An introduction to the foundations of information modeling methods used in current digital library applications. The specific methods considered include relational database design, conceptual modeling, markup systems, and ontologies. The basic concepts underlying these methods are, respectively, relations, entities, grammars, and logic. Implementations include relational database design, ER/EER/UML diagrams, XML markup languages, and RDF/OWL semantic web languages. First order logic is emphasized throughout as the foundational framework for information modeling in general, and for contemporary web-based information management and delivery systems (including semantic web technologies) in particular. 4 graduate hours. No professional credit.

IS 562 Metadata in Theory & Practice credit: 4 Hours.

Combines theoretical examination of the design of metadata schema with their practical application in a variety of settings. Hands-on experience in the creation of descriptive, administrative, and structural metadata, along with their application in systems such as OAI harvesting, OpenURL resolution systems, metasearch systems and digital repositories, will help students develop a thorough understanding of current metadata standards as well as such issues as crosswalking, metadata schema, metadata's use in information retrieval and data management applications, and the role of standards bodies in metadata schema development. 4 graduate hours. No professional credit. Prerequisite: IS 501 or consent of instructor.

IS 567 Academic Librarianship credit: 4 Hours.

Introduces the higher education environment in which academic librarians and other information professionals operate in order to prepare students for leadership roles both within academic libraries and in their parent institutions. This course explores academic librarianship through a variety of lenses including: history and organization of higher education; accreditation; characteristics of students; roles of faculty and other campus professionals; and current issues and challenges. 4 graduate hours. No professional credit.

IS 568 Theological Librarianship credit: 2 or 4 Hours.

Provides an overview of the contexts, materials, services, and issues characterizing theological librarianship. Students interact with a number of librarians currently working in the field. 2 or 4 graduate hours. No professional credit.

IS 569 Financial Management credit: 4 Hours.

Designed to familiarize the student with the basic principles of library financial administration, including budgeting and planning within the mission and goals of the organization. Provides an orientation to the variety of financial management techniques appropriate for libraries and information centers, with an emphasis on sources for obtaining financial support, controlling expenditures, creating and controlling budgets, financial decision making and exploring specific financial and budgetary problems for the major operational areas of libraries - public services, technical services, information technology and facilities. 4 graduate hours. No professional credit.

IS 571 History of the Book credit: 4 Hours.

Explores the role of the book in the production and transmission of knowledge through time. Major themes include the design, materiality, and performance of reading and writing technologies. Particular attention will be paid to the graphic representation and visualization of information across media. Students will examine different approaches to the study of books and documents, including those of palaeography, diplomatics, bibliography, art history, musicology, textual criticism, digital humanities, and new media studies. 4 graduate hours. No professional credit.

IS 572 Medieval Manuscripts and Early Modern Books credit: 2 Hours.

This course explores a wide variety of medieval manuscripts from their creation in the Middle Ages to today and considers the following topics: production of manuscripts, use of books and their cultural significance, patronage and demand for books, translations, literacy, book collecting, libraries and reproduction in the modern age. The course will include visits to the Rare Book and Manuscript Library and hands-on experience with manuscripts. 2 graduate hours. No professional credit.

IS 577 Advanced Bibliographic Metadata credit: 4 Hours.

Seminar on theoretical and applied approaches to cataloging, including the creation and management of complex descriptive and subject metadata. Topics include current developments in conceptual models for bibliographic materials; information processing and mapping; socio-cultural and critical warrant; and ethical foundations of information organization. Students will engage critically with principles and practices in the application of bibliographic standards in a variety of contexts. 4 graduate hours. No professional credit. Prerequisite: IS 507 or consent of instructor.

IS 578 Technical Services Functions credit: 4 Hours.

Seminar on the principles, problems, trends, and issues of acquiring, identifying, recording, and conserving/preserving materials in all types of libraries and information centers; includes the special problems of serials management; emphasizes service aspects. 4 graduate hours. No professional credit.

IS 580 Rare Book and Special Collections Librarianship credit: 2 Hours.

Designed as a practical introduction to Rare Book and Special Collections Librarianship, to cover for the neophyte as well as the experienced librarian the many issues of these departments' responsibilities, including selection, acquisition, receiving, cataloging, processing, shelving, circulation, inter-library loan, reference, preservation and conservation, security, exhibition, publication, and so forth, including the uses of information technology. 2 graduate hours. No professional credit.

IS 581 Administration and Use of Archival Materials credit: 4 Hours.

Administration of archives and manuscript collections in various types of institutions. Theoretical principles and archival practices of appraisal, acquisition, accessioning, arrangement, description, preservation, and reference services. Topics will include: records management programs, collecting archives programs/special collections, legal and ethical issues, public programming and advocacy, and the impact of new information technologies for preservation and access. Lectures, discussion, internet demonstration, and field trips to the Special Collections Department and University Archives. 4 graduate hours. No professional credit.

IS 582 Preserving Info Resources credit: 4 Hours.

Covers the broad range of library preservation and conservation for book and nonbook materials relating these efforts to the total library environment; emphasizes how the preservation of collections affects collection management and development, technical services, access to materials and service to users. 4 graduate hours. No professional credit.

IS 583 Grad Bioinformatics Seminar credit: 1 to 2 Hours.

Same as CPSC 591 and INFO 591. See INFO 591.

IS 584 Archival Arrangement and Description credit: 2 Hours.

Provides seminar discussions and a hands-on processing experience that applies current theories and practices utilized to solve the most common problems that are encountered by today's archivists and curators when arranging and describing historical records, archives, manuscripts, and artifacts. Issues of intellectual and physical arrangement, description, and access are addressed. 2 graduate hours. No professional credit.

IS 585 International Librarianship credit: 4 Hours.

Focuses on international librarianship (how librarians communicate on international issues) and how that differs from comparative librarianship (the comparative study of library services in specific contexts). Examines how concepts such as "one-world" and "free flow of information" are valid in the international information arena; the importance of internationalizing library education; the role of international information agencies and the need for formulating information policies. Local and regional issues relating to library and information science are studied in the context of global issues. 4 graduate hours. No professional credit.

IS 586 Digital Preservation credit: 4 Hours.

Examines current problems with and approaches to digital preservation that are fundamental to the long-term accessibility of digital materials. Examines the range of current research problems, along with emerging methods and tools, and assesses a variety of organizational scenarios to plan and implement a preservation plan. Topics include basic information theory, preservation of complex digital objects; standards and specifications; sustainability and risk assessment; authenticity, integrity, quality control, and certification; and management of preservation activities. 4 graduate hours. No professional credit.

IS 587 History and Foundations of Library and Information Science credit: 4 Hours.

This required course for all first-semester library and information science (LIS) doctoral students introduces students to the historical foundations of LIS. Examinations of the interactions of socio-cultural, technological and professional factors underlying the emergence of LIS provide a basis for exploring more recent developments in theory and practice. 4 graduate hours. No professional credit. Prerequisite: LIS doctoral student in their first semester.

IS 588 Research Design in Library and Information Science credit: 4 Hours.

Provides an introduction to the design of LIS research, beginning with an in-depth consideration of the philosophical and logical underpinnings of research. A brief survey of different methods used in LIS research is followed by an exploration of research design issues through comparative hands-on exercises. Throughout the course, the emphasis will be on research design choices, especially the connections between research questions and research methods. Required Ph.D. course. 4 graduate hours. No professional credit.

IS 590 Advanced Problems in Information Sciences credit: 1 to 4 Hours.

Variety of newly developed and special topics courses on different aspects of the information sciences intended to augment the existing curriculum, offered as sections of IS 590. Additional fees may apply. See Class Schedule. 1 to 4 graduate hours. No professional credit. May be repeated.

IS 591 Practicum credit: 2 Hours.

Supervised field experience of professional-level duties in an approved library or information center. 2 graduate hours. No professional credit. Approved for S/U grading only. A maximum of 2 hours may be applied toward a degree program. Prerequisite: Completion of 14 graduate hours of information sciences courses; submission of Practicum forms.

IS 592 Independent Study credit: 2 to 4 Hours.

Permits the intermediate or advanced student opportunity to undertake the study of a topic not otherwise offered in the curriculum or to pursue a topic beyond or in greater depth than is possible within the context of a regular course. 2 to 4 graduate hours. No professional credit. May be repeated by M.S. students to a maximum of 4 graduate hours; CAS students, a maximum of 8 graduate hours; Ph.D. students, a maximum of 16 graduate hours. Prerequisite: Submission of "Request to Enroll in IS 592" form.

IS 593 CAS Project credit: 0 to 8 Hours.

Individual study of a problem in library and information science; forms the culmination of the Certificate of Advanced Study program. 0 to 8 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. Only eight hours will apply to the Certificate of Advanced Study. Prerequisite: Admission to Certificate of Advanced Study program in library and information science; submission of "Request to Enroll in IS 593 - CAS Project" form.

IS 594 Information Sciences Practice credit: 0 Hours.

Full-time or part-time practice of of any information sciences in an off-campus information science environment. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. Prerequisite: IS students only.

IS 599 Thesis Research credit: 0 to 16 Hours.

Individual study and research. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. M.S. candidates, 0 to 8 hours. Doctoral candidates, 0 to 16 hours. Prerequisite: MS students must submit a "Request to Enroll in IS 599 - Master's Thesis" form.

Integrative Biology (IB)

IB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/IB>)

Courses

IB 100 Biology in Today's World credit: 3 Hours.

Introduction to biology for the non-major. In-depth focus on three contemporary problems-maintaining a livable environment, issues of human health, and evolution. Lecture and discussion. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 103 Introduction to Plant Biology credit: 4 Hours.

Basic principles of growth and form, physiology, genetics, evolution, and ecology in plant biology. Lecture and laboratory. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 104 Animal Biology credit: 4 Hours.

Introductory zoological concepts with emphasis on the diversity and comparative anatomy of animals and the fundamentals of physiology, genetics, evolution, and behavior. Lecture and laboratory. The laboratory includes vertebrate dissection.

IB 105 Environmental Biology credit: 3 Hours.

Introduction to ecological principles in relation to understanding environmental problems; lecture and discussion emphasize impacts upon ecosystems by human activities such as air and water pollution, usage of pesticides and pest control measures, expansion of agriculture in tropics and arid regions, harvesting the oceans, and development of energy sources. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 108 The Biology of Dinosaurs credit: 3 Hours.

The origin, diversity, and extinction of dinosaurs will serve as a conceptual framework to explore fundamental principles of biology. We will consider dinosaurs as animals, examining evidence for their physiology and behavior, and how evolution and speciation produced the diversity of dinosaurs. We will relate the influence of Earth's changing environments on dinosaurs to environmental change on human timescales. We will emphasize how scientists collect and evaluate fossil data through an understanding of living organisms. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 109 Insects and People credit: 3 Hours.

Fundamentals of insect biology as reflected in human culture; insect physiology, ecology, and behavior discussed in the context of art, literature, movies, medicine, sports, law, and history. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 150 Organismal & Evolutionary Biol credit: 4 Hours.

Introduction to physiology, genetics, and evolution of organisms, and their ecology and diversity. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

IB 151 Organismal & Evol Biol Lab credit: 1 Hour.

Topics follow lecture topics in IB 150 and include labs in ecology, plant and animal function, and genetics and evolution. Designed for non-majors needing a year of biology with lab. Credit is not given for IB 151 for Integrative Biology or Molecular and Cellular Biology majors. Prerequisite: Credit or concurrent registration in IB 150.

IB 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for both letter and S/U grading. May be repeated to a maximum of 5 hours.

IB 202 Physiology credit: 3 or 4 Hours.

How animals function in acquiring, processing, and allocating resources in the face of environmental constraints. The inquiry-based laboratory emphasizes testing of hypotheses related to functioning of physiological components of the basic systems of animals. Lecture only, 3 hours; with laboratory, 4 hours. Students must complete the laboratory portion of the course to receive 4 hours of credit. The laboratory includes vertebrate dissection. Prerequisite: IB 150 and MCB 150.

IB 203 Ecology credit: 4 Hours.

The links between evolution and ecology, population dynamics, community structure and function, and ecosystem function on local and global scales. Basic ecology needed to understand environmental problems and to conserve biodiversity. Investigations in both field and laboratory included. Prerequisite: IB 150 and MCB 150.

This course satisfies the General Education Criteria for:
Advanced Composition

IB 204 Genetics credit: 3 or 4 Hours.

The fundamentals of inheritance, with an emphasis on eukaryotes. Major topics include transmission genetics, quantitative genetics, cytogenetics, genomics, genetics of development and behavior, and population genetics. Laboratory emphasizes an experimental, inquiry-based approach to modern and classical genetics. Lecture only, 3 hours; with laboratory, 4 hours. Students must complete the laboratory portion of the course to receive 4 hours of credit. Prerequisite: IB 150 and MCB 150.

IB 220 Applied Entomology credit: 3 Hours.

Same as CPSC 270 and NRES 270. See CPSC 270.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

IB 270 Evolution of Molecules & Cells credit: 5 Hours.

The major evolutionary transitions of biomolecules and cells including: energy acquisition and metabolism; information inheritance, system regulation, and genomes; the origin of life and of the prokaryotic cell, eukaryotic cell, and multicellularity. Lecture and laboratory. Credit is not given for both IB 270 and either MCB 250 or MCB 252. Prerequisite: Admission to the IB honors biology option; credit or concurrent registration in organic chemistry.

IB 271 Organismal Biology credit: 5 Hours.

Integrated study of the diversity and structure and function of plants and animals in evolutionary and environmental contexts. Conceptual themes and techniques of molecular and cellular levels of biological organization will be integrated as well. Lecture and laboratory. The laboratory includes vertebrate dissection. Credit is not given for both IB 271 and IB 202.

Prerequisite: IB 270; good standing in the honors biology option.

This course satisfies the General Education Criteria for:
Advanced Composition

IB 299 Undergraduate Special Course credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated in the same term; may be repeated in separate terms to a maximum of 6 hours.

IB 302 Evolution credit: 4 Hours.

Broad introduction to evolutionary biology, including natural selection and microevolution, phylogeny, speciation, molecular evolution, macroevolution and the fossil records. The laboratory emphasizes a survey of biodiversity and processes and patterns of evolution. Prerequisite: IB 204 or consent of instructor.

IB 303 Anatomy credit: 4 Hours.

An overview of the body structure of vertebrate animals, with a special focus on mammals including humans. Body structure will be investigated from evolutionary, developmental, and human health perspectives through lectures, in-class activities, and required laboratory dissections. Through this course, students will develop a better understanding of anatomy vocabulary, the anatomical design of vertebrates, vertebrate development, and how vertebrate anatomy and development are related to each other, to organismal function, and to human health. Prerequisite: IB 150.

IB 329 Animal Behavior credit: 3 Hours.

Introductory course emphasizing how patterns of behavior promote survival, change through evolution, and are modified by the environment. Same as ANSC 366 and ANTH 342. Credit is not given for both IB 329 and ANSC 363. Prerequisite: IB 150 and MCB 150; or consent of instructor.

IB 335 Systematics of Plants credit: 4 Hours.

Introduces the principles and methods of the identification, naming, classification, systematics, and evolution of flowering plants; includes a survey of selected flowering plant families with information on their interrelationships. Prerequisite: One of the following: IB 100, IB 101, IB 102, IB 103, or IB 150; consent of the instructor.

IB 348 Fish and Wildlife Ecology credit: 3 Hours.

Same as NRES 348. See NRES 348.

IB 360 Evolution and Human Health credit: 3 Hours.

Our health is inseparably tied to our evolutionary history. As a result, evolution is an important underpinning discipline for health professionals. This course first provides an overview of evolutionary processes, molecular evolution, human evolution, life history theory, and evolutionary-developmental biology. Second, it illustrates the application of these principles to our understanding of nutrition and metabolism, reproduction, disease and stress, and behavior. Third, it shows in practical terms how the principles of evolutionary medicine can be applied in medical practice and public health. Same as ANTH 360. Prerequisite: IB 302 or MCB 250 or MCB 244, or consent of instructor.

IB 361 Ecology and Human Health credit: 3 Hours.

Exploration of the emergence of infectious diseases and other human health issues from an ecological perspective, including vector-borne diseases, diseases spread from wildlife in terrestrial and aquatic ecosystems, and the role of pathogens and parasites in community and population ecology, food webs, and ecosystem functioning. Attention will be placed on how current and future global change and biodiversity loss will contribute to the increasing prevalence of human emerging diseases. Same as ANTH 361. Prerequisite: IB 203 or consent of instructor.

IB 364 Genomics and Human Health credit: 3 Hours.

Highlights advances in understanding the human genome, by utilizing the latest techniques in bioinformatics, i.e. acquiring, analyzing, storing, and displaying the information from the entire genome and protein sequences. The course describes the theory and practices behind modern sequencing techniques and explores the genome with a particular emphasis on the use of extensive online databases and software. Students will analyze one human disorder using bioinformatics software and databases in order to update older published literature about the genomics underpinning the disorder. Prerequisite: IB 204 or consent of instructor.

IB 368 Vertebrate Natural History credit: 4 Hours.

Introduction to the classification, life histories, adaptations, and ecology of fishes, amphibians, reptiles, birds, and mammals. Focus is on species of the Midwest region. Laboratory emphasizes identification and distribution of Illinois' vertebrate fauna. Some Saturday field trips are required. Same as NRES 368. Prerequisite: IB 203 or NRES 219 or consent of instructor.

IB 372 Ecology and Evolution credit: 5 Hours.

Integrated study of ecology, population genetics, and evolution. Conceptual themes and techniques from the molecular, cellular, and organismal levels of biology will be integrated as well. Lecture, laboratory, and field work. Credit is not given for both IB 372 and either IB 203 or IB 302. Prerequisite: IB 271; good standing in the IB honors biology option.

IB 390 Introductory Research credit: 1 to 5 Hours.

Laboratory and/or field research and/or reading supervised by faculty members in the School of Integrative Biology. Approved for S/U grading only. May be repeated. Credit is not given for more than a combined maximum of 10 hours of IB 390 or IB 490 towards graduation for IB majors. Prerequisite: Consent of instructor.

IB 401 Introduction to Entomology credit: 3 or 4 Hours.

Integrated studies of the principal morphological, physiological, ecological and behavioral relationships among insects. Lecture and laboratory. 3 or 4 undergraduate hours. 3 or 4 graduate hours. An insect collection will be required for 4 hours credit. Prerequisite: IB 150; or consent of instructor.

IB 405 Ecological Genetics credit: 3 Hours.

Study of the genetics of natural populations, stressing empirical observations and experiments. Emphasis on recent theories of genotype/environmental interactions and their relationship to evolutionary processes. Offered in alternate years. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 204; or consent of instructor.

IB 411 Bioinspiration credit: 3 Hours.

Focuses on how experts in biology and technological fields find inspiration in nature and use it as a model to make technological innovations and solve societal problems. In the future, our day-to-day living, health, and the environment will benefit from interdisciplinary teams using findings in basic biological research for technological innovation. Topics to be explored include human health, efficient architecture, cooperative control, robotics, swarm logic, and advanced biological materials. 3 undergraduate hours. 3 graduate hours.

IB 416 Population Genetics credit: 3 or 4 Hours.

Same as ANSC 446. See ANSC 446.

IB 420 Plant Physiology credit: 3 Hours.

General course concerned with plant functions, including water relations, mineral nutrition, metabolism, growth, and reproduction. Same as CPSC 484. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 103 or IB 150 and MCB 150; CHEM 232; or consent of instructor.

IB 421 Photosynthesis credit: 3 Hours.

Comprehensive description of photosynthesis. Topics include: the photosynthetic membranes, light absorption, electron and proton transfer, photophosphorylation, water oxidation, RUBP carboxylase/oxygenase, photorespiration, whole plant photosynthesis, gas exchange and atmospheric interactions, and impacts of global environmental change. Same as BIOP 432 and CPSC 489. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 420, MCB 354, MCB 450, BIOP 401, or equivalent; or consent of instructor.

IB 426 Env and Evol Physl of Animals credit: 3 Hours.

Physiological adaptations of invertebrate and vertebrate animals to diverse aquatic and terrestrial environments and the extreme habitats embodied therein. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 150; IB 202; CHEM 232; or consent of instructor.

IB 427 Insect Physiology credit: 4 Hours.

The principal physiological and biochemical functions of insects. Lecture and laboratory. Offered in alternate years. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 202 and IB 401; or consent of instructor.

IB 430 Animal Behavior Lab credit: 3 Hours.

Inquiry-driven laboratory course in animal behavior. Students work in groups to generate hypotheses, design experiments, collect and analyze data, and write up their results. Experiments will be carried out in both the field and lab. Discussions emphasize the scientific process, including hypothesis testing, and experimental design and statistics. 3 undergraduate hours. No graduate credit. Prerequisite: IB 329. For majors only.

IB 431 Behavioral Ecology credit: 3 Hours.

In-depth examination of areas of current interest at the interface of behavior, ecology, and evolution; focuses on communication, foraging, and social behavior. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 329; or consent of instructor.

IB 432 Genes and Behavior credit: 3 Hours.

Concepts, methods, and problems in the analysis of the relationship between genes and behavior, the complex neurobiological processes that mediate action on behavior, in appropriate ecological and evolutionary contexts. Same as ANTH 432, NEUR 432, and PSYC 432. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 150 and IB 204; or consent of instructor.

IB 434 Physical Principles in Biology credit: 3 Hours.

Examines the interaction between biological processes and the fundamental laws of mechanics. Covers general topics, such as structural analyses of anatomy, kinematics of movement, the behavior of organisms in fluids, and the importance of scaling, as well as specific topics, such as bird flight, fluid flow in cardio-vascular systems, and high speed predation. Lab culminates in student-designed, group projects to collect novel biomechanical data to answer questions about the organism of the students' choice. 3 undergraduate hours. No graduate credit. Prerequisite: IB 202 or consent of instructor; Physics 101 is recommended.

IB 435 Critical Evaluation of Herbal Remedies credit: 3 Hours.

One-third of Americans use health care products derived from natural sources, particularly plants, but also animals, and fungi. This course examines the biological activity of natural products with respect to their ecological functions and their therapeutic uses. Principles of evidence-based medicine will be reviewed and students will evaluate natural remedies through lectures, in-class activities, discussions, and analyses of scientific papers. Overall, students develop skills useful for evaluating alternative remedies and for communicating their conclusions to the general public. 3 undergraduate hours. No graduate credit. Prerequisite: IB 202 or IB 203 or consent of instructor.

IB 439 Biogeography credit: 3 Hours.

Spatial and temporal patterns of biological diversity and the factors that govern the distribution and abundance of taxa. This course addresses two of its subfields: historical biogeography - the origin, dispersal, and extinction of taxa and biotas; and ecological biogeography - the role physical and biotic environments have played in determining taxonomic distributions. Also explores the ecological, evolutionary, climatological, and paleontological foundations for the distribution of species and biological communities. Includes a review of many of the field's classical papers, the current synthesis of biogeographic theory, and the relevance of biogeography to modern conservation goals. Offered in alternate years. Same as ANTH 436, ESE 439, GEOG 436, and NRES 441. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 150 or other introductory biology course, or consent of instructor.

IB 440 Plants and Global Change credit: 3 Hours.

Same as CPSC 431 and NRES 431. See CPSC 431.

IB 442 Evolution of Infectious Disease credit: 3 Hours.

Same as MCB 435. See MCB 435.

IB 443 Evolutionary Ecology credit: 3 Hours.

Emphasizes the evolution of life-history strategies in plants and animals (reproductive rates, life cycles, sex ratios, breeding and mating systems) and the coevolution of animals and plants (pollination, dispersal, and herbivory). 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 203 or equivalent; IB 302; or consent of instructor.

IB 444 Insect Ecology credit: 3 or 4 Hours.

Discussion of the practical and theoretical aspects of ecology in relation to insects as individuals, populations, and communities; emphasis on the role of insects in the environment. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Offered in alternate years. Lecture only, 3 hours; with laboratory, 4 hours. Prerequisite: IB 150 and MCB 150 or consent of instructor.

IB 447 Field Ecology credit: 1 Hour.

Study of habitats in various sections of North America during spring vacation or intersession. Outdoor cooking and camping; transportation in University cars. Additional fees may apply. See Class Schedule. 1 undergraduate hour. 1 graduate hour. May be repeated to a maximum of 3 hours. Prerequisite: IB 203; or consent of instructor.

IB 449 Limnology credit: 3 or 4 Hours.

Fresh water biology; study of the lake, pond, and river with emphasis on the physical environment as well as on the plants and animals which live in fresh water. Lectures, discussions, laboratory, and field work. Students must complete the laboratory portion of the course to receive 4 hours of credit. Offered in alternate years. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IB 203 or consent of instructor.

IB 450 Stream Ecology credit: 3 or 4 Hours.

Same as CEE 432. See CEE 432.

IB 451 Conservation Biology credit: 4 Hours.

Synthesis of conservation biology with an emphasis on the preservation of biological diversity and its evolutionary potential. Laboratory includes an introduction to the use of modern molecular techniques in conservation biology, computer simulation modeling, and field conservation problem solving. Same as CPSC 436 and ENVS 420. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 203 or consent of instructor.

IB 452 Ecosystem Ecology credit: 3 Hours.

Distribution and structure of ecosystems on earth; integration of multiple disciplines to gain a holistic view of ecosystem function; ecosystem concepts as they apply to understand natural and anthropogenic environmental change. Offered in alternate years. Same as ESE 452 and NRES 462. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102 and CHEM 104; or consent of instructor.

IB 453 Community Ecology credit: 3 Hours.

The direct and indirect interactions among species that determine the structure and composition of plant and animal communities. Emphasis will be on the maintenance of species diversity and its consequences at both local and regional scales. Offered in alternate years. Same as NRES 452. 3 undergraduate hours. 3 graduate hours. Prerequisite: IB 203 or consent of instructor.

IB 461 Ornithology credit: 4 Hours.

Structure, function, ecology, behavior, and evolution of the birds of the world; laboratory devoted to anatomy and identification; and field studies devoted to identification and behavior of birds. Independent research project and two optional weekend field trips. Same as NRES 461. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 203; or consent of instructor.

IB 462 Mammalogy credit: 4 Hours.

Classification, distribution, structure, function, life history, evolution and identification of mammals. Lecture/discussions, laboratory and field work. The laboratory includes vertebrate dissection. Same as NRES 442. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 202 and IB 203; or consent of instructor.

IB 463 Ichthyology credit: 4 Hours.

Classification, anatomy, ecology, behavior, distribution, and evolution of fishes of the world. Emphasis is on morphological, ecological, and behavioral diversification of fishes in a phylogenetic context. Laboratory devoted to anatomy and identification. Same as NRES 463. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 302; or consent of instructor.

IB 464 Herpetology credit: 4 Hours.

Classification, diversity, structure, function, ecology, behavior and evolution of amphibians and reptiles. Laboratory devoted to anatomy and identification. Offered in alternate years. Same as NRES 464. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 302; or consent of instructor.

IB 467 Principles of Systematics credit: 4 Hours.

Comprehensive survey of the theory and methodology of systematics as they are applied today to all groups of organisms, with a practical experience in the acquisition and analysis of systematic data. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 302 and IB 335 or IB 468; or consent of instructor.

IB 468 Insect Classification and Evol credit: 4 Hours.

Analytical survey of the classification and evolution of the orders and principal families of insects, with practical experience in the identification of insects at these taxonomic levels; field trips required. Lecture and laboratory. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 401 or consent of instructor.

IB 471 General Mycology credit: 4 Hours.

Structure, classification, and identification of fungi, including those of economic importance. Offered in alternate years. 4 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 and MCB 150; IB 302 recommended; or consent of instructor.

IB 472 Plant Molecular Biology credit: 1 Hour.

The basic concepts and methodologies of measuring plant gene expression and gene product activity and constructing transgenic plants are presented and discussed. Serves as a gateway to specialized methodology approaches covered in IB 473, IB 474, and IB 475. Same as CPSC 462. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 150 and IB 204; or consent of instructor.

IB 473 Plant Genomics credit: 1 Hour.

Provides broad overview of structural and functional genomics, including genetic and physical mapping, whole genome sequencing, comparative genomic analysis, evolution of gene families and repetitive sequences, genome-wide expression analysis. Emphasis on structural and comparative genomics with brief introduction to functional genomics and bioinformatics. Same as CPSC 467. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 250; IB 472; or consent of instructor.

IB 474 Plant Proteomics- Metabolomics credit: 2 Hours.

Broad introduction to plant proteomics and metabolomics, including a survey of contemporary methods and their applications for protein and metabolite identifications. Proteomics will include the study of posttranslational modifications and protein-protein interactions. Metabolomics will introduce the complexities on pathway tracing and elucidation. The focus of the course is on the application of proteomic-metabolomic approaches to answer biological questions. Tours of proteomic and metabolomic facilities will occur. Same as CPSC 468. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 354; IB 472; or consent of instructor.

IB 477 Genomics for Plant Improvement credit: 2 Hours.

Same as CPSC 466. See CPSC 466.

IB 478 Advanced Plant Genetics credit: 3 Hours.

Same as CPSC 452. See CPSC 452.

IB 481 Vector-borne Diseases credit: 4 Hours.

Study of the major groups of arthropods and associated pathogens that affect the health and well-being of humans and other animals. Training will include ecology, evolutionary biology, and epidemiology of vector-borne diseases; taxonomy and identification of vector arthropods; practical skills in molecular and mathematical biology, spatial analysis and field research. Lecture will make use of technology-enhanced classroom for group-based active learning exercises to address critical challenges in vector-borne disease control. 4 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: IB 361 or IB 401 or consent of instructor.

IB 482 Insect Pest Management credit: 3 Hours.

The principles underlying the control of important insect pests of agriculture and of human and animal health; emphasis on integrated pest management involving a systems approach which combines biological, cultural, and chemical suppressive factors into ecologically sound and socially and economically acceptable technology. Lecture and laboratory. Same as CPSC 479. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 150 or equivalent; or consent of department.

IB 483 Insect Pathology credit: 3 Hours.

The general principles of pathology as they apply to insects; includes non-infectious and infectious diseases caused by viruses, bacteria, fungi, protozoa, and nematodes. Studies the epizootiology of naturally occurring insect disease and the use of insect pathogens as microbial control agents. Same as CPSC 475. 3 undergraduate hours. 3 graduate hours. Lecture in alternate years. Prerequisite: IB 150 and MCB 150 or consent of instructor.

IB 484 Paleoclimatology credit: 4 Hours.

Same as GEOL 484. See GEOL 484.

IB 485 Environ Toxicology & Health credit: 3 Hours.

Explores toxicological, environmental, public health, occupational and ecological aspects of the use and release of toxic substances in the environment; features case histories of environmental contamination that illustrate ecological, health, and social aspects of pollution; emphasizes biochemical mechanisms and ecosystem consequences. Same as CHLH 461 and ENVS 431. 3 undergraduate hours. 3 graduate hours. Prerequisite: A college chemistry course and a college biology course; or consent of instructor.

IB 486 Pesticide Toxicology credit: 3 or 4 Hours.

Examines the biological effects of major classes of insecticides and herbicides, and of selected individual fungicides, including: toxicity to nontarget organisms, persistence and fate in the environment, biotransformation, and ecological consequences. Current regulations on pesticide testing will also be presented. The mechanism of action on target species will be discussed only in relation to effects on nontarget organisms. Same as CB 434 and ENVS 433. 3 undergraduate hours. 4 graduate hours. Offered in alternate years. Prerequisite: One year of college chemistry and one year of college biology; or consent of instructor.

IB 487 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Same as ANSC 448 and STAT 458. See ANSC 448.

IB 488 Environmental Stable Isotopes credit: 3 Hours.

Stable isotopes are powerful tools for studying environmental processes, acting as tracers of resource origin, fate, and flux and integrators of system processes. The goal of this course is to provide a fundamental knowledge base and hands-on training for students to become practitioners of natural abundance and enriched stable isotope techniques. The course will focus on stable isotopes of biologically-relevant light elements (C, H, N, O, S). We will also review case studies demonstrating application of these techniques to disciplines including anthropology, animal, insect, and plant biology, biogeochemistry, biometeorology, ecosystem ecology, forensics, microbial ecology, paleoclimatology, and paleoecology. Offered in alternate years. Same as ATMS 422, GEOL 488, and NRES 478. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: CHEM 104 or equivalent; or consent of instructor.

IB 489 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under University of Illinois faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of UI faculty member supervising the work (who will have examined the proposed research plan); and approval of the school. Not available to freshman.

IB 490 Independent Study credit: 1 to 5 Hours.

Laboratory and/or field research supervised by faculty members in the School of Integrative Biology. A written report is required. 1 to 5 undergraduate hours. No graduate credit. May be repeated. Credit is not given for more than a combined maximum of 10 hours of IB 390 or IB 490 towards graduation for IB majors. Prerequisite: Consent of instructor.

IB 491 Biological Modeling credit: 3 or 4 Hours.

Same as ANSC 449, CPSC 448, and GEOG 468. See GEOG 468.

IB 492 Science Communication Skills credit: 2 Hours.

A successful career in scientific research, teaching and service requires tools and skills for communicating research. Students interested in going into science careers need to know how to write a competitive graduate school or job application, a thesis proposal for graduate research, a fellowship or grant proposal, and how to give a good scientific presentation. This course is designed to teach students these skills with targeted in and out of class exercises. 2 undergraduate hours. No graduate credit. Prerequisite: IB 203 or IB 271; AND one of the following: IB 299, IB 390, IB 490, or consent of instructor. Junior IB majors only.

IB 494 Theoretical Biology + Models credit: 4 Hours.

Biologists are increasingly using mathematical and computer-based models to complement fieldwork and experimental data. These models provide a context in which to understand and answer existing questions, and also lead us to new questions and new insights. Students will encode biological mechanisms into mathematical models, develop the skills to find solutions to these models and relate them to biological data, and analyze and discuss relevant primary literature. Examples will be drawn largely from ecology and evolutionary biology. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or MATH 221; Introductory courses in Ecology and Evolution.

IB 496 Special Courses credit: 1 to 5 Hours.

Experimental and temporary courses. Additional fees may apply. See Class Schedule. 1 to 5 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated as topics vary. Prerequisite: Consent of instructor.

IB 501 Programming for Genomics credit: 4 Hours.

Students will learn to think algorithmically by constructing a biological hypothesis, and implementing code or deploying an existing code implementation, to test that hypothesis. Students will learn to use UNIX and to program in Python, using biological data sets from high-throughput sequencing projects. We will cover major genomics approaches and the algorithms that underlie them, including K-mer analysis, genome and transcriptome assembly, databases and SQL, and visualization techniques. Same as CPSC 501. 4 graduate hours. No professional credit. Prerequisite: Courses in Ecology, Evolution, and Molecular Biology, or consent of instructor.

IB 502 Biological Networks credit: 3 Hours.

This taxon-neutral course prepares students to organize, integrate and analyze complex, multi-scale data that describe biological systems. It provides training, collecting, and processing "omic"-scale data (genomics, transcriptomics, proteomics, metabolomics) into network models, and analyzing these models using current in silico tools to determine biological significance and function of the resulting network interactions. Students will be introduced to Gene Ontology and open source tools for data integration and visualization, including: Cytoscape, Multiple Experiment Viewer, Mapman, and KEGG 3 graduate hours. No professional credit. Prerequisite: Graduate student status or consent of instructor. At least one upper level undergraduate course in molecular biology or its equivalent.

IB 503 Methods/Application in Biotech credit: 3 Hours.

Broad introduction to interdisciplinary methods in and their application to biotechnology research. Draws heavily on the expertise of biotechnology core facilities on campus. Includes tours, data analysis and manipulation, discussion of current literature, and exploration of industry applications. Topics will focus on DNA sequencing, gene expression, bioinformatics, transformation, and cellular imaging. Prerequisite: Courses in molecular genetics (e.g. MCB 250 or IB 204 or IB 472) and cell biology (e.g. MCB 252) or consent of instructor. MCB 450 or MCB 354 or equivalent background in biochemistry is recommended.

IB 504 Genomic Analysis of Insects credit: 3 Hours.

Comprehensive and integrated presentation of insect genomic analysis from the molecular level to that of the population; concepts are applied to certain aspects of insect population regulation. Offered in alternate years. Prerequisite: IB 204 or consent of instructor.

IB 505 Bioinformatics & Systems Biol credit: 4 Hours.

Same as CPSC 567. See CPSC 567.

IB 506 Applied Bioinformatics credit: 4 Hours.

Same as ANSC 542 and CPSC 569. See ANSC 542.

IB 507 Statistical Genomics credit: 3 or 4 Hours.

Same as ANSC 545 and CPSC 545. See ANSC 545.

IB 508 Multivariate Biostatistics credit: 4 Hours.

Same as PATH 528. See PATH 528.

IB 510 Discussions in Plant Biology credit: 0 to 2 Hours.

All graduate students in plant biology, except those with conflicting teaching assignments, are required to register in and attend the general seminar. Approved for both letter and S/U grading. No credit given except to those students presenting the results of their Ph.D. thesis research or industry research projects in the PSM program.

IB 513 Disc in Plant Physiology credit: 1 Hour.

Approved for letter and S/U grading. May be repeated.

IB 516 Ecosystem Biogeochemistry credit: 4 Hours.

Same as NRES 516. See NRES 516.

IB 524 Plant Biochemistry credit: 4 Hours.

Same as CPSC 588 and HORT 588. See CPSC 588.

IB 526 Seminar in Entomology credit: 0 to 1 Hours.

Discussions, reviews, and appraisals of special topics in the field of entomology. Approved for both letter and S/U grading. May be repeated to a maximum of 4 hours.

IB 531 Emerging Infectious Diseases credit: 4 Hours.

Examines new human infectious diseases, such as Asian flu, West Nile virus, AIDS, and Lyme disease, that are a major threat to human health. Explores the historic links among human health, disease pathogens, and ecology, as well as the origin of each new disease and how it is regulated by specific environmental conditions. Also explores how global change and biodiversity loss will increase the possibility of future ecological epidemic and the steps needed to reduce their effects on human health. In this course, students also produce teaching materials for their classrooms.

IB 532 Sustainability & Global Change credit: 4 Hours.

Examines how on-going global change affects sustainability. Explores climate change, global warming, alternative biofuels, future food security, and conservation of biodiversity, and their effects on society. Examines how to make better use of the Earth's natural resources with little to no damage to the ecosystem, while taking into account ever mounting demands for energy resources and climate change. In this course, students also produce teaching materials for their classrooms.

IB 533 Human Genome & Bioinformatics credit: 4 Hours.

Highlights advances in understanding the human genome, utilizing the latest techniques in bioinformatics, i.e. acquiring, analyzing, storing, and displaying the information from the entire genome and protein sequences. Explores the latest laboratory techniques, as well as the use of extensive online databases and software. Students explore the significance of sequencing the human genome, applying bioinformatics to the genome, and realizing its potential to understand human health, disease, and the place of humans in the large ecosystem. In this course, students also produce teaching materials for their classrooms.

IB 534 Evolution and Medicine credit: 4 Hours.

Explores how human health is inseparably tied to our evolutionary history. Principles that apply to human health include evolutionary processes, e.g. natural selections, as well as molecular evolution, human evolution, and evolutionary-developmental biology. Explores how these principles can be applied to understand human nutrition and metabolism, reproduction, disease and stress, and behavior. These principles assist physicians, researchers, and the general public in understanding how natural selection has acted on humans over time and left us vulnerable to disease and injury. In this course, students also produce teaching materials for their classrooms.

IB 535 Biology and Tech Innovation credit: 4 Hours.

Focuses on how experts in biology and technological fields use bio-inspiration to create technology innovations to solve human problems. Classic examples, such as how the observation that seeds with barbs stick to animal fur led to Velcro, are explored. Students use and expand upon their current biological knowledge to explore new ways to create biologically-based sustainable innovations. Topics to be explored include nest building as inspiration for energy-efficient architecture, plant chemistry as inspiration for green manufacturing, animal locomotion and sensing as inspiration for robots, and the advances in understanding of biological nanostructures and nanoprocesses as inspiration for nanotechnology. In this course, students also produce teaching materials for their classrooms.

IB 536 Evolutionary Biology credit: 4 Hours.

Examines fundamental topics for understanding evolution, the unifying principle for all of biology. Evidence for evolution is all around us, and learning how to view life through 'evolutionary tinted' lenses greatly changes our perspective. Emphasizes the creative ways that scientists are gaining insights into how and why life evolved as it is. Provides avenues to use in the classroom to provide scholarly evidence for the basis of evolution to refute non-academic arguments. Students will produce teaching materials for their classrooms. 4 graduate hours. No professional credit. Prerequisite: For graduate students in the Online Masters of Science Teaching Biology program (OMST).

IB 542 Environmental Plant Physiology credit: 4 Hours.

The interaction of plants and environment at the level of the whole organism, extending to the cell and the community; emphasis on heat and mass transfer, plant and soil potentials, and effects of light on growth. Same as CPSC 538. Offered in alternate years. Prerequisite: IB 420; consent of instructor.

IB 545 Fish and Wildlife Ecol Seminar credit: 2 Hours.

Modern ecological principles and concepts to specific problems in fisheries and wildlife. Approved for letter and S/U grading. Offered in alternate years.

IB 546 Topics in Ecology & Evolution credit: 1 Hour.

Speaker seminar series featuring discussion, review and critical analysis of general concepts and specific problems in ecology and evolution. Approved for both letter and S/U grading. May be repeated.

IB 590 Individual Topics credit: 2 to 12 Hours.

Individual topics in research conducted under the supervision of faculty members in the School of Integrative Biology. Designed for graduate students who would like to become more familiar with specialized fields of study prior to committing themselves to a specific area for their doctorate degree. Approved for S/U grading only. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

Italian (ITAL)

ITAL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ITAL>)

Courses

ITAL 101 Elementary Italian I credit: 4 Hours.

For students who have no credit in Italian.

ITAL 102 Elementary Italian II credit: 4 Hours.

Continuation of ITAL 101. Prerequisite: ITAL 101 or one year of high school Italian.

ITAL 103 Intermediate Italian I credit: 4 Hours.

Rapid reading, review of grammar, composition, and conversation. Prerequisite: ITAL 102 or two years of high school Italian.

ITAL 104 Intermediate Italian II credit: 4 Hours.

Continuation of ITAL 103. Prerequisite: ITAL 103 or three years of high school Italian.

ITAL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time to a maximum of 6 hours. Prerequisite: Consent of departmental honors adviser in Italian.

ITAL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 5 hours.

ITAL 200 Italian Studies in a Mediterranean Context credit: 3 Hours.

Introduces students to the study of Italy and Italian culture, emphasizing Italy's central position in Mediterranean networks of cultural, economic and linguistic exchange. Prerequisite: ITAL 104 or consent of instructor.

ITAL 210 Practical Review Italian credit: 3 Hours.

Reviews major challenges in Italian grammar, with particular emphasis on the verb system (major tenses and moods, morphology, and aspect) and areas of contrast with English. Prerequisite: Credit or concurrent enrollment in ITAL 104 or equivalent.

ITAL 220 Contemporary Italian, Oral and Written credit: 3 Hours.

Training in oral-aural skill and in writing.

ITAL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

The development of Medieval Italian civilization in a literary context from the Sicilian School of love poetry to the early Renaissance in Florence; lectures and readings are in English. Same as CWL 240 and MDVL 240. This course satisfies the General Education Criteria for: Humanities - Lit Arts

ITAL 270 Introduction to Italian Cinema credit: 3 Hours.

Introduction to major films, movements and directors in the Italian tradition, paying particular attention to questions of national identity, gender and political and social history. Knowledge of Italian not required. This course satisfies the General Education Criteria for: Humanities - Lit Arts

ITAL 310 Advanced Grammar credit: 3 Hours.

Study of the structure of modern Italian in both its phonological and syntactic aspects for the student who already has a functional command of the language, with an emphasis on developing ability to analyze and interpret grammatical structures. Prerequisite: ITAL 210 or consent of instructor.

ITAL 380 Ital Business & Profess credit: 3 Hours.

Builds preexisting language skills through the study of Italian business practices: financial systems, transactions, banking, import/export and commercial correspondence. Prerequisite: ITAL 210 or equivalent.

ITAL 390 Spec Topics Italian Studies credit: 2 to 4 Hours.

Selected substantive readings for independent study on a given special topic of Italian literature, culture, language, or linguistics. May be repeated. Prerequisite: ITAL 104 and consent of instructor.

ITAL 406 Italian Culture and Globalization credit: 3 or 4 Hours.

Introduction to factors that have shaped present-day Italy, with particular attention to globalization; basic concepts contributing to understanding its present social and cultural development in a European and global context; taught in Italian. 3 undergraduate hours. 4 graduate hours. Prerequisite: ITAL 200 or ITAL 220, or consent of instructor.

ITAL 413 Dante credit: 3 or 4 Hours.

Interpretation of Dante's Divine Comedy with special attention to its position in the medieval world; a knowledge of Italian not required. Same as CWL 413 and MDVL 413. 3 undergraduate hours. 4 graduate hours.

ITAL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.

Studies in Petrarch and Boccaccio; nonmajors in Italian may read the works in translation; lectures are in English. Same as CWL 414 and MDVL 414. 3 undergraduate hours. 4 graduate hours. Prerequisite: Fulfillment of campus rhetoric requirement.

ITAL 415 Europe and the Mediterranean credit: 3 or 4 Hours.

Same as EURO 415 and PS 415. See EURO 415.

ITAL 418 Language&Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, LING 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

ITAL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.

Reading of masterpieces of the 1400 and 1500s and a study of their predecessors and influence; nonconcentrators in Italian may read the works in translation; lectures are in English. Content rotates. Same as CWL 420 and MDVL 420. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours with consent of instructor. Prerequisite: Fulfillment of campus rhetoric requirement.

ITAL 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, LING 462, PORT 435, RMLG 435 and SPAN 435. See SPAN 435.

ITAL 440 Modern Italian Novel credit: 3 or 4 Hours.

An in-depth examination of a particular writer, genre, form or period in modern Italian literature (such as Italo Calvino, Italian detective fiction, or the contemporary Italian novel). See online schedule for specific topic. 3 undergraduate hours. 4 graduate hours. Prerequisite: ITAL 200 or consent of instructor.

ITAL 450 Italian Syntax & Phonology credit: 3 Hours.

Introduction to the essential syntactic and phonological structures of Modern Standard Italian in combination with appropriate discussion of corresponding linguistic concepts. 3 undergraduate hours. 3 graduate hours. Prerequisite: ITAL 310 or consent of instructor.

ITAL 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, PORT 460, SLS 460, and SPAN 460. See EIL 460.

ITAL 470 Topics in Italian Cinema credit: 3 or 4 Hours.

An in-depth examination of a particular director, genre or school from the Italian cinematic tradition (e.g., Fellini, Italian horror, or noorealism); topic will vary each semester. No knowledge of Italian is required. Same as MACS 470. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours.

ITAL 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, LING 489, PORT 489, and SPAN 489. See LING 489.

ITAL 490 Italian Critical Theory credit: 3 or 4 Hours.

An advanced introduction to the critical theory of major Italian thinkers and philosophers (e.g., Gramsci, Negri, Agamben, Esposito). 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: At least two 200-level courses in Italian, or consent of instructor.

ITAL 491 Honors Senior Thesis credit: 2 Hours.

For candidates for honors in Italian. No graduate credit. May be repeated.

ITAL 505 Teaching College and Secondary Foreign Language credit: 4 Hours.

Same as FR 505. See FR 505.

ITAL 510 Seminar in Italian Studies credit: 4 Hours.

Graduate seminar in Italian culture, literature, linguistics, or critical theory. Topics vary. May be repeated in the same semester to a maximum of 8 hours as topics vary. May be repeated in separate semesters to a maximum of 16 hours as topics vary.

ITAL 530 Introduction to Research and Text Criticism credit: 4 Hours.

Same as FR 530. See FR 530.

ITAL 559 Sem Romance Ling credit: 4 Hours.

Same as FR 559, LING 559, PORT 559, RMLG 559, and SPAN 557. See SPAN 557.

ITAL 573 Professional/Academic Writing credit: 4 Hours.

Same as GER 553, PORT 573, and SPAN 573. See SPAN 573.

ITAL 580 Classroom Lang Acquisition credit: 4 Hours.

Same as EIL 580, FR 580, GER 580, PORT 580, SLS 580, and SPAN 580. See SPAN 580.

ITAL 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, EPSY 563, FR 584, GER 584, LING 584, PORT 584, and SPAN 584. See SPAN 584.

ITAL 588 Sem Second Lang Learn credit: 4 Hours.

Same as EALC 588, FR 588, GER 588, LING 588, PORT 588, and SPAN 588. See SPAN 588.

ITAL 595 Spec Topics in Italian credit: 1 to 4 Hours.

Independent study/research under the direction of a faculty member. May or may not fulfill requirements for a particular degree program in Spanish, Italian, and Portuguese. Consult graduate advisor. May be repeated in same or subsequent terms to a maximum of 8 hours.

ITAL 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Japanese (JAPN)

JAPN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JAPN>)

Courses

JAPN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

JAPN 201 Elementary Japanese I credit: 5 Hours.

Introduction to Japanese, spoken language skills and the reading and writing of hirigana, katakana, and kanji.

JAPN 202 Elementary Japanese II credit: 5 Hours.

Continuation of JAPN 201. Prerequisite: JAPN 201.

JAPN 203 Intermediate Japanese I credit: 5 Hours.

Prerequisite: JAPN 202 or equivalent.

JAPN 204 Intermediate Japanese II credit: 5 Hours.

Continuation of JAPN 203. Prerequisite: JAPN 203 or equivalent.

JAPN 305 Advanced Japanese I credit: 5 Hours.

Readings in graded Japanese texts with oral practice designed to help students acquire the sophisticated vocabulary and grammatical structures of written Japanese. Prerequisite: JAPN 204 or placement test for students who have Japanese background or who have previously taken a course(s) in Japanese.

JAPN 306 Advanced Japanese II credit: 5 Hours.

Continuation of JAPN 305. Prerequisite: JAPN 305 or placement test.

JAPN 407 Intro to Classical Japanese credit: 3 Hours.

Introduction to the grammar, morphology, vocabulary, and style of classical Japanese language as found in premodern Japanese literary and historical writings. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of modern Japanese language or equivalent.

JAPN 408 Readings in Classical Japanese credit: 3 Hours.

Readings in texts in classical Japanese selected from historical and literary sources of the premodern period. Attention is given to grammatical, morphological, and stylistic features and to problems in translation. Introduction to reading of classical syllabaries and manuscript texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: JAPN 407 or equivalent.

JAPN 409 Social Science Rdgs Japanese credit: 3 or 4 Hours.

Readings in Japanese social science materials, including articles from newspapers, periodicals, and learned journals. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours. Prerequisite: JAPN 306 or equivalent.

JAPN 440 Fourth Year Japanese I credit: 3 or 4 Hours.

Further developments of skills in sophisticated Japanese language use, including readings in authentic materials in a wide variety of writing styles, writing for formal occasions, and speaking appropriately according to the situation while using precise vocabulary in correct level of speech. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 306 or equivalent.

JAPN 441 Fourth Year Japanese II credit: 3 or 4 Hours.

Continuation of JAPN 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 440 or equivalent.

JAPN 460 Japanese as a 2nd Language I credit: 3 or 4 Hours.

Introduction to basic theory of Japanese pedagogy; teaching methods, and theory and practice of teaching Japanese grammar. 3 undergraduate hours. 4 graduate hours.

JAPN 461 Japanese as a 2nd Language II credit: 3 or 4 Hours.

Application of pedalinguistics of Japanese; theory and method of instructional exercise development for teaching Japanese in practice teaching of Japanese in the classroom. 3 undergraduate hours. 4 graduate hours. Prerequisite: JAPN 460 or equivalent.

JAPN 490 Readings in Japanese Lit credit: 3 or 4 Hours.

Guided readings in Japanese literature in the vernacular with regular individual conferences and a paper. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Reading knowledge of Japanese and consent of instructor.

JAPN 499 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in the Japanese language, literature, and civilization, and in other academic areas appropriate to the student's course of study. No graduate credit. Approved for letter and S/U grading. Prerequisite: Junior standing and a GPA of 3.00.

Jewish Studies (JS)

JS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JS>)

Courses

JS 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, PHIL 108, REL 108, and SOC 108. See REL 108. This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Western

JS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Faculty offer seminars in a range of areas that provide an opportunity for undergraduates to be exposed to key dimensions of Jewish Studies. May be repeated in the same or separate terms to a maximum of 10 hours.

JS 201 History of Antisemitism credit: 3 Hours.

Studies the negative representations of Judaism and Jews from antiquity to the modern world. Topics include: Greco-Roman concepts of the Jewish religion; medieval Christian symbolization of the demonic Jew; Jews and negative attitudes to capitalism; blood purity and blood libel; the rise of racial prejudice in the modern nation state; totalitarianism and genocide; antisemitism and anti-Zionism. Same as REL 212. This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Western

JS 209 Jewish American Literature credit: 3 Hours.

Using a combination of careful reading with historical contextualization we will discuss how the field of Jewish American literature emerged, and get a sense of where it might be heading. We will address topics such as what makes a literary work Jewish American other than the Jewishness of its author; in what ways the field of Jewish American literature has changed over time; and what might be the underlying trends/themes of this field of literature. Same as CWL 209 and ENGL 222.

JS 211 War & Peace in Israeli Lit credit: 3 Hours.

Same as CWL 211 and SAME 211. See CWL 211.

JS 220 Jewish Storytelling credit: 3 Hours.

Same as CWL 221, ENGL 223, REL 220, and YDSH 220. See YDSH 220. This course satisfies the General Education Criteria for: Humanities - Lit Arts
Cultural Studies - Western

JS 252 The Holocaust credit: 3 Hours.

Same as HIST 252. See HIST 252. This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Western

JS 300 Jewish Chicago credit: 3 Hours.

The history of Jewish Chicago from 1820 to the present will be taught in Chicago during Summer I. The class includes excursions all over the city as well as class time at the Newberry Library. Topics of study include immigration, Jews in the labor movement, Jewish political activism, Jewish religious practice, Jewish art, literature, and Yiddish theater. The course will contextualize our study of Jewish Chicago in terms of American history, urban history, gender history, and labor history.

JS 320 Lit Responses to the Holocaust credit: 3 Hours.

Same as CWL 320, ENGL 359, REL 320, and YDSH 320. See YDSH 320. This course satisfies the General Education Criteria for: Humanities - Lit Arts Cultural Studies - Western

JS 335 Middle East 1566-1914 credit: 3 Hours.

Same as HIST 335. See HIST 335.

JS 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Same as CWL 341, REL 340 and SAME 341. See CWL 341.

JS 399 Special Topics credit: 3 Hours.

Faculty offer special topics in their areas of expertise that provide an opportunity for undergraduates to be exposed to some of the most current developments in faculty research. May be repeated in the same or separate term to a maximum of 9 hours.

JS 442 History of Early Judaism credit: 3 Hours.

Same as HIST 432 and REL 442. See REL 442.

JS 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.

Same as CWL 454 and SAME 454. See CWL 454.

JS 495 Independent Study credit: 2 to 4 Hours.

Readings in selected fields in consultation with the instructor along with the completion of a specified writing assignment. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated in the same term to a maximum of 4 undergraduate hours or 8 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours and 16 graduate hours. Prerequisite: Consent of instructor.

JS 496 Topics in History of Judaism credit: 3 or 4 Hours.

Same as REL 496. See REL 496.

JS 501 Grad Intro to Jewish Culture credit: 4 Hours.

Interdisciplinary graduate-level introduction to the study of Jewish culture and society. Focuses on the significations of Jewishness in modern history through a wide range of recent writings by historians, anthropologists, philosophers and cultural theorists. Key themes will include the relationship of Judaism to the other monotheistic religions, the varied pathways of Jewish modernization, the construction of Jewish Otherness in Europe and beyond, and responses to the Holocaust and the creation of the state of Israel.

JS 502 Holocaust Genocide Studies credit: 4 Hours.

Interdisciplinary graduate-level introduction to Holocaust, Genocide, and Memory Studies, focusing on the origins and unfolding of genocidal violence and the legacies of genocide in collective memory, literature, and artistic representation. Key themes will include the relationship between perpetrators, victims, and bystanders; the problems of historical comparison; trauma and testimony; violence and representation.

JS 551 Seminar in Jewish Culture credit: 4 Hours.

Analysis of selected topics of special interest in Jewish Studies. May be repeated in the same term to a maximum of 8 hours. May be repeated in separate terms to a maximum of 16 hours. Prerequisite: Consent of instructor.

JS 552 Seminar Holocaust & Genocide credit: 4 Hours.

Analysis of selected topics of special interest in Holocaust, Genocide, Memory Studies. May be repeated in the same term to a maximum of 8 hours. May be repeated in separate terms to a maximum of 16 hours. Prerequisite: Consent of instructor.

Journalism (JOUR)

JOUR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/JOUR>)

Courses

JOUR 199 Undergraduate Open Seminar credit: 1 to 3 Hours.

A changing array of courses focusing on special topics in journalism. Approved for Letter and S/U grading. May be repeated to a maximum of 12 hours in separate semesters, if topics vary.

JOUR 200 Introduction to Journalism credit: 3 Hours.

Discussion of the history, freedom, technologies, ethics, and functions of the news media. Training in clear, descriptive writing techniques, using journalistic models. Prerequisite: Completion of Composition I general education requirement.

This course satisfies the General Education Criteria for: Advanced Composition

JOUR 205 History of American Journalism credit: 3 Hours.

Surveys the history of the field of journalism since pre-colonial times. Includes the evolution of the media in the United States and the evolution of cultural concepts concerning the media, including rights granted under the First Amendment. Credit is not given for JOUR 205 if credit for JOUR 405 has been earned.

JOUR 210 Newsgathering Across Platforms credit: 4 Hours.

Fundamentals of journalistic reporting and writing across print, broadcast and digital platforms. Credit is not given for JOUR 210 if credit for JOUR 400 has been earned. Prerequisite: JOUR 200.

JOUR 215 Multimedia Reporting credit: 4 Hours.

Designed to acquaint students with the fundamentals of digital photography, video, audio and multimedia as it applies to journalism. Instruction will include conceptual frameworks and techniques to create multimedia journalism content; the conception, planning and creation of multimedia projects; coverage of events with audio, video and photographs; the technical and creative aspects of digital photography, video, and multimedia; delivery platforms for multimedia content including the Web and evolving communication technologies. Credit is not given for JOUR 215 if credit for JOUR 410 has been earned. Prerequisite: JOUR 210 or consent of Journalism Department.

JOUR 220 News Editing credit: 4 Hours.

Editing and headline writing, news judgment, ethics and leadership. Credit is not given for JOUR 220 if credit for JOUR 320 has been given.

JOUR 250 Journalism Ethics & Diversity credit: 3 Hours.

Focuses on media decision-making and news judgment, specifically ethics and diversity in newsgathering with regard to scope, privacy, bias, economic concerns, and accountability. Examines real-life news decisions and the thoughts of journalists who lived through famous and infamous ethics situations. Key provisions in the Society of Professional Journalists Code of Ethics regarding use of diverse voices will be discussed and applied in practical ways, and both students and the instructor will find current examples of ethics issues to present to the class. Diversity education is part of the required standard for achieving journalism accreditation from the discipline's national accrediting body.

JOUR 293 Digital Photography for Everyone credit: 3 Hours.
Foundations of digital photography, techniques to produce photographs; the conception and planning of pictures; the pictorial coverage of locations, events and human interest situations; and the planning and execution of photos in print, on the web and other electronic media are the focus of this hands-on course. You will develop a practical understanding of the potentials and realities of photographic communication to better use them for full expression of your vision. Approved for Letter and S/U grading.

JOUR 311 Media Law credit: 3 Hours.
Detailed analysis of the theories of freedom of expression, the legal doctrines of greatest concern to mass communicators, and contemporary issues related to free speech and press, including libel, copyright, and news-gathering in a digital age. Credit is not given for JOUR 311 if credit for JOUR 411 has been earned.

JOUR 315 Adv Public Affairs Reporting credit: 4 Hours.
Study and extensive practice of in-depth public affairs reporting - its concepts, techniques, traditions, ethics, and social obligations. Credit is not given for JOUR 315 if credit for JOUR 415 has been earned. Prerequisite: JOUR 210.

JOUR 320 News Editing credit: 4 Hours.
Editing and headline writing, news judgment, ethics and leadership. Credit is not given for JOUR 320 if credit for JOUR 420 has been earned.

JOUR 335 Audio Journalism credit: 4 Hours.
Reporting and writing news for audio programs and websites. Credit is not given for JOUR 335 if credit for JOUR 435 has been earned. Prerequisite: JOUR 210.

JOUR 340 Video Reporting & Storytelling credit: 4 Hours.
Introduces news studio and field production and principles of field reporting and editing of news video; principles of planning, producing, and directing news and public affairs programs. Credit is not given for JOUR 340 if credit for JOUR 440 has been earned. Prerequisite: JOUR 210.

JOUR 360 The Media and You credit: 3 Hours.
The course will survey contemporary public relations to clarify several elements: publicity, advertising, branding, press agency, public affairs, issues management, lobbying, investor relations and development. Students will learn to work with the press and the ethical dimensions of the relationships that form. The course will employ real and hypothetical case studies. Teams will develop strategies to reach a PR goal. Each team will make presentations to be judged by real clients or the instructor and guest judges.

JOUR 361 Readings in Sports Journalism credit: 3 Hours.
Books about sports and sports personalities are perennial best-sellers. Students in this course will read, analyze and discuss long-form sports journalism. Some of the books and stories are considered classics of the form; others may be fairly recent and news-worthy publications. All will represent varied approaches to sports journalism in books, magazines and digital experiments and forms.

JOUR 421 Editing for Publication credit: 3 Hours.
Principles and practice of editing across disciplines. Content includes style, grammar, punctuation, word usage, clarity and brevity. Both print and digital environments are considered. Students will edit text and display copy such as headlines and photo captions. 3 undergraduate hours. 3 graduate hours. Credit is not given for both JOUR 421 and JOUR 320. Journalism majors should enroll in JOUR 320. Prerequisite: Advanced Composition.

JOUR 425 Multimedia Editing and Design credit: 4 Hours.
Principles of visual reporting and editing; seeks to instill application-level competency in a wide array of non-linear, non-narrative techniques of journalistic storytelling across various media. 4 undergraduate hours. 4 graduate hours. Prerequisite: JOUR 215.

JOUR 445 Video Storytelling 2-Producing credit: 4 Hours.
Advanced techniques for reporting, producing, writing, shooting, and editing video news stories and for producing and airing regularly scheduled news programs on deadline. 4 undergraduate hours. 4 graduate hours. Prerequisite: JOUR 340.

JOUR 450 Media and Public Opinion credit: 3 Hours.
Theory of public opinion and communications; relation of communication systems to public opinion, social systems, and the political order. 3 undergraduate hours. 3 graduate hours. Prerequisite: Completion of Quantitative Reasoning I.

JOUR 451 Research Methods in Journalism credit: 3 Hours.
Introduction to social science principles of measurement, sampling, statistical inferences and logic of research design in collection, analysis and interpretation of information used in journalism and mass media. 3 undergraduate hours. 3 graduate hours. Prerequisite: Completion of Quantitative Reasoning I requirement. JOUR 200 recommended, or graduate standing. This course satisfies the General Education Criteria for: Quantitative Reasoning II

JOUR 452 Great Books of Journalism credit: 3 Hours.
Books written by journalists have had great impact on U.S. public policy and understanding, covering such topics as corporate power, political corruption, rural poverty, the atomic bombing of Japan, Watergate, and a soldiers-eye view of war. From hard-edged investigations to nonfiction literature, the readings broaden and deepen understanding of the power and purpose of journalism beyond breaking news and celebrities. Readings from eight groundbreaking books, assessment of social and professional impact, ethical issues, reporting and writing approaches, and extensive class discussion. 3 undergraduate hours. 3 graduate hours. This course satisfies the General Education Criteria for: Humanities - Lit Arts
Cultural Studies - US Minority

JOUR 453 Crisis Communications credit: 3 Hours.
Students will take on the role of a public relations/public affairs officer to learn how to deal with the media when managing a crisis for a client, whether a multinational corporation or a professional athlete. Students will use case studies of actual events to examine how the media dealt with the crisis. Students will get a look at the inner workings of a major PR firm devoted to telling the truth while managing the message. 3 undergraduate hours. 3 graduate hours.

JOUR 454 Propaganda & the News Media credit: 3 or 4 Hours.
The course examines techniques and processes of propaganda in a democratic society. It draws from contemporary theories of influence and persuasion to identify propaganda in the context of modern journalism, to delineate differences between propaganda and information, and to assess the impact of propaganda on democratic decision making in the digital age. Particular attention is given to the news media practices and consumption patterns that unwittingly facilitate strategies of modern propagandists. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior or Graduate standing.

JOUR 460 Special Topics credit: 1 to 4 Hours.
A changing array of special projects, research or reading in journalism. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or subsequent semesters if topics vary.

JOUR 470 International Reporting credit: 3 Hours.

Role of international news in daily lives. Examines those who report it and those who pioneered it. Students monitor how U.S. and international media cover selected countries and learn how to write international news. In selected semesters, students may research issues and life in a foreign country in preparation for an international reporting trip. 3 undergraduate hours. 3 graduate hours.

JOUR 471 Science Journalism credit: 3 Hours.

Students will explore media coverage of science. They will examine the interconnections of scientific advances and public understanding. The seminar format will allow students to interview scientists and journalists, to discuss work, and to become science communicators. Subject matter of reporting projects will be determined by the background and interests of the students. Field trips and Illinois science will be featured. 3 undergraduate hours. 3 graduate hours.

JOUR 472 Business Reporting credit: 3 Hours.

Learning to follow the money is a key part of covering corporate America, professional sports or Hollywood. No need to fear financial statements: This course shows you easy methods to pick them apart and turn them into smart stories. Students learn to report and write stories using the Wall Street Journal's feature methods. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210 or JOUR 400. Journalism or Agricultural Communications major(s). Restricted to students with Sophomore, Junior, Senior, or Graduate class standing.

JOUR 475 Magazine Writing credit: 3 Hours.

Preparation of feature stories and articles; techniques of marketing, market analysis, and publishing articles written in the course. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210.

JOUR 480 Advanced Reporting Topics credit: 3 Hours.

Advanced reporting projects or techniques, with separate sections for a varying array of topics such as investigative reporting, immersion journalism, literary journalism, business and financial journalism, online publishing, radio news features, sports writing, broadcast documentary production, digital journalism, and photo journalism. 3 undergraduate hours. 3 graduate hours. May be repeated in the same or subsequent semesters if topics vary. Prerequisite: JOUR 210.

JOUR 481 Literary Feature Writing credit: 3 Hours.

Course focuses on concept, reporting practice, and ethics of literary approaches to create evocative, story-like journalism articles. Students report and write a single in-depth story that will be re-reported and re-written three times. Includes extensive readings illustrating the finest literary journalism. The class includes extensive self, class and professor criticism and editing. Articles for this class have been published in the News-Gazette and other publications. An archive of published stories can be found at intimatejournalism.com. 3 undergraduate hours. 3 graduate hours. Prerequisite: JOUR 210. Journalism majors only.

JOUR 482 Immersion Journalism credit: 3 or 4 Hours.

The interview methodology students learn is seen as the best way to provide the ethnographer/writer/reporter with insight into social phenomena. The methodology can be used to examine living conditions, family history and attitudes of ethnic groups at any class level – wealthy, affluent, middle class, poor or underclass. Students with insatiable curiosity about behavior will be able to extract from participants surprising revelations about their needs, desires and motivations. Students will learn how personalities, circumstances, and choices made by participants' parents and forebears affect the participant's life today. Same as AFRO 482. 3 undergraduate hours. 4 graduate hours. Prerequisite: Juniors, Seniors and Graduate students of any discipline.

JOUR 483 Investigative Journalism credit: 3 Hours.

The investigative methodology students learn is seen as the best way to provide the producer/editor/reporter with insight into social issues, government and businesses practices and systems. The methodology can be used to examine and topics or issue. Students will use data, documents, interviews and field observation to collect information, do basic data analysis, test hypotheses, and produce stories in text, audio, or video or all. Students will learn how to do deep research, organize complex material, and produce presentations that are easy for the public to understand. 3 undergraduate hours. 3 graduate hours.

JOUR 490 Professional Project credit: 3 Hours.

Individual and team-produced advanced enterprise projects in specialized fields. 3 undergraduate hours. 3 graduate hours. May be repeated in the same or subsequent semesters if topics vary.

JOUR 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved professional, industry related internship. 0 to 1 undergraduate hours. 0 to 1 graduate hours. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours or 2 graduate hours. May be repeated in separate terms to a maximum of 3 undergraduate hours or 3 graduate hours. Prerequisite: Consent of instructor.

JOUR 500 Current Issues in Journalism credit: 4 Hours.

Seminar on issues of contemporary importance in journalism in their historical, multicultural contexts. Emphasis on ethical, legal, social, professional aspects of those issues. Aimed at helping students to develop their own journalism philosophies and high standards of conduct. Prerequisite: Consent of department.

JOUR 501 Multimedia Storytelling credit: 4 Hours.

The course is designed to equip graduate students who have little or no journalism experience to report in a multimedia environment. In the first part of the course, students learn where to find stories and how to develop story ideas, as well as basic research and interviewing techniques. Students will then be introduced to the various ways in which stories can be told using media platforms such as print, radio, television and the web. Prerequisite: Graduate students only.

JOUR 505 Journalism Proseminar credit: 4 Hours.

Introduction to scholarship and research in journalism and mass communication examining theoretical approaches to the meanings, uses, and effects of mass media in society; discussion of media freedom and accountability; humanistic and social scientific contributions to understanding mass communication. Prerequisite: Consent of department.

JOUR 515 Master's Project credit: 4 Hours.

A professional journalism project demonstrating development of analytical and critical thinking abilities appropriate to the profession and effective application of journalism methodology. May be repeated up to 8 hours. Prerequisite: Consent of department.

JOUR 590 Advanced Topics in Journalism credit: 2 to 4 Hours.

Advanced special projects, research or reading in journalism at the master's and doctoral level. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 8 hours; may be repeated in separate terms to a maximum of 24 hours.

Kinesiology (KIN)

KIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KIN>)

Courses

KIN 100 Development Activities credit: 1 to 2 Hours.

Skills and knowledge essential for leisure-time activities which are classified as developmental activities. Prerequisites and descriptions for each developmental activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 2 hours.

KIN 101 Dance Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as dance activities. May be repeated; more than one activity (Sections A through Z) may be taken in the same term. Prerequisite: See Class Schedule for prerequisites for each dance activity.

KIN 102 Individual and Dual Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as individual and dual activities. Prerequisites for each individual or dual activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 103 Indoor Court Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as indoor court activities. Prerequisites for each indoor court activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

KIN 104 Skating Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as skating activities. Prerequisites for each skating activity are provided in the Class Schedule. Additional Ice Skating Rink Facility charges are required and provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 107 Aquatic Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as aquatic sport activities. Prerequisites for each aquatic sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

KIN 109 Team Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as team sport activities. Prerequisites for each team sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

KIN 110 Intro to the Health Sciences credit: 3 Hours.

Same as CHLH 110. See CHLH 110.

KIN 111 Prescribed Exercise credit: 1 Hour.

Prescribed exercises adapted to individual needs, capacities, and interests; open to persons with paraplegia, permanently disabled, and individuals with significant temporary disabilities who will require long term rehabilitation. Students must be registered or eligible to register with DRES. May be repeated to a maximum of 4 hours. Prerequisite: Enrollment restricted to students with permanent disabilities or disabilities which are long-term in nature. Student should be registered or eligible to register with DRES.

KIN 120 Injuries in Sport credit: 2 Hours.

Emphasizes injury mechanisms, means of injury prevention, and emergency care applied to various types of sport injuries; laboratory sessions emphasize preventive and therapeutic taping and emergency first aid. Additional fees may apply. See Class Schedule.

KIN 121 Survey of Sports Medicine credit: 3 Hours.

Introduction to sports medicine for non-kinesiology majors; includes discussion of training, conditioning, preparation for sports, injury aspects of sports, and rehabilitation.

KIN 122 Physical Activity and Health credit: 3 Hours.

Provides the scientific evidence of physical activity in preventing disease and optimizing quality of life. Teaches behavioral change strategies to achieve an active lifestyle.

KIN 125 Orientation KIN & Comm Health credit: 1 Hour.

Serves as an introduction to the Kinesiology and Community Health Department and provides an overview of the Kinesiology and Community Health curricula, areas of study, and opportunities available for a career in the field. Enrollment required for Kinesiology freshmen and transfer students. Credit is not given for both KIN 125 and CHLH 125.

KIN 130 Analysis of Basic Movement credit: 2 Hours.

Introduction to human movement through development of skills and knowledge relative to structure and function of the human body in selected physical activities including: basic postural and locomotion patterns and fundamental throwing patterns; also studies developmental aspects of typical and atypical movement skills. Emphasizes performance and qualitative analysis of movement skills.

KIN 140 Social Sci of Human Movement credit: 3 Hours.

Introduction to the social scientific aspects of human movement including sport; particular emphasis on concepts derived from the social sciences (including psychology) that are appropriate to human movement. Additional fees may apply. See Class Schedule. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

KIN 142 Contemporary Issues in Sport credit: 3 Hours.

Examines current issues in sport relative to competition, economics, race, sex, youth, educational institutions, deviant behavior, religion, psychology, and the media.

KIN 150 Bioscience of Human Movement credit: 3 Hours.

Integrates anatomical and physiological aspects of human movement; emphasizes how the body moves, physiological responses to exercise stress, physical conditioning and physical fitness. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

KIN 160 Introduction to Kinesiology credit: 3 Hours.

Kinesiology is the interdisciplinary study of physical activity that includes a number of sub-disciplines. This course will examine these areas of study within Kinesiology from scientific, applied, and experiential perspectives. Students will study fundamental/introductory concepts associated with each area of Kinesiology, explore those concepts within research and applied contexts, and complete activities in which they experience various dimensions of those concepts.

KIN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated.

KIN 201 Physical Activity Research Methods credit: 3 Hours.

This course provides an introduction of physical activity measurement and methods. The course will focus on (a) defining physical activity and associated terms and concepts; (b) providing detailed understanding of approaches and tools for measuring physical activity; and (c) facilitating understanding of scientific methods for physical activity research (e.g., experimental and non-experimental designs).

KIN 230 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.

Same as HDFS 263 and RST 230. See RST 230.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

KIN 247 Intro to Sport Psychology credit: 3 Hours.

Analysis of the competitive sport process, with study of how personality and situational variables affect motivation, anxiety, and aggression in sport. Attention is given to the psychological skills needed by coaches and athletes for successful and enjoyable sports participation.

KIN 249 Sport & Modern Society credit: 3 Hours.

The sociological analysis of sport in modern societies with regard to social class, politics, community, education, and collective behavior. Same as SOC 249.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

KIN 257 Coordination, Control & Skill credit: 3 Hours.

Introduction to the concepts and principles of the coordination and control of movement and the development of skilled action. The course will focus on such topics as fundamental movement activities; movement control processes; acquisition, retention and transfer of skill; and the role of constraints to action. These topics have implications for understanding skilled performance, motor development and human performance in general. Additional fees may apply. See Class Schedule. Prerequisite: KIN 140 and KIN 150 or consent of instructor.

KIN 259 Motor Development and Control credit: 3 Hours.

This course provides students with an overview of motor development across the life span as well as an introduction to the discipline of motor behavior/control. Specifically, it focuses on the concepts and principles of coordination, the control of movement, and development of skilled action throughout the life span. The course focuses on such topics as the development of fundamental movement activities; movement control processes; acquisition, retention and transfer skill; and the role of constraints to action. Same as HDFS 259. Additional fees may apply. See Class Schedule. Credit is not given for both KIN 259 and KIN 257.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

KIN 260 Teaching Activities I credit: 3 Hours.

An activity-based course focusing on skills, knowledge, and teaching progressions related to territorial and net sports for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: KIN 130.

KIN 261 Teaching Activities II credit: 2 Hours.

An activity-based course focusing on skills, knowledge, and teaching progressions related to target sports, rhythms, dance and fitness activities, and adventure education activities for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: Prerequisite: KIN 130.

KIN 262 Motor Develop, Growth & Form credit: 3 Hours.

Examination of the concepts of motor development, physical growth, and body form throughout the lifespan. Major emphasis is on the period of birth through adolescence. Same as HDFS 262.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

KIN 268 Children's Movement credit: 3 Hours.

Introduction and overview of kinesiology principles and physical activity related to children. Laboratory portion of class focuses on the application of information to teaching physical activity to elementary school children. Prerequisite: For non-kinesiology majors.

KIN 340 Soc & Psych of Phys Activity credit: 3 Hours.

Discusses how social and psychological processes and constraints affect human action in physical activity environments. Attention is given to socialization, personal dynamics, stratification, and ideological and economic constraints upon the manifestations of physical activity. Prerequisite: KIN 140 or PSYC 100 and completion of the Campus Composition I general education requirement. This course satisfies the General Education Criteria for:
Advanced Composition

KIN 345 Sport and Society credit: 3 Hours.

Same as HIST 390. See HIST 390.

KIN 346 Case Study: Endless Summer credit: 3 Hours.

The 1966 classic film –The Endless Summer– and related films and literature are used as lenses for the historical-cultural study of human movement in the form of riding waves of water. Surf culture and films are global phenomena and by using such as unique cases, students gain mastery in cultural-interpretive theories, themes, and vocabulary, and in articulating perspectives on social roles, knowledge, and power. Same as RST 346 and MACS 346.

KIN 352 Bioenergetics of Movement credit: 3 Hours.

Study of the nature of energy transfer during physical activity; mechanisms of metabolic control, force production, cardiorespiratory support and adaptation relative to physical activity. Additional fees may apply. See Class Schedule.

KIN 355 Biomechanics of Human Movement credit: 3 Hours.

Studies the biological and mechanical principles of human motor performance; analyzes selected movement skills in depth. Additional fees may apply. See Class Schedule.

KIN 360 Adapted Physical Education credit: 3 Hours.

Organization, administration, and conduct of physical education programs for the most prevalent types of medical conditions found in school settings; emphasis on analyzing motoric needs and prescribing programs of motor activity for special populations, including individuals with mental retardation and learning disabilities Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

KIN 361 Curriculum in Grades K-6 credit: 3 Hours.

Examines the theoretical and philosophic curricular principles necessary to the development of a sound, professionally grounded, and research-based curriculum for children in grades K-6. Requires planning a variety of developmentally appropriate learning activities that are taught to children during micro-teaching experiences in the field. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

KIN 362 Curriculum in Grades 7-12 credit: 3 Hours.

Provides students with theoretical knowledge and professional practice in secondary physical education curriculum and instruction. This research-based course emphasizes effective teaching, development of content, and analysis of curricular models in grades 7-12. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

KIN 363 Instructional Strategies in PE credit: 3 Hours.

Analyzes the teaching-learning process, emphasizing the identification of instructional strategies specific to the development of skilled performance in movement activities. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program.

KIN 364 Exper in the Common School credit: 3 Hours.

Supervised practice in observing, assisting, and teaching children in elementary, junior high school, and senior high school. Emphasis is on understanding motor behavior, teacher-learner behavior, and interrelatedness with other aspects of the learning environment. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

KIN 365 Civic Engagement in Wellness credit: 3 Hours.

Provides scholarly knowledge and practical experience related to environmental, intellectual, physical, psychological, spiritual, and social wellness. Students acquire leadership and real-world skills while working in teams to develop and implement projects that facilitate health and well-being in the population of adults living in the community. Projects emphasize integrative learning and are showcased in both written and oral formats. Same as AHS 365, CHLH 365, RST 365, and SHS 370.

KIN 369 Coaching Strategies credit: 3 Hours.

Examination of philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and equipment and facility management related to coaching.

KIN 375 Comm Partners & Health credit: 3 Hours.

Same as AHS 375 and SHS 375. See SHS 375.

KIN 385 Exper in Kinesiology Research credit: 3 Hours.

Supervised laboratory experiences in kinesiology research; individual work under the supervision of members of the faculty in their respective fields. The student assists with data collection, processing, and analysis for research in progress. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

KIN 386 Exercise Instruction & Elderly credit: 3 Hours.

This course is designed to offer practical experience opportunities to undergraduate Kinesiology students aspiring to work in applied exercise fields with a diverse aged population. It will entail extensive "on the job" training through the Lifetime Fitness Program, an older adult service program of the Department of Kinesiology. Additionally, students will gain training in current program management practices. May be repeated to a maximum of 6 hours. Prerequisite: KIN 352 or consent of instructor is required. A current CPR is required at the beginning of the term and certification must remain current.

KIN 387 Exper in the Agency Setting credit: 3 Hours.

Supervised practical experience in leadership roles in nonschool agency settings; emphasis on observing, planning, and conducting physical activity programs for children and/or adults in preschool, recreation, or other social agencies. May be repeated for a maximum of 6 hours.

KIN 390 Honors credit: 2 Hours.

Course is restricted to James Scholars pursuing the Civic Commitment and Leadership Tracks. Designed to support completion of the James Scholar honors project. Same as CHLH 390 and RST 390. May be repeated to a maximum of 6 hours. Prerequisite: James Scholar standing.

KIN 391 Special Project-Problems credit: 2 or 3 Hours.

Special projects in research and independent investigation in any phase of health, kinesiology, physical education, and related areas selected by the students. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; grade-point average of 2.5; consent of instructor.

KIN 393 Honors Thesis credit: 3 Hours.

Planning, researching and writing of an honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. Paper will be presented at a suitable meeting and/or seminar. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing when enrolling; minimum grade point average (total, University and Kinesiology prefix courses) of 3.25; a minimum of one full year (2 semesters) remaining at the University of Illinois, Urbana-Champaign campus; and submission of a written proposal.

KIN 401 Measure & Eval in Kinesiology credit: 3 or 4 Hours.

Examines the concepts of observation, measurement, and evaluation of human motor performance and functioning in physical activity contexts. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140 and KIN 150, or graduate standing, or consent of instructor.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

KIN 407 Disability, Culture & Society credit: 3 or 4 Hours.

Same as ANTH 404, CHLH 407, and REHB 407. See CHLH 407.

KIN 442 Body, Culture & Society credit: 3 or 4 Hours.

Analysis of the significant social aspects of the human body including anthropological, historical, psychological and sociological perspectives. Places emphasis on cross-culture and cross-national studies of bodily behavior with particular stress on exercise, health and sport practices. Same as GWS 442. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 249 or SOC 249, or graduate standing; or consent of instructor.

KIN 443 Psychophysiology in Ex & Sport credit: 3 or 4 Hours.

Designed to give the student an understanding of the interaction between psychological processes and physiological parameters in exercise and sport. Examines psychophysiological exercise and sport research with particular attention to relevant models and theories. Same as PSYC 443. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior or senior standing, KIN 340, or graduate standing, or consent of instructor.

KIN 444 Physical Activity and Chronic Diseases credit: 3 or 4 Hours.

Focuses on the scientific evidence regarding the health benefits of exercise, physical activity, and physical fitness in the prevention and management of chronic diseases. 3 undergraduate hours. 4 graduate hours.

KIN 447 Psych of Sport Performance credit: 3 or 4 Hours.

Outlines the social psychological parameters which influence behavior and performance in sport; emphasizes the impact of social influences upon the individual within the sport context, including such factors as achievement motivation, competition, anxiety, aggression, and personality. Same as PSYC 447. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140, KIN 247, or PSYC 201, or graduate standing, or consent of instructor.

KIN 448 Exercise & Health Psychology credit: 3 or 4 Hours.

Examines the psychological determinants and consequences of exercise and physical activity as a health promoting behavioral process. Same as CHLH 448. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above, or graduate standing, or consent of instructor.

KIN 450 Biochemistry of Exercise credit: 3 or 4 Hours.

Introduces the metabolic and biochemical adaptation of the body in response to acute and chronic physical activity. Primary focus is given to the subcellular and enzymatic regulation and integration during exercise. Substrate metabolism, bioenergetics, hormonal action and nutritional influences as related to exercise are emphasized. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352 or MCB 450; or consent of instructor.

KIN 451 Skeletal Muscle Physiology credit: 3 or 4 Hours.

Offers basic information on skeletal muscle anatomy, physiology and function which will provide a basis for understanding changes in muscle structure and function during periods of increased or decreased use. Knowledge gained in this course can be used in areas such as design of training programs, physical therapy, or injury prevention. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352 or prior consent of the instructor.

KIN 452 Clin & Applied Ex Physiology credit: 3 or 4 Hours.

Physical fitness appraisal and guidance in clinical and applied settings with emphasis on medical clearance, risk factor assessment, physical fitness assessment and exercise prescription. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352, or graduate standing, or consent of instructor.

KIN 453 Nutrition for Performance credit: 3 or 4 Hours.

Nutrition for performance is the fusion of two disciplines, nutrition and exercise physiology, which provides the knowledge-base to support and optimize training, performance, and recovery. This course will provide information regarding the use of nutrition to increase performance in athletes training for strength or endurance. Same as FSHN 453. 3 undergraduate hours. 4 graduate hours.

KIN 457 Motor Learning & Control credit: 3 or 4 Hours.

Discussion and analysis of scientific principles related to the learning and control of motor skills; review of related literature and research in motor learning and control. The focus of the course is on mechanisms for the control of movement and recent theories of how movements are acquired and performed. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

KIN 458 Neurobio of Aging credit: 0 to 4 Hours.

Same as PSYC 451 and NEUR 451. See PSYC 451.

KIN 459 Physical Activity & Aging credit: 3 or 4 Hours.

Examines aging and age-related changes in the cells, tissues, organs, and systems of the human body; emphasizes the role of physical activity and other lifestyle choices in modifying the aging process and in influencing the onset and progression of the chronic diseases which accompany aging. Same as HDFS 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior, or graduate standing or consent of instructor.

KIN 460 Technology & Pedagogical KINES credit: 3 or 4 Hours.

Promotes mastery of technology skills and complex computer applications through the analysis of research and critical issues related to technology in Kinesiology. The completion of technology modules, requiring problem solving and the collection and analysis of assessment data, will culminate in an interactive, multimedia project. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing.

KIN 470 Exercise Endocrinology credit: 3 or 4 Hours.

The objective of this course is to gain a better understanding of the endocrine system and its response to physical exercise. Therefore, this course will provide a basic review of 1) the major glands and tissues that secrete chemical messengers, 2) the ability of acute exercise and exercise training to regulate chemical messengers, and 3) the physiological consequences of endocrine adaptation to exercise. Clinical disorders associated with endocrine dysfunction will also be discussed when relevant. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: KIN 352.

KIN 473 Skill Acquisition Strategies credit: 3 or 4 Hours.

Examines theory and practice related to structuring practice conditions to maximize the acquisition and performance of motor skills. The nature of skill, activities, and strategies for enhancing skill are discussed with particular emphasis placed on strategies that instructors, teachers, and/or coaches can use to enhance skill acquisition and performance. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

KIN 474 Tech-Driven Health Intervention credit: 3 or 4 Hours.

Course will review and critique the state of the science of technology-driven health behavior interventions. A broad scope of technologies and health behaviors will be covered and students will acquire an understanding of current uses of technology for facilitating health behavior change and maintenance. Students will examine the efficacy and potential for large-scale adoption and dissemination; and develop skills necessary to apply technology-based solutions to address public health problems. 3 undergraduate hours. 4 graduate hours.

KIN 485 Clin Exper in Sports Medicine credit: 2 to 8 Hours.

Clinical experiences in medical supervision of sports programs, in the areas of therapeutic exercises, fitness programming, and cardiac rehabilitation. 2 to 8 undergraduate hours. 2 to 8 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

KIN 494 Special Topics credit: 1 to 4 Hours.

Lecture course on topics of current interest; specific topics announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

KIN 501 Kinesiology Research Methods credit: 4 Hours.

Review and appraisal of common research procedures; application of statistical procedures, library methods, evaluation procedures, and experimental methods.

KIN 530 Childhood Obesity I credit: 3 Hours.

Same as CHLH 530, FSHN 530, HDFS 551, NUTR 530, SOCW 570. See NUTR 530.

KIN 531 Childhood Obesity II credit: 4 Hours.

Same as CHLH 531, FSHN 531, HDFS 552, NUTR 531, SOCW 571. See NUTR 531.

KIN 540 Health Behavior: Theory credit: 4 Hours.

Same as CHLH 540. See CHLH 540.

KIN 543 Physical Activity & Cognition credit: 4 Hours.

Examines the relationship between physical activity and fitness on brain and cognition across the lifespan. The psychobiology of physical activity effects on cognition is emphasized. Other areas of study include aging, development, and psychosocial factors. Methodological issues as well as human and animal models of research will be studied.

KIN 551 Sci Basis of Phys Performance credit: 4 Hours.

Contemporary trends in the study of human performance and exercise stress; analysis of the research literature, experimental strategies, and research instrumentation. Lecture-discussion and laboratory.

KIN 552 Adv Skeletal Muscle Physiology credit: 4 Hours.

Course provides an in-depth understanding of skeletal muscle anatomy, cell biology, and physiology. Classroom discussions of primary literature and other activities will focus on muscle structure and function. Information will also be provided on the molecular and cellular basis for adaptations that occur with increased use, such as endurance or strength training, or periods of disuse, such as injury and disease.

KIN 553 Circulorespiratory Physiology credit: 4 Hours.

Aerobic performance responses to short-term, intermittent, and prolonged physical activity; special consideration given to endurance training methods and assessment techniques, ergogenic aids, and problems associated with growth, environmental influences, and competitive sport. Prerequisite: KIN 551 or consent of instructor.

KIN 557 Stress Immunology credit: 4 Hours.

This course will examine the role of stress in modulating immune function and the pathobiological mechanisms resulting in disease. An emphasis will be placed upon the reciprocal communication pathways that exist between the central nervous, endocrine and immune systems. Prerequisite: Consent of the instructor. It will be assumed that students will have introductory knowledge in biochemistry, endocrinology, and immunology.

KIN 560 Research on Teacher Education credit: 4 Hours.

Critically examines advanced theories, trends, problems, and implications of research on teacher education in Kinesiology. Students will complete a series of written assignments that are grounded in theory, illustrate critical thinking skills, and demonstrate extensive knowledge of the literature. Prerequisite: Graduate standing.

KIN 564 Qualitative Research Methods credit: 4 Hours.

Introduces students to qualitative methodology in the educational and health-related professions settings. Students will learn to interpret qualitative research, understand its theoretical underpinnings, acquire interviewing and observation skills, design and evaluate a community-based group research project, learn to collaborate with others, and critically assess the contributions to the project of self and peers.

KIN 565 Teaching in the Professoriate credit: 4 Hours.

Provides scholarly knowledge and practical experience necessary for effectively assuming the roles of teaching, mentoring, and presenting in the professoriate. Students will team teach an undergraduate course with an assigned faculty mentor, give a scholarly research presentation, and attend a series of theoretically grounded lectures focusing on instructional design, learner characteristics, and successfully conveying information to others. Same as CHLH 565, RST 560, and SHS 565. Prerequisite: Must be a PhD student in the College of Applied Health Sciences.

KIN 590 Independent Study credit: 2 or 4 Hours.

Independent research on special projects. May be repeated.

KIN 591 Seminar credit: 1 Hour.

Lectures, discussions, and critiques on kinesiology and community health related subjects by faculty members and visiting professional leaders; presentation and criticism of student research. Approved for S/U grading only. May be repeated in subsequent terms as topics vary.

KIN 594 Special Topics credit: 1 to 4 Hours.

Lecture course in topics of current interest; specific subject matter announced in the Schedule. May be repeated.

KIN 599 Thesis Research credit: 0 to 16 Hours.

Preparation of theses in kinesiology. Approved for S/U grading only. May be repeated.

Korean (KOR)

KOR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KOR>)

Courses

KOR 201 Elementary Korean I credit: 5 Hours.

First semester of Korean for students without any background of the Korean language, starting from the Korean alphabet (Hangul) and learning basic grammar, vocabulary, and commonly used expressions, to achieve beginning level of speaking, listening, reading, writing, and basic grammar skills in Korean. Credit is not given for KOR 201 if credit for KOR 221 has been earned.

KOR 202 Elementary Korean II credit: 5 Hours.

Continuation of KOR 201, and second semester of first year Korean. Students learn basic grammar, vocabulary, and commonly used expressions by practicing conversations and reading conversation based texts, to achieve beginning-intermediate levels of speaking, listening, reading, and writing in the Korean language. Credit is not given for KOR 202 if credit in KOR 222 has been earned. Prerequisite: KOR 201 or as determined by placement test and instructor. Students must have taken KOR 201 at this University. Otherwise, they must take the placement test given in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 203 Intermediate Korean I credit: 5 Hours.

Continuation of KOR 202 and first semester of the second year Korean. Students practice conversations, study grammar based on conversational materials with variety of styles and levels of discourse and usage, and learn about Korean culture, to achieve intermediate-level fluency. Credit is not given for KOR 203 if credit for KOR 222 has been earned; determination is based on the placement test. Prerequisite: KOR 202 or as determined by a placement exam and an instructor. Students must have taken KOR 202 at this University. Otherwise, they should take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 204 Intermediate Korean II credit: 5 Hours.

Continuation of KOR 203 and second semester of the second year Korean. Students practice conversations and study grammar based on conversational materials with variety of styles and levels of discourse and usage, to achieve intermediate-level fluency in speaking, listening, reading and writing in the Korean language. Credit is not given for KOR 204 if credit for KOR 241 has been earned. Prerequisite: KOR 203 or as determined by a placement exam and an instructor. Students must have taken KOR 203 at this University. Otherwise, they should take the placement exam in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 221 Korean Reading and Writing I credit: 4 Hours.

First semester of spoken and written Korean for students with background in spoken Korean. Starting from the Korean alphabet (Hangul) students learn basic grammar, vocabulary, and commonly used expressions, to achieve the beginning level proficiency in reading and writing as well as in speaking. Credit is not given for KOR 221 if credit for KOR 202 has been earned. Prerequisite: Ability to speak and understand spoken Korean as determined by a placement test and an instructor. Students with prior knowledge of Korean must take the placement test in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 222 Korean Reading and Writing II credit: 4 Hours.

Continuation of KOR 221 and second semester of spoken and written Korean for the students with background in Korean. Students learn basic grammar, vocabulary, and commonly used expressions, to achieve the beginning-intermediate level proficiency in reading and writing as well as in speaking of Korean. Credit is not given for KOR 222 if credit for KOR 202 has been earned; determination is based on the placement test. Prerequisite: KOR 221 or as determined by a placement test and an instructor. Students must have taken KOR 221 at this University. Otherwise, those with prior knowledge of Korean must take placement test in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 241 Korean Reading and Writing III credit: 4 Hours.

Continuation of KOR 222 and first semester of the second year of spoken and written Korean. Students learn grammar and vocabulary to achieve intermediate-level speaking, listening, reading and writing in Korean. Credit is not given for KOR 241 if credit for KOR 204 has been earned; determination is based on the placement exam. Prerequisite: KOR 222 or as determined by a placement exam and an instructor. Students must have taken KOR 222 at this University. Otherwise, those with prior knowledge of Korean must take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 242 Korean Reading and Writing IV credit: 4 Hours.

Continuation of KOR 241 and second semester of the second year of spoken and written Korean. Students are exposed to theme-related passages and dialogues, practicing speaking, listening, reading, and writing, in order to achieve advanced-intermediate level proficiency in Korean. Credit is not given for KOR 242 if credit for KOR 306 has been earned. Prerequisite: KOR 241 or as determined by a placement exam and an instructor. Students must have taken KOR 241 at this University. Otherwise, those with prior knowledge of Korean must take the placement test in January. Sign up for the test in the office of the EALC Department (244-2725).

KOR 305 Advanced Korean I credit: 5 Hours.

Continuation of KOR 204 and first semester of third year Korean. Concentrates on enhancing the level of fluency in speaking, listening, reading and writing of Korean. Students learn more advanced-level vocabulary and expressions and read more authentic texts in Korean. Credit is not given for KOR 305 if credit for KOR 241 has been earned; determination is based on placement test. Prerequisite: KOR 204 or as determined by a placement exam and an instructor. Students must have taken KOR 204 at this University. Otherwise, they should take the placement test in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 306 Advanced Korean II credit: 5 Hours.

Continuation of KOR 305 and second semester of third year Korean. Concentrates on enhancing the level of fluency in speaking, listening, reading and writing of Korean. Students will learn about more advanced-level vocabulary and everyday expressions and read texts in Korean where Korean culture is introduced and discussed. Credit is not given for KOR 306 if credit for KOR 242 has been earned. Prerequisite: KOR 305 or as determined by a placement test and an instructor. Students must have taken KOR 305 at this University. Otherwise, they should take the placement text in January. Sign up for the exam in the office of the EALC Department (244-2725).

KOR 440 Fourth Year Korean I credit: 3 or 4 Hours.

Develop the ability to engage in fluent discourse, to understand authentic texts through the acquisition of advanced-level vocabulary and expressions, and to refine and improve their writing in Korean. Students are expected to engage in class discussions on various topics of Korean culture and society. 3 undergraduate hours. 4 graduate hours. Prerequisite: KOR 306 or KOR 242 or as determined by a placement test and an instructor. Students must have taken KOR 306 or KOR 242 at this University. Otherwise, those with prior knowledge of Korean should take the placement exam in August. Sign up for the test in the office of the EALC Department (244-2725).

KOR 441 Fourth Year Korean II credit: 3 or 4 Hours.

Allows advanced students to further develop their reading comprehension of authentic texts through the acquisition of advanced-level vocabulary and expressions, and to discuss and write on various topics and issues related to contemporary Korea. 3 undergraduate hours. 4 graduate hours. Prerequisite: KOR 440 or as determined by a placement test and an instructor. Students must have taken KOR 440 at this University. Otherwise, those with prior knowledge of Korean should take the placement test in January. Sign up for the test in the office of the EALC Office (244-2725).

Labor and Employment Relations (LER)

LER Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LER>)

Courses

LER 100 Introduction to Labor Studies credit: 3 Hours.

Provides an overview of workers and unions in American society. Looks at economic, political, and workplace issues facing working people, why and how workers join unions, how unions are structured and function, and how unions and management bargain a contract. Provides a historical overview of the American labor movement, and discusses the contemporary struggles workers and unions face in a rapidly changing global economy.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

LER 110 Labor and Social Movements credit: 3 Hours.

Explores the role of labor unions in American society. Discusses the role of labor unions in initiating actions on social issues that impact the U.S. working class, the economy, public policy, and politics. Analyzes the labor movement's interaction with the civil rights, women's, student, global justice, and living wage movements.

LER 120 Contemporary Labor Problems credit: 3 Hours.

Focuses on problems and challenges facing American workers and the U.S. labor movement. Topics include the deterioration of the labor-management "social contract" in recent decades; a review of labor and employment law; the health care crisis; globalization and cross-border union alliances; and union democracy.

LER 130 Intro Labr Wrkng Class History credit: 3 Hours.

Do working people have a history worth studying? What does the history of the U.S. look like when viewed from the point of view of those who built the country? Introduces U.S. labor and working class history. Examines the conditions of life and work of the various groups of working people: enslaved, indentured, small farmers, but especially wage workers and their families from the civil War to the present. Studies the main collective actions workers have taken to protect and improve their lives and the organizations and social movements they created to do this. Students who complete LER 130 and want a more in-depth look at the subject should enroll in HIST 480.

LER 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LER 200 Globalization and Workers credit: 3 Hours.

Is globalization good for working people in the United States and around the world? Globalization is the driving force in the world economy but it is also provoking tremendous debate and popular resistance. Students will learn the basics about globalization and its institutions from the perspective of workers' right in the U.S. and the Third World. Analyzes the debate over free trade and sweatshops, trade agreements such as the North American Free Trade Agreement, and institutions such as the World Trade Organization and the International Monetary Fund. Closely examines working conditions in several Third World countries, and explores the role of the global justice movement.

LER 210 Images of Labor in Film credit: 3 Hours.

Uses feature-length film to take an in-depth look at key labor strikes and organizing drives from the 1910s through the 1980s. Students will view some of the most powerful films on worker and labor themes ever produced. Studies the work lives and labor unions of miners; railroad porters; packinghouse workers; textile workers; and farm workers. Discusses the meaning of the events depicted in the films by situating them in historical context with detailed readings; engage the debates raised in the films about labor organizing methods and strike strategies that are relevant to today's labor movement; reflect on issues of race, gender, class consciousness, working conditions, union goals, anti-communism, and labor-management relations raised in the films and readings; analyze how effectively the films, and Hollywood in general, portray workers and unions; and compare and contrast the films.

LER 220 The Media, Workers, and Unions credit: 3 Hours.

Workers, unions, and how the news media tells their stories. Looks at the past, the present and future. Analyzes how these stories are told in the mainstream and independent news media in the U.S., and examines the Internet's explosion and impact on these stories. Looks at how blogs, online videos, citizen journalism, and the fast changing world of Internet communication has given voice to workers and their issues. Compares the print and online media with the work done in documentaries and the cinema. Looks at the global telling of these stories. Lastly, examines the ways that unions can better tell their stories.

LER 240 China's Labor Relations credit: 3 Hours.

This course analyzes how China is reshaping the world economy, labor markets, unions, forms of worker resistance, and the lives of workers around the globe. We will examine China's transition from socialism to state capitalism; working conditions facing Chinese workers; evolving labor and employment relations; the role and function of the All-China Federation of Trade Unions; and worker protests and strikes demanding improved conditions.

LER 290 Introduction to Employment Law credit: 3 Hours.

Addresses and critiques the content, interpretation, and applications of the laws that govern employer-employee relations in the American workplace. Explores the historical sources, underlying ideology, and current content of anti-discrimination and civil rights laws, of laws that seek to guarantee a safe and healthy workplace for all Americans, of laws that guarantee minimum wages and overtime pay, of legal protections of privacy on the job, of unemployment insurance and workers' compensation laws, and of laws that guarantee workers the right to collective action and collective bargaining.

LER 300 Workers, Unions, and Politics credit: 3 Hours.

What is the meaning and impact of politics seen from the perspective of those at the bottom of the pyramid of political power rather than from the usual focus on the actions and perceptions of political elites? In what ways do workers become involved in politics? Under what circumstances are they likely to be successful in bringing about change? This course addresses these questions by exploring political power, political participation, and political change from a broad historical and cross-cultural perspective, but always focusing on a view of politics from the bottom up. The course analyzes the political economy of labor, and the labor movement's political influence in politics.

LER 320 Gender, Race, Class and Work credit: 3 Hours.

Provides a historical and contemporary overview of the impact and interplay of gender, race, class and other issues of identity in the workplace. Topics include: pay gap, occupational segregation, workplace harassment, low wage work, and employment discrimination laws. The response of labor unions to identity issues will also be examined. Prerequisite: LER 100, LER 110 or one course that covers race or gender issues is required.

LER 330 Comparative Labor Relations credit: 3 Hours.

Designed as an overview of comparative labor movements and labor relation systems. Develops a framework for understanding union formation and the development of industrial relations system in a variety of countries around the world. An emphasis will be placed on each country's interaction between unions and political organizations, national labor policies, the machinery for the resolution of workplace problems, the level of shop floor disturbances, bargaining coverage of employees, and the issues of workers' control. Also addresses how globalization has transformed the capacity of any nation's labor relations' system to respond to economic challenge and workplace conflicts. Examines the possibility of developing transnational union.

LER 410 Labor and the European Union credit: 4 Hours.

Addresses the formation of European Union (EU) labor policy; the role of trade unions in EU member nations; worker immigration in the EU; diversity issues in the EU labor market and a comparative analysis of industrial relations in Europe. Same as EURO 410 and SOC 410. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of the instructor.

LER 440 Economics of Labor Markets credit: 2 to 4 Hours.

Same as ECON 440. See ECON 440.

LER 450 European Working Class History credit: 2 to 4 Hours.

Same as HIST 450 and SOC 422. See HIST 450.

LER 480 US Work Class Hist Since 1780 credit: 2 to 4 Hours.

Same as HIST 480. See HIST 480.

LER 522 Government Regulation credit: 4 Hours.

Focuses on federal and state legislation, court and agency rulings, and executive orders that regulate a wide range of private and public employment practices including: Title VII and Affirmative Action Compliance; American with Disabilities Act; drug-, HIV-, and genetic testing; Fair Labor Standards Act; Civil Service procedures; Equal Pay Act, Family and Medical Leave Act, and employment-at-will; constitutional protection for employees, job-applicants, and others. Prerequisite: LER 547 or LER 591, or consent of instructor.

LER 523 Org Fundamentals for HR credit: 4 Hours.

Increases students' effectiveness in analyzing and understanding organizations and the organizational context. It relies on the case method and focuses a number of important themes such as organization design; strategy; decision-making; and culture. In order to prepare students for the various transformations that they will experience in their careers, it examines many of these topics in the context of organizational change. Exposes students to basic ideas about key organizational topic - as well as a number of applications of these ideas - in order to give them a framework for organizing past experience. The topics covered do not offer a recipe for what to do in all situations, but rather give students a set of skills and different ways of thinking that can help them address novel problems they will face throughout their lives.

LER 530 Found of Ind Org Psych credit: 4 Hours.

Same as PSYC 530. See PSYC 530.

LER 540 Labor Economics I credit: 4 Hours.

Same as ECON 540. See ECON 540.

LER 541 Labor Economics II credit: 4 Hours.

Same as ECON 541. See ECON 541.

LER 542 Collective Bargaining credit: 4 Hours.

Examination of: social values and social science concepts to develop a framework for explaining the basis and shape of collective bargaining as it has been practiced in the United States; government and law, unions, and employers as part of the development of this framework; the environment of collective bargaining with respect to the role of economics and bargaining structure; the negotiating process as the interactive basis for union-management relations; conflict and conflict resolution as part of the negotiating process; wage and other effects of collective bargaining as bargaining outcomes; contemporary changes in union management relations. Case materials and exercises may be used to supplement course materials. Same as ECON 542. Prerequisite: Consent of instructor.

LER 543 Workplace Dispute Resolution credit: 3 or 4 Hours.

Examination of the use of procedures to resolve employment disputes in both union and nonunion workplaces; comparative analysis of grievance arbitration, interest arbitration, mediation, fact-finding, and combinations of these procedures; special emphasis given to the role of third party intervention. Same as ECON 543 and LAW 665. 3 professional hours. 4 graduate hours.

LER 545 Economics of Human Resources credit: 4 Hours.

Study of the economics of personnel with the modern corporation. Topics include hiring, promotion, evaluation, discrimination, raiding, job definition, pay schemes, benefits, and design of work. Same as HRD 534. Prerequisite: LER 593 or equivalent, or consent of instructor.

LER 547 Labor Law I credit: 3 or 4 Hours.

Same as LAW 662. See LAW 662.

LER 548 Topics in Personnel Mgmt credit: 4 Hours.

Same as BADM 511. See BADM 511.

LER 556 Industrial Relations Theory credit: 4 Hours.

Integrated analysis of the principles of industrial relations through the study of the works of the major theorists and their critics. Prerequisite: Consent of instructor.

LER 557 Human Resources Theory credit: 4 Hours.

Continuation of LER 556. Focuses on contemporary research in human resource management and related fields.

LER 558 Faculty-Student Workshop credit: 0 to 4 Hours.

Training and experience for Ph.D. students in the application of social science and industrial relations theory and research methodology to contemporary industrial relations problems through presentation and discussion of faculty and student research. Ph.D. students are required to make presentations and to participate in workshop discussions during the entire period of their campus residency. Approved for letter and S/U grading.

LER 559 Micro Research Methods credit: 4 Hours.

Provides doctoral students a foundation for conducting independent, scholarly micro research (i.e., individuals or small groups as the primary unit of analysis) by addressing the components of the research process. This foundation for conducting independent research is based on the research process as an open system of interconnected choices that unfold sequentially: (1) Choosing and framing a research question, (2) Choosing an hypothesis to address the research question, (3) Choosing a Strategy and Design, (4) Choosing modes for treating constructs, (5) Choosing Forms for Converting Data into Observations, (6) Choosing procedures to analyze data, and (7) Choosing conclusions for interpreting results. Prerequisite: Doctoral degree student in LER, Department of Psychology, Economics, College of Business, College of Education. Master's degree students who are considering a doctoral degree program subject to instructor approval.

LER 561 Compensation Systems credit: 4 Hours.

Compensation theory and practice. Course addresses the theoretical and practical issues associated with the design of effective compensation systems. The design phases include establishing internal equity, external equity, and individual equity. Budgeting and administration are also addressed. Case analyses and computer simulations may be used to supplement course materials.

LER 562 HR Planning and Staffing credit: 4 Hours.

Examines conceptual issues, policies, and practices relating to the attraction, selection, development, and planning for the most effective utilization of human resources.

LER 564 HR Training and Development credit: 2 Hours.

Provides students a firm understanding of human resource training and development systems in today's business environment. A constant theme setting the back drop for this course will be on the various kinds of change facing organizations and how these changes relate to human resource training and development. Aspiring HR professionals will gain essential knowledge to effectively manage employee training and development systems in a variety of companies.

LER 565 HR Management and Strategy credit: 4 Hours.

Designed to provide integration across the specific functional areas of the human resources management (HRM) field, while at the same time demonstrating the linkages horizontally within HRM and vertically with strategic management of the firm. This case-focused course places emphasis on human resources issues of strategic importance to the organization. Same as BADM 512. Prerequisite: One prior course from the Organizational Behavior and Personnel Management distribution subject area list (in the MHRIR degree requirements for the graduate degree in Labor and Employment Relations).

LER 566 International HR Management credit: 4 Hours.

Human resource management issues examined from the perspective of the multinational firm. Topics include globalization and human resource strategy, management and the structure of multinational firms, dealing with intercultural differences, selecting employees for foreign assignments, training and developing expatriate employees, evaluation and compensation of employees in international assignments. Individual and group projects. Prerequisite: Graduate standing.

LER 567 Negotiation in HR Decisions credit: 2 Hours.

General survey course concerning the strategies and tactics of bargaining and negotiation, with special emphasis on applications in human resource management contexts. Topics covered include: the structure of negotiated outcomes; integrative bargaining tactics; distributive bargaining tactics; negotiation planning; power, persuasion and influence; communication; negotiating in teams and groups; negotiating using 3rd parties (arbitrators, mediators, agents); cross-cultural negotiations. Students will discuss negotiation issues and build negotiation skills through a series of experiential exercises and cases. Credit is not given for both LER 567 and MBA 505 (Sections W1 and W2: Managerial Negotiations). Prerequisite: Graduate standing. An introductory course in social psychology or organizational behavior is preferred but not required.

LER 568 Firm Performance and HR credit: 4 Hours.

The purpose of this course is to enable students to understand some basic ideas about and measures of firm performance with heavy emphasis on the role of human resource managers. Students will gain an understanding of how human resource professionals fit into the organization, structure, and function of business firms. Many basic ideas from the field of finance will be studied. The course covers theoretical ideas and has many empirical, policy, and practitioner-relevant applications, all with the goal of providing human resource managers fundamental financial analysis tools to enable them to function effectively in their post-graduate corporate workplaces.

LER 569 Power & Influence in HRM credit: 2 Hours.

Designed to help prospective human resource managers learn how to use power and influence as effective tools for understanding the surroundings in which they will be working with and managing people, and achieving the goals that they set for themselves. It provides frameworks and practical tools that allow students to make sense of on-the-job learning experiences and equip them with basic diagnostic and action-planning skills that they can use at different points in their careers - and to consider difficult ethical questions in the process. Prepares students to get things done in the real world, where personalities and office politics sometimes hinder rather than help them.

LER 570 Leadership for HR Managers credit: 2 Hours.

In contemporary organizations, the HR function is often called on to serve a variety of leadership roles. Thus, HR managers will not only need to learn how to utilize and improve their leadership skills in different and changing contexts, but also how to help other employees become effective leaders. The goals of this course are (1) to analyze and discuss a number of key frameworks that will provide students with knowledge of leadership in different types of organizations, and (2) to provide students with practical tools to help them make sense of their own on-the-job experiences and equip them with basic action-planning skills that they can use on the job.

LER 580 Internship credit: 0 Hours.

Full or part-time practice of human resources or employment relations in an off-campus government, corporate or not-for-profit environment. Approved for S/U grading only. May be repeated in separate terms. Prerequisite: Must be a student in the LER program.

LER 590 Individual Topics credit: 0 to 8 Hours.

Students in labor and industrial relations may register for this unit with the consent of the curriculum adviser and the adviser under whom the student will perform individual study or research. Such individual work may include special study in a subject matter for which no course is available or an individual research project, including on-the-job research in industry, which is not being undertaken for a thesis. Approved for letter and S/U grading.

LER 591 Employment Relations Systems credit: 4 Hours.

General framework for the analysis of employment relationships. Topics include industrial relations theory, the American system of collective bargaining, intercountry system differences, and human resource management strategies and practices. Prerequisite: Graduate standing.

LER 593 Quantitative Methods in LER credit: 4 Hours.

Application of statistical methods to problems in human resources and industrial relations. Analysis and presentation of results using computer software. Covers statistical techniques through analysis of variance and multiple regression. Prerequisite: Any elementary statistics course.

LER 594 Tutorial Seminar credit: 0 to 4 Hours.

Research experience for Master's students in carrying out a problem solving project from formulation to written report in a chosen area of labor and industrial relations. Each student selects an individual topic with the approval and guidance of a faculty member and participates in a Tutorial Workshop. Approved for both letter and S/U grading. Prerequisite: Completion of no fewer than 24 graduate hours of LER course work.

LER 595 Managing Diversity Globally credit: 4 Hours.

In a global economy workplace diversity is not a trend; it is a reality faced by corporate leaders, human resource professionals and management consultants. Within the US, immigration, migration, and gender and racial differences have been major trends shaping workplace composition. Globalization places additional pressures on managing workplace diversity effectively. In this setting, training managers and human resource professionals to manage differences and adapt to multiple national and cultural contexts is an imperative. Course provides an in-depth understanding of how managers and HR professionals can be effective in not only managing diversity in a global context, but also in leveraging global diversity as a competitive advantage. By the end of this course students will have a holistic appreciation of the tools necessary to implement effective diversity management practices for a globally inclusive workplace.

LER 597 Employee Motivation & Performance credit: 4 Hours.

Managing and motivating employees effectively is one of the most complex and challenging issues facing companies today. While business leaders acknowledge the need for implementing effective performance management systems, recent studies indicate that an overwhelming majority of performance management systems are unsuccessful. Takes a strategic approach to employee motivation and performance starting with a firm level view to reviewing current approaches to employee motivation and performance management. Aims at providing students with practical and conceptual tools that will aid them in future endeavors to design and implement employee development and performance management systems. Format includes in-class discussions, case studies and individual assignments and papers.

LER 598 Impl High Perf Work Systems credit: 4 Hours.

Intensive analysis of all aspects of high performance work systems, including work design, reward systems, training, team operations, lean/six sigma systems, and labor-management partnership. Special focus on skills and principles for effective implementation, in ways that advance employee well-being and to organizational effectiveness.

LER 599 Thesis Seminar credit: 0 to 16 Hours.

For all students writing theses in LER at the MHRIR and Ph.D. levels. May be repeated. Approved for S/U grading only.

Landscape Architecture (LA)

LA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LA>)

Courses

LA 101 Introduction to Landscape Arch credit: 2 Hours.

Introduction to primary concepts and methods of landscape inquiry as a means to understand experiential qualities of landscape and to guide landscape design and planning projects.

LA 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

LA 212 Water and Society credit: 3 Hours.

A comparative investigation of built landscapes and hydraulic resources through history. Examines problems of water scarcity, abundance and changes in ecology, human social organization, economy, law, and cultural values related to natural water conditions and human management. Comparative case studies include the ancient Near East and modern Middle East, ancient and modern Egypt, the Roman empire, Peru, the Netherlands, South Asia, Illinois River basin, and the American West.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

LA 218 S Asian Cultural Landscapes credit: 3 Hours.

Survey of Hindu, Buddhist, and Islamic landscapes of South Asia. Examines urban structures, building typologies, and open space types through history as influenced by concepts of the natural, sacred, political, and social. Same as ASST 218.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

LA 220 Exploring African Cities credit: 3 Hours.

Examines the buildings, landscapes, and societies of pre-colonial, sub-Saharan African cities from the third century BCE until the nineteenth century CE. Same as ANTH 223.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

LA 221 History of the Prison credit: 3 Hours.

History of prison architecture, landscapes, and carceral regimes from ancient times until the present. Topics include: philosophy of punishment, the invention of the modern prison, the advent of mass incarceration, and 21st century geographies of incarceration. The course focuses on the western experience, but also includes international examples, e.g. from China, East Africa, and Japan. Interdisciplinary approach includes readings in architectural history, urban planning, sociology, philosophy, psychology, history, and landscape studies. Same as AFRO 221 and HIST 219.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

LA 222 Islamic Gardens & Architecture credit: 3 Hours.

Study of the formation, history, and meaning of the landscape and architecture of the Islamic world. Same as ARCH 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

LA 233 Foundation Design Studio credit: 5 Hours.

Introduction to the fundamentals of design, including studies in two- and three-dimensional abstract and applied problems, basic elements and procedures of design, and principles of landscape composition. Additional fees may apply. See Class Schedule. Open to Landscape Architecture majors only. Prerequisite: Credit or concurrent registration in LA 280 or consent of instructor.

LA 234 Site Design Studio credit: 5 Hours.

Site as the fundamental unit of landscape design. Involves ecological, cultural and experiential understanding of sites, and the creation of place-specific designs. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: LA 233 or consent of instructor.

LA 241 Landform Design & Construction credit: 3 Hours.

Introduction to landform design, drainage, stormwater management, surveying, and materials. Prerequisite: MATH 014 or 016.

LA 242 Nature and American Culture credit: 3 Hours.

Same as HIST 282, RST 242, and NRES 242. See RST 242. This course satisfies the General Education Criteria for:
Cultural Studies - Western

LA 250 Environmental Site Analysis credit: 3 Hours.

Principles and practices of identifying, analyzing, and recording landscape resources. Field trip required. Prerequisite: GEOL 100, 101, 103 or GEOG 103 or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

LA 270 Behavioral Factors in Design credit: 3 Hours.

Introduces the impacts of cultural and social factors, such as age, gender, physical ability, economic status, ethnicity and how people interact with the environment. Reading assignments, short exercises, field trips, and evaluation of space will enable students to evaluate and potentially design more socially and ecologically responsive environments.

LA 280 Design Communications I credit: 3 Hours.

Fundamentals of visual communication in the design process and presentation for landscape architecture. Includes freehand and constructed drawing, color, media, and models. Open to Landscape Architecture majors only. Prerequisite: Concurrent registration in LA 233.

LA 281 Design Communications II credit: 3 Hours.

Advanced principles and techniques of visual communication in landscape architectural rendering, emphasizing computer-based techniques. Open to Landscape Architecture majors only. Prerequisite: Concurrent registration in LA 234; completion of LA 280 and completion of campus Composition I general education requirement or consent of instructor.

LA 301 Senior Honors credit: 1 to 6 Hours.

Independent guided study and research in a selected area of landscape architecture; for candidates for honors in landscape architecture. May be repeated to a maximum of 9 hours. Prerequisite: Senior standing in landscape architecture, a university grade-point average of 3.0, and consent of head of department.

LA 314 History of World Landscapes credit: 4 Hours.

Analysis of the development of landscape architecture as a result of environmental and cultural influences. Same as ARCH 314.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - Western

LA 315 History of Modern Landscape Arch credit: 3 Hours.

A selected overview of developments in landscape architecture in the western world from 1900 to the present. Prerequisite: LA 314.

LA 335 Community & Open Space Studio credit: 5 Hours.

Development of design solutions at site and master plan scale relative to community, urban and open space problems; emphasizes development of analysis and design techniques to integrate physical context of place with social context. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: LA 234 or consent of instructor.

LA 336 Design Workshop Studio I credit: 5 Hours.

Project design at various scales utilizing problems of a wide range of complexity and subject matter; rural, community, and urban problems, housing, recreation, and natural areas; emphasizes problem analysis and generation of innovative design alternatives. Students select from several sections depending on specific interests. Additional fees may apply. See Class Schedule. Prerequisite: LA 335 or consent of instructor.

LA 342 Site Engineering credit: 4 Hours.

Principles of site engineering including landform design, stormwater management, site surveying, circulation systems and site utility planning. Prerequisite: LA 241 and college trigonometry; or consent of instructor.

LA 343 Landscape Construction credit: 4 Hours.

Construction methods, materials, and procedures related to the design of landscape structures; development of design details and cost estimating. Prerequisite: LA 342 or consent of instructor.

LA 345 Professional Internship credit: 0 to 10 Hours.

Professionally supervised field experience in design offices and public agencies intended to introduce students to practice. Students work in the department-approved firm or agency of their choice. Seventy five hours of employment is required for each one hour of course credit. Approved for S/U grading only. May be repeated to a maximum of 10 hours. Prerequisite: Upper division undergraduate standing or consent of instructor.

LA 346 Professional Practice credit: 2 Hours.

Study of the profession of landscape architecture including an introduction to modes of practice, career evolution, organizational theory, office procedures, project management and professional ethics. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing or consent of instructor.

LA 370 Environmental Sustainability credit: 3 Hours.

Explores the challenges of creating a sustainable world. Examines: a) trends and conditions of the earth's major ecosystems, b) ways in which our economic system has created levels of consumption that threaten sustainability, c) the extent to which equity and justice contribute to sustainable systems, and d) evidence demonstrating how human creativity and innovation can create a more sustainable world. Same as ENSU 300 and NRES 370.

LA 390 Independent Study credit: 1 to 6 Hours.

Supervised independent study, research, or special project in a selected area related to landscape architecture. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; consent of instructor and head of department prior to advance enrollment and registration.

LA 399 Off-Campus Study credit: 0 to 15 Hours.

Provides campus credit for off-campus study. Approved for letter and S/U grading. (Summer session, 0 to 6 undergraduate hours). Final determination of appropriate credit is made by a faculty review committee upon completion of the student's work. Maximum credit, 15 hours (summer session, 6 hours), all of which must be earned within one term. Prerequisite: Junior standing; prior review and approval of the student's written proposal by a faculty committee and the department head.

LA 427 Amer Vernacular Cultural Land credit: 4 Hours.

Focuses on vernacular structures in the cultural landscape, especially common houses, barns, and commercial and industrial structures; examines origin and geographical diffusion of vernacular architecture in the United States. 4 undergraduate hours. 4 graduate hours.

LA 430 Children and Nature credit: 2 Hours.

Same as HORT 430. See HORT 430.

LA 437 Regional Design Studio credit: 5 Hours.

Ecological design and planning studio emphasizing team approaches to design development and evaluation using current human and environmental research results. Projects require field work, analysis, problem-solving, and advanced design and presentation products. 5 undergraduate hours. 5 graduate hours. Prerequisite: LA 336 or consent of instructor.

LA 438 Design Workshop Studio II credit: 3 to 6 Hours.

Project design at various scales utilizing problems of a wide range of complexity and subject matter; rural, community, and urban problems, housing, recreation, and natural areas; and emphasizes problem analysis and generation of innovative design alternatives. The student selects from several sections depending on specific interests. Additional fees may apply. See Class Schedule. 5 undergraduate hours. 3 to 6 graduate hours. May be repeated. Prerequisite: LA 336 or consent of instructor.

LA 441 Land Resource Evaluation credit: 4 Hours.

Examines concepts for the value of land, land resource problems and policy responses, methods for evaluating land resource development and policy alternatives, and case studies of land resource evaluation. Same as UP 441. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate standing or consent of instructor.

LA 446 Sustainable Planning Seminar credit: 4 Hours.

Examines sustainability issues of concern to planners, such as resource conservation, urban growth, environmental justice, industrial development, social equity, sustainable agriculture, and economic development. Presents holistic approaches ranging from theoretical concepts to detailed case studies that combine urban and regional land use, physical design, and policymaking. Same as GEOG 446, NRES 446, and UP 446. 4 undergraduate hours. 4 graduate hours.

LA 450 Ecology for Land Restoration credit: 4 Hours.

Ecological implications of alternative land use patterns; equipment, field techniques, and nomenclature in current use by environmental consultants; and elements of a baseline ecosystem study. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

LA 452 Natural Precedent in Planting credit: 3 Hours.

Biogeography; identification of native species, uses of native plants in the landscape; and restoration and planting design projects. Field trips required. 3 undergraduate hours. 3 graduate hours. Additional fees may apply. See Class Schedule. Prerequisite: HORT 302 or consent of instructor.

LA 453 Cultural Precedent in Planting credit: 3 Hours.

Planting design issues; historic precedent and contemporary comprehensive design projects; management practices; technical documents; and plant use and identification. Field trips required. 3 undergraduate hours. 3 graduate hours. Prerequisite: LA 452.

LA 454 Landscape Archaeology credit: 3 or 4 Hours.

Same as ANTH 453. See ANTH 453.

LA 460 Heritage Management credit: 3 or 4 Hours.

Same as ANTH 460 and RST 459. See ANTH 460.

LA 466 Energy, Plng & Blt Environment credit: 4 Hours.

Same as UP 466. See UP 466.

LA 470 Social/Cultural Design Issues credit: 3 Hours.

Critical discussion of notions and theories pertaining to the reciprocal effects of landscape architectural design and human behavior. 3 undergraduate hours. 3 graduate hours.

LA 472 Museum Theory and Practice credit: 3 or 4 Hours.

Same as ANTH 462 and ARTH 462. See ANTH 462.

LA 480 Sustainable Design Principles credit: 2 Hours.

Introduction to key concepts for the sustainable design of buildings and landscapes, including concepts that form the core of the U.S Green Building Council rating system (LEED). Introduction to LEED accreditation. Same as UP 480. 2 undergraduate hours. 2 graduate hours.

LA 501 Landscape Arch Theory & Prac credit: 2 Hours.

Seminar to introduce the discipline, profession, and practice of landscape architecture. Emphasis is on understanding the skills and knowledge base of the profession including environmental, social, and historical factors in design.

LA 505 Methods in Arch & LA History credit: 2 to 4 Hours.

Seminar on the historiography of architectural and landscape history, including an introduction to the major concepts and figures in the discipline, past and present. Students will learn of approaches historians have used for analyzing the built environment from traditional methods to newer interpretive frameworks, and examine how contemporary values determine or inform the writing of history.

LA 506 Landscape and Vision credit: 4 Hours.

A study of the major 20th-century texts on vision, perception, and perspective as applied to architecture and landscape. Prerequisite: Doctoral students only; master's level students must receive permission from instructor.

LA 513 History of World Landscapes credit: 4 Hours.

Introduction to the landscape architectural heritage of the past in its social, environmental and historical context. Same as ARCH 510.

LA 515 Hist & Thry of Modrn Land Arch credit: 4 Hours.

A selected overview of developments in landscape architecture in the western world from 1900 to the present. Prerequisite: LA 513 or approval of instructor.

LA 535 Local Policy & Immigration credit: 4 Hours.

Same as UP 535 and SOCW 535. See UP 535.

LA 537 Landscape Plan & Design Studio credit: 5 Hours.

Ecological design and planning studio emphasizing design that reflects evaluation and integration of human and environmental research results. Detailed investigation of design options. Additional fees may apply. See Class Schedule. Prerequisite: LA 441 and LA 450, or consent of instructor.

LA 562 Social Construction of Space credit: 4 Hours.

Same as ANTH 557. See ANTH 557.

LA 563 Soc/Beh Research Designed Env credit: 4 Hours.

Same as ARCH 563. See ARCH 563.

LA 570 Landscapes and Human Health credit: 3 Hours.

We will explore the challenge of, and science behind, creating healthy, sustainable places. We will engage this topic by learning about four mechanisms through which places impact health. We will examine the empirical evidence in support of each of these mechanisms. Learning in this course grows from a series of readings, active participation in class discussion, and the development of a review paper or a research proposal. Same as CHLH 580 and GEOG 561. 3 graduate hours. No professional credit. Prerequisite: Graduate student standing.

LA 587 Graduate Seminar credit: 1 to 4 Hours.

Preparation, presentation, and discussion of research papers on current and future areas of landscape architectural application. May be repeated. Prerequisite: Consent of instructor.

LA 590 Directed Research credit: 1 to 8 Hours.

Nature and scope of projects to be determined by consultation between student and faculty adviser; open to landscape architecture majors as well as those from other disciplines who wish to engage in interdisciplinary work. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated. Prerequisite: Consent of instructor.

LA 593 Islamic & S Asian Landscapes credit: 2 or 4 Hours.

Topics in Islamic and South Asian cultural landscape history, including historiography, methodology and recent scholarship. An advanced course that requires disciplinary familiarity with research on the built environment, material culture and visual culture. May be repeated to a maximum of 8 hours per semester; may be repeated to a maximum of 12 total hours.

LA 594 Cultural Heritage credit: 2 or 4 Hours.

Topics in cultural landscape heritage, conservation planning and design. Investigates theories of landscape, heritage, and their intersections, with readings drawn from anthropology, geography, and landscape studies, as well as applied work on historical landscape conservation, preservation and management. Same as ANTH 594. May be repeated to a maximum of 10 hours per semester; may be repeated to a maximum of 16 total hours. Prerequisite: Concurrent enrollment in LA 438 may be required in the spring semester; check Class Schedule.

LA 597 Research Design & Methods credit: 3 Hours.

This graduate-level course provides instruction and application of research and scholarly methods for landscape architecture and related fields. Students are introduced to the basic steps of inquiry and development of a thesis/research proposal. Course content includes: problem identification; choosing and articulating a research topic; synthesis of topical/theoretical background from literature; choice of research strategy; design of a plan for investigation; selection of data sources, methods and analysis; proof of concept; feasibility planning; and other necessary components of a successful research proposal. 3 graduate hours. No professional credit. Prerequisite: Second year or post-professional MLA students; graduate students in other majors may enroll with permission of instructor.

LA 598 Master's Project credit: 0 to 8 Hours.

Major independent or small-group project synthesizing knowledge from previous coursework. Approved for letter and S/U grading. Prerequisite: Consent of instructor and program adviser.

LA 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Graduate standing in landscape architecture.

Latin (LAT)

LAT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAT>)

Courses

LAT 101 Elementary Latin I credit: 4 Hours.

Grammar and reading for students who have had no work in Latin.

LAT 102 Elementary Latin II credit: 4 Hours.

Grammar and reading of easy prose. Prerequisite: LAT 101 or one year of high school Latin.

LAT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LAT 201 Intermediate Latin credit: 4 Hours.

Review of grammar; reading of easy narrative prose. Prerequisite: LAT 102 or two years of high school Latin.

LAT 202 Intro to Latin Literature credit: 4 Hours.

Continuation of LAT 201, with readings chiefly in Latin poetic literature.

LAT 401 Survey of Latin Literature credit: 2 or 3 Hours.

Intermediate level readings in classical Latin literature. 3 undergraduate hours. 2 graduate hours. May be repeated for a total of 6 undergraduate hours or 4 graduate hours in separate semesters, if topics vary. Prerequisite: LAT 104 or four years of high school Latin.

LAT 411 Intermediate Prose Composition credit: 3 Hours.

Practice in the writing of Latin prose. 3 undergraduate hours. 3 graduate hours. Prerequisite: LAT 104 or the equivalent.

LAT 460 Medieval Latin credit: 3 or 4 Hours.

Literary and historical texts in prose and poetry will be read in the original; the course will also cover patristic writings. Same as MDVL 460. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two years of college Latin or consent of instructor.

LAT 491 Readings in Latin Literature credit: 3 or 4 Hours.

Readings in authors or special topics chosen by the instructor from the entire extant literature in Latin. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated. Prerequisite: Three years of college Latin or equivalent; consent of instructor.

LAT 492 Senior Thesis credit: 2 or 4 Hours.

Thesis and honors. For candidates for honors in Latin and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

LAT 493 Independent Reading credit: 1 to 4 Hours.

1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 undergraduate hours or 12 graduate hours. Prerequisite: LAT 302 and consent of instructor.

LAT 498 Senior Survey credit: 2 or 4 Hours.

For candidates for honors in Latin and for other seniors. 2 or 4 undergraduate hours. No graduate credit. Prerequisite: Senior standing and consent of Classics Honors Program.

LAT 511 Advanced Prose Composition credit: 1 Hour.

Practice in writing Latin prose, with special attention to stylistic questions.

LAT 520 Proseminar credit: 4 Hours.

Alternating poetry and prose, concentrates on a major author from one of the following areas: epic, oratory, lyric and elegiac poetry, history, drama, philosophy, satire, or epistolography. Areas normally follow this sequence in successive years. May be repeated to a maximum of 20 hours if topics vary. Prerequisite: LAT 491 or equivalent.

LAT 531 Special Disciplines credit: 4 Hours.

Same as GRK 531. See GRK 531.

LAT 580 Latin Seminar credit: 4 Hours.

Research on special problems of Latin literature; required of all majors in classical philology. May be repeated if topics vary. Prerequisite: A Latin proseminar.

LAT 595 Intro to Classical Studies credit: 4 Hours.

Same as GRK 595. See GRK 595.

LAT 599 Thesis Research credit: 0 to 16 Hours.

Guidance in writing theses for advanced degrees. Approved for S/U grading only. May be repeated.

Latin American & Caribbean St (LAST)

LAST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAST>)

Courses

LAST 170 Introduction to Latin America credit: 3 Hours.

Interdisciplinary introduction to the ways of life of Latin American peoples, their origins and current expressions; discusses social, economic issues, and domestic and international policies related to them in the context of other societies in developing countries.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

LAST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LAST 240 Constr Afr and Carib Identity credit: 3 Hours.

Same as AFST 209, CWL 225, and FR 240. See FR 240.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

LAST 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, INFO 325, REES 325, and SAME 325. See EPS 325.

LAST 342 Arts of Colonial Latin America credit: 3 Hours.

Same as ARTH 342. See ARTH 342.

LAST 343 Arts of Modern Latin America credit: 3 Hours.

Same as ARTH 343. See ARTH 343.

LAST 395 Special Topics credit: 2 to 4 Hours.

Topical survey of cultural, social, economic, and political factors in Latin American life. Each term a particular topic is considered. Prerequisite: A basic course in a humanities or social science discipline.

LAST 440 Honduras Water Project I credit: 3 Hours.

Same as ENG 440. See ENG 440.

LAST 441 Honduras Water Project II credit: 3 Hours.

Same as ENG 441. See LAST 441.

LAST 445 Native Latin Amer Languages credit: 2 to 4 Hours.

Upon the consent of the Director of the Center for Latin American and Caribbean Studies, tutorials are available in special native Latin American languages not regularly offered by the University (ie. Quechua, Kagchikel Mayan). Tutorials at the elementary, intermediate, and advanced levels may be arranged. Students registering for unit credit for the first two terms must first present satisfactory evidence of knowledge of the language at the elementary level, either in the form of credit earned at another institution or by passing a proficiency examination. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated in 6 terms successively, to a maximum of 16 hours. Graduate credit is given only for work beyond the elementary level. Prerequisite: Consent of instructor.

LAST 490 Individual Study credit: 1 to 5 Hours.

Major tutorial normally taken in the senior year. Students read the works from list devised in consultation with a faculty tutor and write a term paper. 1 to 5 undergraduate hours. 1 to 5 graduate hours. May be repeated as topics vary to a maximum of 6 hours. Prerequisite: LAST 170; a declared major in Latin American and Caribbean Studies; consent of instructor.

LAST 550 Interdisc Seminar Latin Am St credit: 4 Hours.

Examines the interconnections among research approaches and problems in the field of Latin American and Caribbean Studies. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: M.A. standing in Latin American and Caribbean Studies or consent of instructor.

LAST 597 M.A. Research credit: 4 Hours.

Open to students who choose to complete their M.A. by submitting two departmental papers. May be repeated in the same or subsequent terms to a maximum of 8 hours. Prerequisite: M.A. standing in Latin American Studies and consent of instructor and advisor.

LAST 599 Thesis Research credit: 4 Hours.

Preparation of M.A. thesis. Approved for S/U grading only. May be repeated to a maximum of 8 hours with approval. Students may register in more than one section per term. Prerequisite: M.A. standing in Latin American and Caribbean Studies and consent of instructor.

Latina/Latino Studies (LLS)

LLS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LLS>)

Courses

LLS 100 Intro Latina/Latino Studies credit: 3 Hours.

Interdisciplinary introduction to the basis for a Latina/Latino ethnicity in the United States. Topics include immigration and acculturation experiences and their commonalities and differences, comparison of Latina/Latino experiences to those of other racial, ethnic and immigrant groups, and the potential for a pan-ethnic identity.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

LLS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

LLS 200 U.S. Race and Empire credit: 3 Hours.

Same as AAS 200. See AAS 200.

LLS 201 US Racial & Ethnic Politics credit: 3 Hours.

Same as AAS 201, AFRO 201, and PS 201. See PS 201.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

LLS 215 US Citizenship Comparatively credit: 3 Hours.

Same as AAS 215, AFRO 215, AIS 295, and GWS 215. See AAS 215.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

LLS 220 Mexican & Latin Am Migration credit: 3 Hours.

General overview of international migration to the United States, using Latin American migration to the U.S., especially the Midwest, as the focal point. Topics discussed include the history of international migration to the United States, the relationship between history and the contemporary context, the development of U.S. immigration policy, the incorporation of Latino immigrants in U.S. society, and immigrant and community responses to migration. Same as SOC 221.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

LLS 227 Latina/Latinos in the Contemporary United States credit: 3 Hours.

Same as SOC 227. See SOC 227.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

LLS 230 Latina/o Genders & Sexualities credit: 3 Hours.

Survey of major theories and debates surrounding the gendered and sexualized dimensions of the Latina/o experience in the United States. The course is comprised of three major units: Gender, Sexuality, and Sex. In these units, students will read about and discuss issues pertaining to femininity/marianismo, masculinity/machismo, family/familism, desire, sexual behavior, sex work, sexual and gendered violence, and gendered and sexualized representations in pop culture. Same as GWS 230.

LLS 238 Latina/o Social Movements credit: 3 Hours.

Focuses on the history and theory of Latina/o social movements. Topics include immigrant mobilizations, transnational organizing, agrarian and farm worker movements, political representation, feminisms and reproductive rights, environmental justice, labor and educational struggles, and urban social movements. Same as HIST 292.

LLS 240 Latina/o Popular Culture credit: 3 Hours.

Provides an introduction to Latina/o popular culture in the United States. Specific modes of popular culture might include mass media, music, film, video, performance, and other expressive forms. Lecture and readings are in English. Same as ENGL 224 and SPAN 240.

LLS 242 Intro to Latina/o Literature credit: 3 Hours.

Survey of literature by and about people of Mexican, Puerto Rican, Cuban, and other Latina/o descent in the United States. Taught in English. Same as ENGL 225 and SPAN 242.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

LLS 246 Gender & Sexuality in Latina/o Literature credit: 3 Hours.

Same as SPAN 246. See SPAN 246.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

LLS 250 Latina/os on the Bronze Screen credit: 3 Hours.

Critical, historical, and theoretical exploration of Latina/o representations in U.S. film from the 1900s to the present. Examination of cinematic representations as well as the social, political, and cultural context in which those representations are produced. The focus is on Mexican American and Puerto Rican images, but Hollywood's treatment of other Latina/o communities and ethnic groups will be discussed. Students will be required to attend weekly movie screenings. Same as MACS 250.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - US Minority

LLS 258 Muslims in America credit: 3 Hours.

Same as AAS 258 and REL 258. See AAS 258.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

LLS 259 Latina/o Cultures credit: 3 Hours.

Same as ANTH 259. See ANTH 259.

LLS 260 Graffiti and Murals credit: 3 Hours.

Same as ARTH 260. See ARTH 260.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts
Cultural Studies - Western

LLS 265 Politics of Hip Hop credit: 3 Hours.

Examines hip hop as politics, culture, and commodity. Emphasis given to hip hop's relation to urban spaces deeply impacted by state surveillance, cuts in social welfare programs, immigration, and the global restructuring of capital. Also considers the viability of a "politics of hip hop" in the wake of the music's rising value as a global commodity and analyzes hip hop as a transnational site in which gendered and sexual identities are created, contested, and rearticulated. Same as AAS 265.

LLS 278 Mapping Latina/o Inequalities credit: 3 Hours.

Explores contemporary structural forces that contribute to the concentration of Latinas/os in segregated neighborhoods, and the detrimental effects of housing inequality on Latina/o communities. Focuses on the influence of geographic context in creation and maintenance of racial inequalities as they affect urban, suburban, and small town locals. Further examines the role of space and place in the development and persistence of community identities. Same as SOC 278.

LLS 279 Mexican-American History credit: 3 Hours.

Examination of the history of Mexican Americans living within the United States from the Spanish Conquest to the twentieth century. Explores the process of migration, settlement, assimilation, and discrimination with emphasis on continuity and change in Mexican cultural development.

Same as HIST 279.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

LLS 280 Caribbean Latina/o Migration credit: 3 Hours.

Same as HIST 280. See HIST 280.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

LLS 281 Constructing Race in America credit: 3 Hours.

Same as AAS 281, AFRO 281, and HIST 281. See HIST 281.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil
Cultural Studies - US Minority

LLS 296 Topics Latina/o Studies credit: 3 Hours.

Course examines specific topics in Latina/Latino Studies not addressed in regularly offered courses. Examples include theories of ethnic identity, historical foundations, cultural expression, and relevant topics in public policy studies of Latina/Latino communities. May be repeated in same or separate terms to a maximum of 6 hours.

LLS 301 19thC US Latina/o Lit-ACP credit: 4 Hours.

Focuses on the fiction (historical novels and poetry) as well as the critical essays of the 1848 Mexican-American War and the 1898 Spanish-American War, the two key 19th century events that determined the status of the people of the Caribbean and Mexican descent in the United States. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil
Cultural Studies - US Minority

LLS 305 Theories of Race, Gender, and Sexuality credit: 3 Hours.

Same as AAS 300 and GWS 305. See AAS 300.

This course satisfies the General Education Criteria for:

Advanced Composition

LLS 308 Spanish in the United States credit: 3 Hours.

Same as SPAN 308. See SPAN 308.

LLS 310 Race and Cultural Diversity credit: 4 Hours.

Same as AAS 310, AFRO 310, and EPS 310. See EPS 310.

This course satisfies the General Education Criteria for:

Advanced Composition

Cultural Studies - US Minority

LLS 316 Latina/Latino Politics credit: 3 Hours.

Same as PS 316. See PS 316.

LLS 320 Gender & Latina/o Migration credit: 3 Hours.

Study of the gendered social process of international immigration, focusing on Latin American migration to the United States. Established theories of migration, the history of international immigration to the U.S., and historical and contemporary Mexico, Caribbean and Central American migration flows will be discussed in great detail. Primary focus on how gender shapes the migration experiences of immigrants and the gendered impact of migration on the economic, political, and social status of individuals. Same as SOC 321 and GWS 320. Prerequisite: LLS 100 or SOC 100.

LLS 322 US Latina and Latino Families credit: 3 Hours.

Same as HDFS 322. See HDFS 322.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

LLS 355 Race and Mixed Race credit: 3 Hours.

Explores the history of racial classification in the U.S. with special attention to the census and the role of the state more generally in defining race. Emphasis on how race-mixing has been understood in American culture, and on the current literature on "multiracials" and the future of "race" in the U.S. Readings are drawn from interdisciplinary sources, but examined from a sociological perspective. Same as AAS 355 and SOC 355. Prerequisite: Any lower division LLS or SOC or AAS course.

LLS 360 Contemporary US Latina/o Lit credit: 3 Hours.

Focuses on the major U.S. Latina/Latino writers and texts and their depictions of the events that have shaped 20th- and 21st-Century U.S. Latina/Latino cultures.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

LLS 368 Latinas/os & Public Policy credit: 3 Hours.

Examines the effectiveness of current U.S. public policies in addressing the social, economic, and political problems affecting Latina/o individuals and communities. Specifically, it evaluates current policy in the areas of public assistance, fair housing, criminal justice, immigration enforcement, and reproductive health. Although this interdisciplinary course primarily focuses on national policies and programs, it also addresses, as necessary, the particulars of public policy in the state of Illinois.

LLS 370 Latina/o Ethnography credit: 3 Hours.

Addresses the theoretical, methodological, and ultimately political implications and questions generated by a range of ethnographic materials on Latina/os. Specifically explores culture and power (e.g., racism, sexism, and activism) through ethnographic methods and modes of representation, including literature. Fundamental to the course is the requirement that students engage in ethnographic practice, producing ethnographic research on Latina/os at the University of Illinois. Same as ANTH 370. Prerequisite: Any lower division course in LLS or ANTH.

LLS 372 Immigration, Law, and Rights credit: 3 Hours.

Same as AAS 370. See AAS 370.

LLS 375 Latina/o Media in the US credit: 3 Hours.

Same as MACS 375. See MACS 375.

LLS 377 Prisons, Race, and Terror credit: 3 Hours.

Same as AAS 375. See AAS 375.

LLS 379 Latina/os and the City credit: 3 Hours.

Examination of the migration and settlement of Latina/o populations (Mexicans, Puerto Ricans, Cubans, Dominicans, and Central and South Americans) in U.S. cities. Focus on the historic, economic, social and political factors that influenced these migrations and the choices migrants made to come to the United States and to urban areas in particular. Study of the regional variation among Latina/o groups, and coalition building and collaborative ventures between Latina/os and other communities of color in urban areas. Same as HIST 379.

LLS 382 Race and Migration in Chicago credit: 3 Hours.

As the "Second City" located in the heartland of America, Chicago is central to many debates on urban space, race, and nation. Specifically, it is an influential site in which Latina/os, African-Americans, Asian-Americans, and ethnic whites have come to understand meanings of race in a highly segregated setting. This course takes an interdisciplinary approach to the study of racial and ethnic groups in this city, examining issues of migration, gender, segregation, labor, and education from the late nineteenth century to the present. Same as HIST 382. Prerequisite: One course in either LLS or HIST.

LLS 385 Theory and Methods in LLS credit: 3 Hours.

Introduction to the interdisciplinary theories and methods of Latina/Latino Studies. Traditional approaches to the study of ethnicity and race will be interrogated through critical scholarship produced by Latina/Latino Studies scholars across a variety of approaches (anthropology, communications, literature, history, sociology, among others). By learning about a variety of methodological approaches, students will become proficient in conducting ethnic studies research projects about U.S. Latina/o populations. Prerequisite: LLS 100.

This course satisfies the General Education Criteria for:

Advanced Composition

LLS 387 Race, Gender and the Body credit: 3 Hours.

Focuses generally on the relation between power and the body. In western culture, the body is typically thought of as a natural, biological entity. However, as a number of social theorists have pointed out, the body can never be reduced to mere biology. It is also always a product of culture and therefore necessarily implicated in relations of dominance and subordination. Using this framework, the class is specifically concerned with how raced, gendered, and sexed bodies have been imagined in US culture (as abnormal, diseased, criminal, etc.) and with how such bodies have been rendered objects of surveillance, discipline, and regulation. Same as SOC 387. Prerequisite: LLS 100.

LLS 390 Independent Study credit: 0 to 3 Hours.

Special topics not treated in regularly scheduled courses; designed especially for advanced Undergraduates. Approved for letter and S/U grading. May be repeated in the same or subsequent terms as topics vary to a maximum of 6 hours. Prerequisite: One course in Latina/Latino Studies and consent of instructor.

LLS 391 Oral History Methods credit: 3 Hours.

Same as HIST 391. See HIST 391.

LLS 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Explores the experiences of Chicanas and Latinas through the lens of contemporary sociological research. Topics to be discussed include: community formation and activism, Chicana/Latina feminisms, sexuality, religion, health, family, immigration, education, work, media, and artistic expression. Readings emphasize the link between the structural inequalities of society, and the day-to-day lived experiences of Chicana/Latinas. Same as GWS 392 and SOC 392. Prerequisite: Any 100, 200, or 300-level LLS, GWS, or SOC course.

This course satisfies the General Education Criteria for:
Advanced Composition

LLS 396 Adv Topics Latina/o Studies credit: 3 Hours.

Examines specific topics in Latina/Latino Studies not addressed in regularly offered courses. Examples include theories of ethnic identity, historical foundations, cultural expression, and relevant topics in public policy studies of Latina/Latino communities. May be repeated in the same or separate terms to a maximum of 6 hours.

LLS 410 Writing Latina/o Chicago credit: 3 or 4 Hours.

Examination of novels, poetry, film and memoirs by Latinas and Latinos writing from and/or about Chicago. Through these texts, the course will simultaneously track a Chicago-based Latina/o literary history and analyze articulations of Latina/o everyday life and politics grounded in the city's distinct topographical and social contexts. Issues of migration, gentrification, segregation, youth culture, gender, sexuality, race, violence, poverty, class consciousness, and struggles for social justice will figure prominently in lectures and class discussions. 3 undergraduate hours. 4 graduate hours. Prerequisite: LLS 100.

LLS 412 Hispanics in the U.S. credit: 3 or 4 Hours.

Same as SOCW 412. See SOCW 412.

LLS 433 Found of Bilingual Educ credit: 2 to 4 Hours.

Same as CI 433. See CI 433.

LLS 435 Commodifying Difference credit: 3 or 4 Hours.

An interdisciplinary examination of how racial, ethnic and gender difference is negotiated through media and popular culture, and how racial, ethnic and gendered communities use cultural forms to express identity and difference. Among the theoretical questions explored are the politics of representation, ethnic/racial authenticity, cultural commodification and transnational popular culture. Some of the cultural forms examined are cultural festivals/parades, ethnic/race-based beauty pageants, cinematic and televisual texts and musical forms, such as Hip-Hop and Salsa. Same as AAS 435, AFRO 435, GWS 435, and MACS 432. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any combination of 6 hours from Latina/o Studies, Asian American Studies, Afro-American Studies, Gender and Women Studies or Media and Cinema Studies; graduate standing, or consent of instructor.

LLS 442 Latina Literature credit: 3 or 4 Hours.

Examines literary productions by and about women of Mexican, Puerto Rican, Cuban, and other Latina/o descent in the United States. Taught in English. Same as GWS 445 and SPAN 442. 3 undergraduate hours. 4 graduate hours. Prerequisite: At least one previous course in U.S. Latina/Latino Studies or Gender and Women's Studies, or consent of instructor.

LLS 449 Issues in Latina/o Educ credit: 2 to 4 Hours.

Same as CI 449. See CI 449.

LLS 458 Latina/o Performance credit: 3 or 4 Hours.

Focuses on Latina/o performances to underscore the relationship between practices of everyday life and acts on stage. Pays particular attention to the material (human) body and bodies of work. Students will critically engage with performance theory and scripts, media works of performances, and theorizations of Latinidad and the body. Same as ENGL 458. 3 undergraduate hours. 4 graduate hours.

LLS 460 Critical Ethnic Studies credit: 3 or 4 Hours.

Same as AAS 400. See AAS 400.

LLS 465 Race, Sex, and Deviance credit: 3 or 4 Hours.

Explores how racial stereotypes rely on sexual stereotypes by examining the intersections of ethnic studies, gender and women's studies, and queer studies. Interdisciplinary course that draws from critical legal studies, sociology, anthropology, literary criticism, and history. Same as AAS 465, AFRO 465, and GWS 465. 3 undergraduate hours. 4 graduate hours. Prerequisite: Any lower division course in LLS, AAS, AFRO, or GWS.

LLS 468 Latinas/os & the Law credit: 3 or 4 Hours.

Examines the Latina/Latino experience in the U.S. how and when the law, through the courts, has most often operated as an instrument of subordination and oppression, but has also at times been leveraged for positive social transformation. Students will come to understand that the law is a deeply contested social space that is central to U.S. social hierarchies based upon race, ethnicity, sexuality, gender, class, immigration status, and religion. 3 undergraduate hours. 4 graduate hours.

LLS 472 Border Latina, Latino Cultures credit: 3 or 4 Hours.

Same as ANTH 472. See ANTH 472.

LLS 473 Immigration, Health & Society credit: 3 or 4 Hours.

This interdisciplinary seminar examines the social determinants of US racial and ethnic health inequalities through the lens of (im)migration. Topics to be addressed include: conceptualizations of race and ethnicity, immigrant-adaptation theories, discrimination, place, and the intersections of race, ethnicity, poverty, immigration, gender and health. Same as CHLH 473, SOC 473, and SOCW 473. 3 undergraduate hours. 4 graduate hours.

LLS 475 History of the American West credit: 3 or 4 Hours.

Same as HIST 476. See HIST 476.

LLS 479 Race, Medicine, and Society credit: 3 or 4 Hours.

The idea of race has historically been central to how Western cultures conceptualize and think about human difference. This course examines the historical significance of race through one domain of knowledge: medicine. Specifically, it will be concerned with "race" as a central category in the medical construction and management of individuals and populations. Case studies might focus on colonial medicine, race and public health, sexuality and reproduction, global health disparities, and genetics and genomics. Same as AAS 479 and ANTH 479. 3 undergraduate hours. 4 graduate hours. Prerequisite: LLS 100 or consent of instructor.

LLS 490 Senior Research Project credit: 2 or 4 Hours.

Research project leading to a senior paper. 2 or 4 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 4 undergraduate hours. Prerequisite: Senior standing; enrollment as a major in Latina/Latino Studies; and consent of instructor.

LLS 495 Senior Honors Thesis credit: 2 or 4 Hours.

Research project leading to a thesis. 2 or 4 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 4 undergraduate hours. May be taken by honors students in partial fulfillment of department honors requirement. Prerequisite: Senior standing; enrollment as a major in Latina/Latino Studies; a cumulative grade point average of at least 3.25; a minimum 3.5 grade point average in the major; and consent of supervising professor.

LLS 496 Seminar in Latina/o Studies credit: 3 or 4 Hours.

3 undergraduate hours. 4 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 12 graduate hours.

LLS 517 Bilingual and English as a Second Language Assessment credit: 4 Hours.

Same as CI 517. See CI 517.

LLS 554 Social Ent in Diverse Society credit: 4 Hours.

Same as HDFS 541 and SOCW 554. See SOCW 554.

LLS 561 Race and Cultural Critique credit: 4 Hours.

Same as AAS 561, AFRO 531, ANTH 565, and GWS 561. See AAS 561.

LLS 577 Perspectives in LLS credit: 4 Hours.

Provides an overview of scholarly work and research in the field of Latina/o Studies. Prerequisite: One undergraduate or graduate course in Latina/Latino Studies or consent of instructor.

LLS 585 Doctoral Training & Beyond credit: 2 Hours.

Same as AAS 585 and GWS 585. See GWS 585.

LLS 590 Independent Study credit: 1 to 4 Hours.

Independent study on special topics not treated in regularly scheduled courses. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours.

LLS 596 Graduate Seminar in LLS credit: 4 Hours.

Examination of specific topics in Latina/Latino Studies. Topics vary. May be repeated in the same or subsequent semesters to a maximum of 12 hours.

Law (LAW)

LAW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAW>)

Courses

LAW 199 Undergraduate Open Seminar credit: 1 to 3 Hours.

Approved for letter and S/U grading. May be repeated in the same term up to 6 hours, if topics vary; May be repeated in separate terms up to 12 hours, if topics vary.

LAW 201 Basic Constitutional Law & Individual Rights credit: 3 Hours.

An introduction to the main themes of the American Constitution - with an emphasis on the First and Fourteenth Amendments - and to basic techniques of constitutional interpretation. Attention will be paid to the interplay of constitutional text, judicial doctrine, and constitutional decision-making outside the judiciary. No prerequisites.

LAW 301 Introduction to Law credit: 2 or 3 Hours.

Guides the undergraduate student in an initial study of law and legal reasoning. Covers the nature and function of rules/law, the distinctiveness of legal reasoning, and the way in which law responds to social phenomena and contributes to the development of different social, business and economic institutions. Includes both criminal and civil proceedings. Serves as a general foundation course for those interested in applying to law school. Also of interest to students who are not interested in pursuing a more formal law education, but for whom general legal training will enhance their career aspirations. Develops skills that are transferable to virtually any career.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

LAW 302 Transitional Justice credit: 3 Hours.

Wrongdoing is part of the history of many, if not most, political communities around the globe. This course examines the moral questions that dealing with past wrongdoing raise. Our focus is specifically on political wrongdoing, that is, wrongdoing inflicted on individuals by the state or groups contesting the state. Such wrongdoing has taken different forms, from slavery, to forced disappearances, to programs of torture and of land appropriation. We also focus on two specific political contexts: the United States and South Africa. In this course, we survey a range of legal measures including criminal punishment, truth commissions, reparations, and apology, that have been, and can be used, to deal with legacies of wrongdoing. Not available for Graduate or Professional credit.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

LAW 499 LAW Study Abroad credit: 0 to 8 Hours.

Provides campus credit for study at accredited foreign institutions or approved overseas programs. Final determination of credit granted is made after the student's successful completion of work. 0 to 8 undergraduate hours. 0 to 8 graduate hours. Approved for letter and S/U grading. Prerequisite: Full academic standing in the College of Law or Graduate College and consent of major department. Law students, successful completion of the year's requirements.

LAW 500 LLM Legal Writing and Research credit: 2 Hours.

Designed and developed to equip incoming LL.M students with the necessary background in U.S. constitutional law, legal research, analysis, and writing for effective classroom performance. Approved for S/U grading only. Prerequisite: Admission to the U.S. LLM program.

LAW 501 Professional Responsibility credit: 3 or 4 Hours.

This course concerns itself with the laws, regulations, and customs that govern the legal profession in the United States, and considers those matters in the context of an increasingly globalized legal profession. 3 or 4 graduate hours. No professional credit. Students will be expected to attend class, review the assigned reading before class, participate in class discussions and exercises, complete written assignments, and examinations.

LAW 598 Law Partner Scholar Notation credit: 0 Hours.

Illinois Law Partner Scholars Program requirements provide designated students an opportunity to enhance their professional and personal competences in four areas: cultural awareness, leadership and team-building, academic excellence, and community involvement. The activities and contributions of designated students will advance the development of global law practice skills within the College of Law: 1) by providing points of comparison and contrast to U.S. Law; and 2) by understanding the social and business context of law outside the U.S. 0 graduate hours. No professional credit. Approved for S/U grading only. Prerequisite: For students who are identified by Illinois Law Partner schools for admission into the Illinois LL.M. program.

LAW 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only.

LAW 600 Pro Bono Service credit: 0 Hours.

Course carries no academic credit, but recognizes law students who provide at least sixty hours of pro bono legal service to the community. The sixty hours of service may be performed at any time during the student's three years of law school, and must be documented through reports to the Associate Dean for Academic Affairs. 0 graduate hours. 0 professional hours. Approved for S/U grading only. Students may enroll only with permission of the Associate Dean for Academic Affairs. Prerequisite: Enrollment in the J.D. or LL.M. program at the College of Law.

LAW 601 Contracts credit: 4 Hours.

Enforceability of promises including unjust enrichment and reliance, offer and acceptance, mistake, unfairness and overreaching, unconscionability, Statute of Frauds, interpretation of contract language, conditions, and third party beneficiaries. 4 graduate hours. 4 professional hours.

LAW 602 Property credit: 4 Hours.

Basic first-year course in property law, required of all students. Provides an overview of law of the land, with incidental coverage of personal property; includes the concept of property, acquisition of private property, recognized property interests, and gratuitous transfer of property interests. 4 graduate hours. 4 professional hours.

LAW 603 Torts credit: 4 Hours.

Basic course in civil wrongs, including intentional torts (such as assault and battery), negligence (duty, unreasonable risk analysis, actual and proximate cause), and strict liability. 4 graduate hours. 4 professional hours. Prerequisite: Law students only.

LAW 604 Criminal Law credit: 4 Hours.

Sources and purposes of the criminal law; the meaning of criminal responsibility; and the characteristics of particular crimes. 4 graduate hours. 4 professional hours. Prerequisite: Law students only.

LAW 605 Criminal Proc: Investigation credit: 3 or 4 Hours.

Problems in the administration of criminal justice with emphasis on right to counsel, arrest, search, interrogation, lineups, and the scope and administration of exclusionary rules. 4 graduate hours. 3 professional hours.

LAW 606 Constitutional Law I credit: 4 Hours.

Basic first-year course provides an introduction to constitutional law, including the origins of judicial review, basic Article III limits on federal court jurisdiction, the nature and scope of federal legislative power, the Commerce Clause, and the relationship of the federal government to the states. 4 graduate hours. 4 professional hours.

LAW 607 Civil Procedure credit: 4 Hours.

Role and importance of procedure in litigation, including jurisdiction, pleadings and parties, pretrial motions and discovery, trial practice (except evidence), relationship between judge and jury, the effect of a decision in one case on subsequent litigation between the same or different parties (res judicata), verdicts and judgements, and appellate review. 4 graduate hours. 4 professional hours.

LAW 609 Legal Writing & Analysis credit: 2 or 3 Hours.

Emphasis on development and improvement of skills in legal writing, and training in legal bibliography. Assignments may include brief writing and preparation of legal memoranda and opinions. 3 graduate hours. 2 professional hours.

LAW 610 Introduction to Advocacy credit: 2 or 3 Hours.

Continuation of LAW 609. Introduction to Advocacy is required in the second semester of the first year for further development of legal research skills persuasive writing and oral advocacy. Each student will work on the preparation of a summary judgment motion and an appellate brief relating to their first semester assignment, then argue their assigned case before a panel of local attorneys and faculty. 2 graduate hours. 3 professional hours. Approved for Letter and S/U grading.

LAW 612 Constitutional Law III credit: 3 or 4 Hours.

This elective for second-and third-year law students is an intensive study of the First Amendment to the Constitution and its application to the states through the Fourteenth Amendment. Examines decisions of the U.S. Supreme Court in areas concerning freedom of speech, religion, and the press. Specific topics include punishment of criminal advocacy; regulation of picketing and public demonstrations; obscenity; commercial speech; regulation of news media; and religious exemptions from government regulation. 4 graduate hours. 3 professional hours. Prerequisite: LAW 606.

LAW 615 Administrative Law credit: 3 or 4 Hours.

Functions of administrative tribunals in federal, state, and municipal government; the procedure before such administrative tribunals; and judicial relief from administrative decisions. 4 graduate hours. 3 professional hours.

LAW 616 Environmental Law and Pol I credit: 3 or 4 Hours.

Course is the basic introduction to Environment Law; it considers the principal legal approaches used to deal with environmental problems, including common-law, statutory, regulatory, and economic-incentive systems. 4 graduate hours. 3 professional hours.

LAW 618 Natural Resources credit: 2 to 4 Hours.

Legal problems associated with the ownership and use of land, water, and mineral resources. 2 or 4 graduate hours. 3 professional hours.

LAW 619 Wildlife Law credit: 3 or 4 Hours.

Covers a variety of legal issues relating to the status and treatment of wildlife and the management of natural areas for the conservation of biodiversity. 4 graduate hours. 3 professional hours.

LAW 620 Health Law Policy credit: 3 or 4 Hours.

This course focuses on the profound legal and policy issues raised by changes in health law and the U.S. health care delivery system including: access to health law and the U.S. health care delivery system including: access to health services; the financing and organization of the health care system; development of legal standards to ensure quality of care; and issues of long-term care. In addition, we will focus on the process of making laws and policies; what entities, institutions, and individuals control decisions about the quality and cost of health care. We will also explore the need and basis for reform. 4 graduate hours. 3 professional hours.

LAW 622 Land Use Planning credit: 2 to 4 Hours.

Examination of the legal and administrative aspects of land development and regulation in an urban society, including the techniques and problems of planning; the tools of plan effectuation, such as zoning, subdivision regulation, renewal and redevelopment, and housing programs; and the allocation of decision-making among various levels of government. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 624 Real Estate Finance credit: 3 or 4 Hours.

Methods of financing land acquisition and residential and commercial development, including publicly owned and subsidized housing. 4 graduate hours. 3 professional hours.

LAW 625 State and Local Government credit: 3 or 4 Hours.

The law governing the structure, powers, and operation of local governments in urban and suburban areas with analysis of political, economic, and social implications. 4 graduate hours. 3 professional hours. Prerequisite: LAW 606.

LAW 627 Legal Research credit: 1 or 2 Hours.

Introduction to the basic tools and methodology used in conducting legal research and will develop the skills necessary to identify and locate relevant, complete and current legal information in both print and digital formats. Weekly problem-based research exercises will be assigned. 1 graduate hour. 1 or 2 professional hours. Approved for letter and S/U grading. Required in the first year, fall term.

LAW 629 Bankruptcy credit: 3 or 4 Hours.

Study of the regulation of the relationship between debtors and creditors under the federal Bankruptcy Code. 4 graduate hours. 3 or 4 professional hours.

LAW 631 Secured Transactions credit: 2 to 4 Hours.

Study of secured transactions under Article 9 of the Uniform Commercial Code. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 633 Business Associations I credit: 3 or 4 Hours.

Examines the basic legal consequences for individuals, organizations, and society of the formation, control, and financing of organizations. Surveys agency relationships, partnerships, and close and public corporations. 4 graduate hours. 3 or 4 professional hours.

LAW 634 Securities Regulation credit: 3 or 4 Hours.

Explores the federal securities laws governing issuance of securities in the primary markets. Emphasis on regulatory requirements governing corporate financing. 4 graduate hours. 3 professional hours. Prerequisite: LAW 633.

LAW 635 Securities Litigation credit: 3 or 4 Hours.

Focuses in detail on the substantive law and strategic considerations that are important in securities litigation, whether private suits by individual investors, private class actions under federal securities laws, or federal and state government enforcement proceedings. Topics include: 10(b) fraud suits under the 1934 Act, 11 and 12(a)(2) suits under the 1933 Act, insider trader liability, procedural issues in class actions, and litigation under federal proxy solicitation and tender offer regulations. 4 graduate hours. 3 professional hours. Prerequisite: LAW 633.

LAW 636 Business Associations II credit: 3 or 4 Hours.

The second course in the sequence. Covers derivative suits, corporate finance, introduction to securities regulation, insider trading and mergers and acquisitions. 4 graduate hours. 3 professional hours. Prerequisite: LAW 633.

LAW 638 White Collar Crime credit: 2 to 4 Hours.

This course will focus on the federal statutes commonly invoked in corporate and white collar prosecutions, including those used in prosecutions for conspiracy, mail and wire fraud, RICO, extortion, bribery, tax offenses, obstruction of justice, and false statements. The class will investigate the theoretical and policy framework for individual and institutional responsibility in our criminal justice system and will also explore emerging theories of corporate criminal liability and the principles undergirding the sanctions imposed for white collar crime. Prerequisite: This course is appropriate for law students who have completed introductory courses in criminal law and procedure. Some students have found it helpful to complete the course in LAW 633 before taking this course, but it is not a prerequisite.

LAW 639 Corporate Finance credit: 3 or 4 Hours.

Analysis of corporate and securities law problems using the tools of modern financial theory. Emphases will typically include valuation, capital structure, and fundamental changes of public corporations. 4 graduate hours. 3 professional hours. Prerequisite: LAW 633.

LAW 642 Antitrust Law credit: 3 or 4 Hours.

The limitations imposed by the Sherman Act, Clayton Act, and Federal Trade Commission Act on anticompetitive practices by business firms; emphasizes price fixing and other agreements among competitors, monopolization, mergers, exclusive dealing, tying arrangements. Considers applicability of traditional rules to intellectual property and new technologies. 4 graduate hours. 3 professional hours.

LAW 643 Trademark & Unfair Competition credit: 3 or 4 Hours.

Course introduces basic legal concepts relating to statutory and common-law trademark, interference with contractual relations and trade libel, the federalization of unfair competition law, and the role of the Federal Trade Commission in consumer protection activities. 4 graduate hours. 3 professional hours.

LAW 644 Copyright Law credit: 3 or 4 Hours.

Offers an in-depth look at the legal aspects of copyright with special emphasis on the application of traditional copyright principles to new technologies and media of expression. 4 graduate hours. 3 professional hours.

LAW 645 Patent Law credit: 2 to 4 Hours.

Historical development of protection of ideas, inventions, and discoveries; patentability; securing the patent; amendment and correction of patents; and infringement remedies, defenses, and procedure. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 647 Income Taxation credit: 3 or 4 Hours.

The fundamental course in federal income taxation. Includes materials relating to income taxation of individuals and an introduction to taxation of corporations and shareholders. 4 graduate hours. 3 or 4 professional hours.

LAW 648 Corporate Taxation credit: 3 or 4 Hours.

In-depth study of federal income tax law related to taxation of corporations, shareholders, partnerships, and partners. 4 graduate hours. 3 professional hours. Prerequisite: LAW 647.

LAW 649 Partnership Taxation credit: 3 or 4 Hours.

Involves the study of Subchapter K of the Internal Revenue Code, including partnership formation, allocations, distributions, and liquidations. Also examines the tax treatment of Subchapter S corporations. 4 graduate hours. 3 professional hours. Prerequisite: LAW 647.

LAW 651 Tax Exempt Organizations credit: 3 to 4 Hours.

Covers the rationale and technical tax requirements for exempting charities from federal and state taxes. Subjects will include the rationale for exemption (especially with respect to churches, schools, and hospitals), qualification rules under I.R.C. Section 5 (c) (3), the Unrelated Business Income Tax, and if time permits, the charitable contributions deduction. 4 graduate hours. 3 professional hours. Prerequisite: LAW 647 is a prerequisite, though it may be waived in appropriate cases.

LAW 653 International Business Trans credit: 3 or 4 Hours.

Doing business abroad: export-import regulations, use of foreign commission merchants, licensing of patents and know-how, investment and exchange problems, establishing a foreign operation (including forms of business organization available abroad), and application of United States and foreign antitrust law to the business operation. 4 graduate hours. 3 professional hours.

LAW 654 International Trade Policy credit: 3 or 4 Hours.

Analysis of the regulation of trade between nations by international agreement (e.g., the GATT), by multinational organizations (e.g., the European Communities), and by individual countries; emphasizes U.S. import restraints, export controls, and related laws. 4 graduate hours. 3 professional hours.

LAW 655 European Union Law credit: 2 to 4 Hours.

Intensive study of the European Common Market, particularly of its laws relating to trade barriers, establishment of companies, and antitrust; and United States legislation in the field of international trade. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 656 International Law credit: 3 to 4 Hours.

The nature, sources, and subjects of international law and its place in the control of international society; includes an examination of the law of jurisdiction, territory, recognition and succession of states, rights and immunities of states in foreign courts, diplomatic immunities, treaties, protection of citizens abroad, settlement of international disputes, war and neutrality, the United Nations, and the International Court of Justice. 4 graduate hours. 3 professional hours.

LAW 657 International Human Rights Law credit: 3 or 4 Hours.

Studies established and developing legal rules and procedures governing the protection of international human rights, including Marxist and Third World, as well as Western, conceptions of those rights. 4 graduate hours. 3 professional hours.

LAW 660 Individual Employee Rights credit: 3 Hours.

This course investigates the legal rights and responsibilities of employees in the non-union workplace. The course will emphasize particularly the role of law in adjusting the balance of power between individual employees and employers. It will study the regulation of contract, tort, and statute of such areas as hiring, discharge, compensation, employee privacy and dignity and the like.

LAW 662 Labor Law I credit: 3 or 4 Hours.

Study of the National Labor Relations Act as amended, the pre-act history of the labor movement, and the judiciary's response thereto, with emphasis on understanding the problems, experiments, and forces leading to the enactment; includes the negotiation and administration of the collective bargaining agreement, especially the grievance arbitration procedure, its operation and place in national labor policy; and explores the relationship of the individual and the union. Same as LER 547. 4 graduate hours. 3 or 4 professional hours.

LAW 664 Employment Discrimination credit: 2 to 4 Hours.

Problems arising under federal statutory prohibitions of discrimination in employment, with particular emphasis on evidentiary problems and the use of statistical proofs; defining relevant labor pools, using statistical analyses of data, and establishing proof of test validation. 2 or 4 graduate hours. 2 to 3 professional hours.

LAW 665 Workplace Dispute Resolution credit: 3 or 4 Hours.

Same as ECON 543 and LER 543. See LER 543.

LAW 667 Family Law credit: 3 or 4 Hours.

The creation and dissolution of the family, and legal relationships established by marriage, cohabitation and procreation. Covers the law of marriage, divorce, annulment, separation, unmarried cohabitation, illegitimacy, adoption and rights of child custody, parental property on divorce, inheritance, and related rights. Legal rules are placed into the social setting in which they operate, and emphasis is given to family policy as reflected in current developments in family law reform, including constitutional law. 4 graduate hours. 3 professional hours.

LAW 668 Decedents' Estates and Trusts credit: 3 or 4 Hours.

Studies the means of transferring wealth, with primary emphasis on gratuitous transfers; the means available for making gratuitous transfers, including the validity and effect of testamentary instruments and trust deeds; and problems concerning the dispositive provisions of any type of instrument which transfers wealth. 4 graduate hours. 3 professional hours.

LAW 670 Elder Law credit: 3 or 4 Hours.

Examines the various legal implications of people living longer, with special emphasis on public policies and programs affecting the financing of medical care, housing arrangements, and income maintenance of persons aged 60 years and older. 4 graduate hours. 3 professional hours.

LAW 673 Workers Compensation credit: 2 or 3 Hours.

A general survey class on rules relating to workers compensation claims and litigation. Begins with an overview of the historical development of workers compensation laws, then surveys the general principles applicable to such laws, with particular emphasis on the Illinois Workers Compensation Act. Guest speakers will include an arbitrator, a petitioner's attorney, and a claims manager. 3 graduate hours. 2 professional hours.

LAW 675 Products Liability credit: 2 to 4 Hours.

Substantive theories of products liability: negligence, breach of warranty, strict liability, and tortious misrepresentation; procedural and remedial problems with, and defenses to, each substantive theory. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 676 Insurance Law credit: 3 or 4 Hours.

Covers principles generally applicable to insurance law and includes distinctive rules governing certain types of insurance coverage; objectives are to examine the nature of the insurance contract, marketing of insurance, principles of indemnity, individuals and entities protected by insurance rules, and risks that are shifted by insurance coverage. 4 graduate hours. 3 professional hours.

LAW 678 Anthropology and Law credit: 3 or 4 Hours.

Same as ANTH 560. See ANTH 560.

LAW 679 Criminal Proc: Adjudication credit: 3 or 4 Hours.

Problems in the administration of criminal justice, with emphasis upon the commencement of formal proceedings (bail, decision to prosecute, grand jury, preliminary hearing, location of prosecution, scope of prosecution, speedy trial); the adversary system (pleas, discovery, jury trials, prejudicial publicity, ethical problems, double jeopardy); and post-conviction review (post-trial motions, appeals, habeas corpus, related post-conviction remedies). 4 graduate hours. 3 professional hours.

LAW 680 Professional Responsibility credit: 2 to 4 Hours.

Problem course analyzing ethical issues that arise in the practice of law and considering the approaches to such issues taken by the American Bar Association's Code of Professional Responsibility, Model Rules of Professional Conduct, and Code of Judicial Conduct. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 682 Evidence credit: 3 or 4 Hours.

Law governing the proof of disputed issues of fact; function of the court and jury; competence and examination of witnesses; standards of relevancy; privileged communications; illegal evidence; hearsay rule; best evidence rule; presumptions; and judicial notice. 4 graduate hours. 3 or 4 professional hours.

LAW 683 Complex Litigation credit: 3 or 4 Hours.

Legal and practical issues in "complex" cases: problems of joinder in multi-party cases, consolidation of cases brought independently (including the activities of the Judicial Panel of Multidistrict Litigation), class actions, discovery issues including the assertion and waiver of evidentiary privileges and use of computers, consequences of active judicial "management" of litigation at the pretrial stage, settlement of complex cases, and res judicata problems. 4 graduate hours. 3 professional hours.

LAW 684 Federal Courts credit: 3 or 4 Hours.

Examination of the relationship of federal courts to other organs of federal government and to the states, including an analysis of cases dealing with congressional control over jurisdiction, federal review of state court decisions (including the relationship between state and federal substantive and procedural law), and application of law to fact; the scope of the federal question of jurisdiction in federal courts; abstention; federal injunctions of state criminal proceedings; and problems of justiciability, advisory opinions, and mootness. 4 graduate hours. 3 professional hours.

LAW 685 Dispute Resolution credit: 2 to 4 Hours.

Examination of the limitations, consequences, and costs, as well as the indispensability of some aspects of modern litigation; the possibilities, requirements, and legal problems of consensual and of court-annexed dispute resolution processes alternative to final judicial adjudication, including legal counseling, negotiation, mediation, arbitration, mini-trials, summary trials, summary jury trials, early neutral evaluation, private resolution providers, and settlement processes; current disputes used for illustration. 2 to 4 graduate hours. 2 to 3 professional hours.

LAW 686 Remedies credit: 2 to 4 Hours.

Survey of legal and equitable remedies for the protection of personal and property rights. Procedural and substantive aspects of injunctions; restitution of unjust enrichment in the context of the receipt of unsolicited benefits, benefits derived from the commission of tortious acts, and the mistaken acquisition of benefits; alternative remedies arising from bargain transactions; and remedies for violations of civil rights. 2 or 4 graduate hours. 2 to 3 professional hours.

LAW 687 Jurisprudence credit: 3 or 4 Hours.

The place of law in society; the nature, goals, and methods of law; and the relation of law and social science. 4 graduate hours. 3 professional hours.

LAW 688 American Legal History credit: 3 or 4 Hours.

Studies selected topics in the development of law and legal institutions in the United States with particular emphasis on the history of the legal profession, legal education, and the role of lawyers and courts in U.S. society. 4 graduate hours. 3 professional hours. Prerequisite: Some prior study of U.S. history, particularly social and intellectual, is helpful but not required.

LAW 689 Law and Economics credit: 3 or 4 Hours.

Introduction to the economic analysis of law, including property, contracts, torts, criminal law, and related topics. 4 graduate hours. 3 professional hours.

LAW 692 Field Placements credit: 1 to 4 Hours.

Several field placements offer practical legal education, through field work in various agencies. Students engage in legal work under the supervision of experienced attorneys; the work may include conducting client interviews, doing legal research and fact investigation, preparing legal documents, negotiating, and in some cases, engaging in real trials. 1 to 4 professional hours. May be repeated in the same or separate terms.

LAW 693 Clinical Training credit: 1 to 4 Hours.

Several clinics offer practical legal education through a variety of in-house clinics. The clinics focus on specific lawyering skills that are relevant to a particular area of practice (e.g., litigation or family advocacy), and have a classroom component. Students engage in legal work under the supervision of experienced attorneys; the work may include conducting client interviews, doing legal research and fact investigation, preparing legal documents, negotiating, and in some cases, engaging in real trials. No graduate credit. 1 to 4 professional hours. May be repeated up to 22 hours. Approved for both letter and S/U grading.

LAW 694 Trial Advocacy credit: 1 to 3 Hours.

Examination of the problems of advocacy and tactics at the trial level. Students engage in all aspects of actual trial work, including witness preparation, opening and closing statements, direct and cross examination, and jury instructions; culminates in student conduct of a full jury trial in late spring; demonstrations are conducted by staff and visiting judges and practitioners. 2 professional hours. 3 graduate hours. May be repeated to a total of 4 hours. Approved for both letter and S/U grading. Prerequisite: Completed or enrolled concurrently with LAW 682.

LAW 695 Fundamentals of Trial Practice credit: 3 or 4 Hours.

Explores the theory and reality of trial practice, from developing a theory of the case through submission of jury instructions; topics include fact gathering, jury selection, opening statements, direct and cross-examination, exhibits, expert witnesses, and closing arguments. 3 professional hours. 4 graduate hours. Approved for both letter and S/U grading. Prerequisite: LAW 694 and completion or concurrent enrollment in LAW 682.

LAW 696 Legal Problems credit: 1 to 2 Hours.

Preparation of articles and notes for publication in the University of Illinois Law Review, Elder Law Journal, Journal of Law Technology and Policy, Illinois Law Update section of the Illinois Bar Journal. Teaching practicums and clinical assistantships for Law courses and clinics. No graduate credit. 1 to 2 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours in the same term and to a maximum of 22 hours in separate terms.

LAW 697 Moot Court credit: 1 to 2 Hours.

Preparation of an appellate brief; presentation of an appellate oral argument; participation in intramural, state, national, or international moot court competition. 1 to 3 graduate hours. 1 to 2 professional hours. Approved for S/U grading only. May be repeated to a maximum of 5 hours.

LAW 699 Independent Study credit: 0 to 2 Hours.

Individual research on a special problem selected in consultation with the instructor. 0 to 2 graduate hours. 0 to 2 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 2 hours.

LAW 792 Current Legal Problems credit: 1 to 4 Hours.

This is an umbrella course listing for specialty topics of current legal issues of interest. Additional fees may apply. See Class Schedule. 2 to 4 graduate hours. 1 to 4 professional hours. Approved for letter and S/U grading. May be repeated.

LAW 793 Advanced Litigation Topics credit: 1 to 4 Hours.

This is an umbrella course listing for specialty topics of current interest in litigation. 1 to 4 graduate hours. 1 to 4 professional hours. Approved for letter and S/U grading. May be repeated if topics vary.

LAW 794 Adv Topics in Business Law credit: 1 to 4 Hours.

This is an umbrella course listing in business law for specialty topics of current interest. 1 to 4 graduate hours. 1 to 4 professional hours. Approved for letter and S/U grading. May be repeated if topics vary.

LAW 795 Adv Topics in Criminal Law credit: 1 to 4 Hours.

This is an umbrella course listing in criminal law for specialty topics of current interest. 1 to 4 graduate hours. 1 to 4 professional hours. May be repeated if topics vary.

LAW 796 Comparative Law Topics credit: 1 to 4 Hours.

This is an umbrella course listing in comparative law for specialty topics of current interest. 1 to 4 graduate hours. 1 to 4 professional hours. Approved for letter and S/U grading. May be repeated if topics vary.

LAW 797 Intellectual Property Topics credit: 1 to 4 Hours.

This is an umbrella course listing in intellectual property law for specialty topics of current interest. 1 to 4 graduate hours. 1 to 4 professional hours. May be repeated if topics vary.

LAW 798 Seminars credit: 1 to 4 Hours.

This is an umbrella course listing for specialty topics of special interest. Approved for professional and graduate credit. May be repeated.

Liberal Arts and Sciences (LAS)

LAS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LAS>)

Courses

LAS 100 Success in LAS for International Students credit: 2 Hours.

Prepares international students for their transition to campus by examining expectations and focusing on the purpose and value of the higher education experience from a US perspective. Introduces critical concepts to know about academic programs, and engages students in planning their program of study as well as their personal and professional development. Serves as a complement to LAS 101/LAS 102/LAS 122 for students new to the US education system.

LAS 101 Freshman Seminar credit: 1 Hour.

Orientation seminar for first-year students enrolled in LAS curricula. Prepares students for collaborative learning environments through campus orientation, study skills, and project-based assignments. Introduces students to the multiple perspectives represented by the Humanities, the Social Sciences, and the Physical and Life Sciences, and helps them appreciate the strengths and weaknesses of both qualitative and quantitative data in addressing real world problems. Prerequisite: Restricted to first-year students in LAS.

LAS 102 Transfer Advantage credit: 1 Hour.

Introduction for first-term transfer students to the college and campus. Familiarizes transfer student with the resources available to them and helps them connect with other students and form a bond with the college. Prerequisite: For first-term LAS transfer students only.

LAS 110 Workshop-Tutorial credit: 0 to 4 Hours.

Independent study and experimental seminars open to Unit One students and to others; specific offerings vary each term. Approved for letter and S/U grading. May be repeated if topics vary. Credit toward college or departmental requirements is contingent upon approval by the appropriate unit. A total of 12 hours of LAS 110 credit may be applied toward graduation in the College of Liberal Arts and Sciences. Prerequisite: Unit One students or consent of Unit One Director.

LAS 122 Leadership and Society credit: 1 Hour.

Engages first-year LAS honors students in the realms of citizenship, stewardship and leadership for the 21st century. En route to becoming competent and agile learners, first-year honors students experience an orientation to Illinois that fosters greater awareness and knowledge of campus resources and an examination of scholarly and personal leadership, global issues, and civic engagement. The course serves as a means for students to enhance their independence, cultural awareness and connection to community. Students work with a small cohort of peer scholars in a one-hour weekly graded session led by an upper-level LAS James Scholar peer mentor. Students are expected to work together and individually on projects involving community partners and campus groups. Assignments will incorporate the concept of service in connection with civic engagement.

LAS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Topics will vary. See class schedule. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated.

LAS 289 Internship Experience credit: 0 Hours.

Students follow a program of study and research through an approved internship. Written work report required. Approved for S/U grading only. May be repeated in separate semesters. Prerequisite: Consent of course instructor required. Restricted to students enrolled in the College of Liberal Arts and Sciences.

LAS 290 FLAS Seminar credit: 0 to 12 Hours.

Foreign Language and Area Studies Off-Campus Studies provides campus credit for off-campus study by undergraduate Foreign Language and Area Studies Fellows. Final determination of appropriate credit is made by a faculty review committee upon completion of the student's approved foreign language program. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Junior standing; intermediate or advanced study of a less-commonly taught language; awarding of FLAS fellowship by campus Title VI National Resource Center; prior review and approval of the student's program by Center's FLAS Fellowship Coordinator.

LAS 291 Global Perspectives for Intercultural Learning credit: 0 Hours.

Prepares students who are going abroad for a semester or academic year for their transition through a) examining expectations, b) focusing on the purpose and value of the abroad experience, c) preparing students culturally and logistically, d) addressing issues of culture shock, e) helping students with articulating their experience for future personal and professional goals, f) enhancing intercultural communication and global understanding, and g) assisting with re-entry planning. Approved for S/U grading only. May be repeated in separate terms.

LAS 292 Global Perspectives in Cross-Cultural Contexts credit: 1 Hour.

Provides an opportunity for students studying abroad to consider how their journey might be articulated as a global learning experience. Requires students to discuss what they are learning, reflect upon it, and discern ways to apply the knowledge gained through their experiences. May be repeated in separate terms. Prerequisite: LAS 291.

LAS 299 LAS Study Abroad credit: 0 to 18 Hours.

Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made upon the student's completion of the work. Approved for letter and S/U grading. (Summer session, 0 to 8 hours). May be repeated to a maximum of 36 term hours per academic year or to a total of 44 term hours, all of which must be earned within one calendar year. Prerequisite: One year of residence at UIUC, good academic standing, and prior approval of the major department and the College of Liberal Arts and Sciences.

LAS 399 Leadership & Professional Development credit: 1 to 3 Hours.

Leadership and professional development seminar for student interns. Interns will learn teaching, mentoring, leadership and professional skills that will enable them to lead a section of an LAS transition course or experience and share their successful academic experiences with undergraduate students who are new to the University. Interns will help their students develop the skills necessary to succeed at the U of I. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Instructor approval required.

LAS 490 LAS Advanced Seminar credit: 1 to 6 Hours.

See Class Schedule for current topics. 1 to 6 undergraduate hours. 1 to 6 graduate hours. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours.

LAS 494 Senior Project credit: 2 or 4 Hours.

For students seeking graduation with distinction in IPS. 2 or 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Consent of instructor and IPS Advisory Committee; open only to students whose major is IPS and who have a cumulative grade point average of at least 3.25.

Library & Information Science (LIS) -- Changed to Information Sciences (IS)

Lingala (LGLA)

LGLA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LGLA>)

Courses

LGLA 201 Elementary Lingala I credit: 5 Hours.

Introduction to Lingala; emphasizes grammar, pronunciation, reading and conversation in standard Lingala. Participation in language laboratory required. Same as AFST 211.

LGLA 202 Elementary Lingala II credit: 5 Hours.

Continuation of elementary Lingala, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Lingala. Same as AFST 212. Participation in language laboratory required. Prerequisite: LGLA 201.

LGLA 403 Intermediate Lingala I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, composition skills, study of written texts in the standard and spoken Lingala dialects, and discussion of grammatical variations. Same as AFST 413. 4 undergraduate hours. 4 graduate hours. Prerequisite: LGLA 202.

LGLA 404 Intermediate Lingala II credit: 4 Hours.

Continuation of LGLA 403. Emphasizes ability to engage in reasonably fluent discourse in Lingala, comprehensive knowledge of formal grammar, and ability to read ordinary texts in various Lingala dialects. Same as AFST 414. 4 undergraduate hours. 4 graduate hours. Prerequisite: LGLA 403.

LGLA 405 Advanced Lingala I credit: 3 Hours.

Third-year Lingala with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and Central African cultural materials, in at least two Lingala varieties. Course will also deal with the advanced level grammar found in such texts. Same as AFST 415. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 404 or equivalent.

LGLA 406 Advanced Lingala II credit: 3 Hours.

Continuation of LGLA 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. Same as AFST 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 405 or equivalent.

LGLA 407 Topics Lingala Lang & Lit I credit: 3 Hours.

Selected readings from modern Lingala authors and composers, with a focus on novels, plays, music, and basic poetry illustrative of Central African cultural issues and advanced level Lingala grammar, as well as development of expository writing skills. Same as AFST 417. 3 undergraduate hours. 3 graduate hours. Prerequisite: LGLA 406.

LGLA 408 Topics Lingala Lang & Lit II credit: 3 Hours.

Continuation of LGLA 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 418. Prerequisite: LGLA 407.

Linguistics (LING)

LING Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/LING>)

Courses

LING 100 Intro to Language Science credit: 3 Hours.

Introduction to the theory and methodology of general linguistics; includes the various branches and applications of linguistics. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 104 Talking Culture credit: 3 Hours.

Same as ANTH 104. See ANTH 104. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 105 Language in Daily Life credit: 3 Hours.

Analysis of what constitutes knowledge of language, how it is used in daily life, and how speakers are perceived by others. Emphasis on discovering what makes language function as it does through an examination of its forms and functions in real life. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

LING 110 Cultural Experiences of the Muslim World credit: 0 Hours.
Explores the languages and cultures of the Muslim world through different co-curricular activities. Students will acquire a higher proficiency of the target language and exposure to other languages that are spoken within this region. They will expand their knowledge and gain a better understanding of the target culture as well as of those in the Muslim world. Only offered in conjunction with the Summer Institute for Languages of the Muslim World. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated if SILMW language course varies.

LING 111 Language in Globalization credit: 3 Hours.
Introduction to the role of language in globalization by examining communication issues concerning language use across cultural, political and geographic boundaries. Explores the interaction of language and other cultural forms in the global context. Among the topics discussed are issues of identity, spread of English and its acculturation to local contexts of use, creativity in language mixing, language in global pop cultures, language in cyberspace, as well as minority language experiences, and loss of indigenous languages. This course can be used to fulfill either Western or Nonwestern general education categories, but not both.
This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Cultural Studies - Western

LING 115 Language and Culture in India credit: 3 Hours.
Examines the relationship between language and culture in the multilingual and multicultural context of India. Special topics of focus are: linguistic and cultural diversity in India, impact of the language and cultural contact on the structure and function of languages (convergence, diglossia, code-mixing, pidgins and creoles), language and identity, language of religion, language and gender, language in the media, literature and culture, language and power, language and globalization. Same as HNDI 115 and REL 115.
This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

LING 191 Freshman Honors Tutorial credit: 1 to 3 Hours.
Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated once. Prerequisite: Consent of departmental honors advisor.

LING 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

LING 210 Language History credit: 3 Hours.
Addresses the question "Why does language change?" Specific topics include: the history and origin of writing; why pronunciation changes; change in vocabulary and what it tells us about change in culture and society; the relation between "language" and "dialect"; multilingualism and its consequences, including Pidgins and Creoles; genetic relationship between languages, with focus on the "Indo-European" family (English, German, French, Russian, Latin, Greek, and Sanskrit, etc.) and the relationships between human languages. Prerequisite: Fulfillment of the foreign language requirement of the College of Liberal Arts and Sciences. This course satisfies the General Education Criteria for:
Humanities - Hist Phil

LING 221 American Sign Language II credit: 4 Hours.
Same as SHS 221. See SHS 221.

LING 225 Language, Mind, and Brain credit: 3 Hours.
Introduction to the theory and methodology of psycholinguistics with emphasis on language acquisition and linguistic behavior. This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

LING 240 Language in Human History credit: 3 Hours.
Role of language in the life of nations as a tool of communication, as a symbol of identity, and as a means of power. Scripts and orthographies, language planning, culture and language glossopolitics. Prerequisite: Three years of high school foreign language study or fulfillment of the foreign language requirement of Liberal Arts and Sciences. This course satisfies the General Education Criteria for:
Humanities - Hist Phil

LING 250 Language Diversity in the USA credit: 3 Hours.
Investigation of the uses and users of different language varieties - English and non-English - as well as issues of language discrimination, gender/race/class, youth culture, and new communication technologies. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

LING 270 Language, Technology & Society credit: 3 Hours.
What technologies have humans developed to augment the quintessential human ability: language? We start with the development of writing, the first technology that was specifically designed for language, and trace its history through the invention of printing, and into the digital age. With the advent of computers the relevance of language for technology has broadened significantly. We review technologies such as automatic speech recognition, speech synthesis and automatic translation, and discuss their implications for present and future human-machine interaction. Prerequisite: LING 100 or consent of instructor. This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci
Cultural Studies - Western

LING 290 Individual Study credit: 1 to 4 Hours.
Individual readings and research reports on special topics dealing with the theoretical or applied aspects of the linguistic sciences. May be repeated to a maximum of 8 hours. Prerequisite: Written consent of instructor.

LING 291 Linguistics Laboratory Research Experience credit: 1 to 3 Hours.
Supervised participation in laboratory or other research, usually as an assistant to a senior researcher. May be repeated up to a maximum of 9 hours. Prerequisite: Consent of instructor.

LING 300 Anat & Physiol Spch Mechanism credit: 4 Hours.
Same as SHS 300. See SHS 300.

LING 301 Elements of Syntax credit: 3 Hours.
Introduction to concepts and techniques essential for syntactic analysis and description, with special attention to testing analyses and justifying them. Prerequisite: LING 100 or consent of instructor. This course satisfies the General Education Criteria for:
Advanced Composition

LING 302 Elements of Phonology credit: 3 Hours.
Introduces elements of phonological theory and data analysis. Emphasis is placed on both Structuralist and Generative theories, introducing students to the principles of phonological contrast, allophony, neutralization, and markedness. Formal phonological models are considered, including both distinctive feature theory and prosodic theory. Equal emphasis is placed on linguistic data analysis. Prerequisite: LING 100 or consent of instructor.

LING 303 General Speech Science credit: 4 Hours.

Same as SHS 301. See SHS 301.

LING 304 Elements of Morphology credit: 3 Hours.

An introduction to the concepts and methods of morphology, the linguistic study of word formation. We examine the smallest units of word structure—how they are arranged and organized, and how they interact with sentence structures (syntax) and sound patterns (phonology). Students will consider data from many different languages, and investigate how those languages are similar and different in terms of how they form their words. Prerequisite: LING 100.

LING 307 Elements Semantics & Pragmatics credit: 3 Hours.

Introduction to the theory of meaning for natural language, including techniques for the description of lexical meaning, compositional determination of phrase and sentence meaning, and pragmatic effects on interpretation in context. Same as PHIL 307. Prerequisite: LING 100 or consent of instructor.

LING 321 American Sign Language III credit: 4 Hours.

Same as SHS 321. See SHS 321.

LING 357 Intro to Conversation Analysis credit: 3 Hours.

Analysis of everyday conversation and talk in institutional settings, including basic organizational features of talk such as turn-taking, sequences of actions, openings and closings, and repair; ways that participants use talk to perform social actions such as complimenting, inviting, arguing, blaming, and apologizing; and ways that talk is used in professional settings such as 911 emergency calls, courtroom interactions, and doctor-patient interviews to perform the work of these social institutions. Same as CMN 357.

LING 391 Honors Individual Study credit: 2 to 4 Hours.

Study and research for honors thesis; open only to seniors in the linguistics major who are eligible for departmental distinction. May be repeated to a maximum of 8 hours. Prerequisite: Written consent of instructor and linguistics course average of 3.4.

LING 400 Intro to Linguistic Structure credit: 3 or 4 Hours.

Introduction to the theory and methodology of the science of linguistics with special reference to phonology, morphology, syntax and semantics. Not intended for undergraduate majors in linguistics. 3 undergraduate hours. 4 graduate hours.

LING 401 Intro to General Phonetics credit: 3 or 4 Hours.

Introduction to the main branches of general phonetics and phonological theory; emphasis on analysis of non-Western languages and research techniques. 3 undergraduate hours. 4 graduate hours.

LING 402 Tools & Tech Spch & Lang Proc credit: 3 Hours.

Introduction to aspects of the tools and methods of studies in speech and natural language processing (NLP), with a focus on programming for NLP and speech applications, statistical methods for data analysis, and tools for displaying and manipulating speech data. 3 undergraduate hours. 3 graduate hours.

LING 404 Tutorials in Non-Western Lang credit: 1 to 5 Hours.

Advanced or intensive language instruction in a selected non-Western language; excludes instruction in East or Southeast Asian languages. 1 to 5 undergraduate hours. 2 to 4 graduate hours. May be repeated with approval. Prerequisite: Consent of instructor.

LING 406 Intro to Computational Ling credit: 3 or 4 Hours.

Introduces the field of natural language processing and computational linguistics. Topics include finite-state methods, parsing, probabilistic methods, machine learning in NLP, computational semantics and applications of NLP technology. The course is mostly about concepts rather than programming, though some programming assignments will be given. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 402 or a 100-level computer science programming course, or consent of instructor.

LING 407 Logic and Linguistic Analysis credit: 3 or 4 Hours.

Introduction to the theory of logic as applied in linguistic analysis. Same as PHIL 407. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate students: LING 307 or equivalent background with consent of instructor.

LING 410 Historical Linguistics credit: 2 to 4 Hours.

Introduction to historical and comparative linguistics with particular attention to theoretical issues. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: LING 401 (or concurrent registration), and either LING 301 and LING 302, or LING 400.

LING 412 Lang in African Culture & Soc credit: 3 or 4 Hours.

Introductory survey of the role of language in African cultures and societies, with particular emphasis on the study of indigenous African languages in multilingual settings, their spread, and use as media of communication in various domains, and as tools of development. Same as AFST 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: AFST 222 or consent of instructor.

LING 415 Machine Translation: History and Applications credit: 3 or 4 Hours.

Same as TRST 415. See TRST 415.

LING 416 Structure of French Language credit: 3 Hours.

Same as FR 416. See FR 416.

LING 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, PS 418, SLAV 418, and SPAN 418. See FR 418.

LING 420 Intro to African Linguistics credit: 3 or 4 Hours.

Introduction to the genetic and typological classification of the main language families of Africa; concentration on grammatical and phonological characteristics. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 100 or LING 400; consent of instructor.

LING 423 Language Acquisition credit: 3 or 4 Hours.

Same as MACS 423 and PSYC 423. See PSYC 423.

LING 425 Intro to Psycholinguistics credit: 3 or 4 Hours.

Introductory survey of psychological and linguistic approaches to the study of communication. Same as MACS 425. 3 undergraduate hours. 4 graduate hours. Credit is not given for both LING 425 and PSYC 425. Prerequisite: An introductory course in linguistics or psychology.

LING 426 Child & Adult Lang Acquisition credit: 3 or 4 Hours.

The study of first and second language acquisition by children and adults. Course topics will include the following: first language acquisition, including signed and spoken languages; bilingualism and second language acquisition; the comparison of monolingual and bilingual language development. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory course in linguistics or psychology.

LING 427 Language and the Brain credit: 3 or 4 Hours.

Same as PSYC 427 and SHS 427. See SHS 427.

LING 430 Intro to East Asian Ling credit: 3 or 4 Hours.

Introduction to the genetic relation of the Far Eastern languages with other languages; concentration on synchronic analysis of phonology and syntax. Same as EALC 430. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 400; consent of instructor.

LING 432 Gender and Language credit: 3 or 4 Hours.

Same as CMN 432 and GWS 432. See CMN 432.

LING 438 Philosophy of Language credit: 3 or 4 Hours.

Same as PHIL 438. See PHIL 438.

LING 450 Sociolinguistics I credit: 2 to 4 Hours.

Introduction to the fundamental concepts, philosophy, and research methods of the study of language in its social contexts. Special attention to language spread, and language variation; language attitudes; language diversity; code-switching; language standardization; and language identity and loyalty. 3 undergraduate hours. 2 or 4 graduate hours.

LING 462 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, ITAL 435, PORT 435, RMLG 435, and SPAN 435. See SPAN 435.

LING 469 Structure of Semitic Languages credit: 3 or 4 Hours.

In-depth survey of comparative issues in Semitic Linguistics, with particular emphasis on morphology, syntax, phonology and language change from the perspectives of current linguistic theories. Same as AFST 469. 3 undergraduate hours. 4 graduate hours. Prerequisite: LING 100, LING 400, or consent of instructor.

LING 480 Intro to Slavic Linguistics credit: 3 or 4 Hours.

Same as SLAV 480. See SLAV 480.

LING 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

General introduction to second language acquisition (SLA) theory. Examines nativist, interactionist and cognitive approaches to SLA and explores the role of learner characteristics. Same as FR 481, GER 489, ITAL 489, PORT 489, and SPAN 489. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory course in linguistics or consent of instructor.

LING 490 Special Topics in Linguistics credit: 3 or 4 Hours.

Course provides an opportunity to focus on various subfields of the linguistic sciences, depending on the interests of the faculty and student. 3 undergraduate hours. 4 graduate hours. May be repeated as topic varies to a maximum of 9 undergraduate hours or 12 graduate hours. Students may register for up to two sections in the same term. Prerequisite: LING 100, LING 400, or consent of instructor.

LING 501 Syntax I credit: 4 Hours.

Introduction to the fundamental concepts, philosophy, and methods of syntactic theory. Prerequisite: LING 400 or equivalent.

LING 502 Phonology I credit: 4 Hours.

Examination of language-specific phonological problems with a view toward formulating a language-independent theory of phonology. Prerequisite: LING 401 or consent of instructor.

LING 504 Practicum credit: 2 Hours.

Supervised practical experience in extended linguistic research on individual topics of the student's choice. Concurrent enrollment in at least 2 hours of LING 590 is required. May be repeated to a maximum of 4 hours. Prerequisite: LING 501 and LING 502.

LING 505 Language Teaching Practicum credit: 1 Hour.

Introduction for graduate teaching assistants to issues specific to the teaching of the so-called less commonly taught language (LCTLs) offered by the Department of Linguistics (African Languages, Arabic, Hindi, Persian, Sanskrit, and Turkish). Familiarizes the instructors with developments in second language acquisition research with special focus on LCTLs. Different approaches to LCTL teaching will be discussed together with practical information on how to develop instructional materials using new technologies and online resources. A number of presentations, demonstrations, and discussions will be led by visiting experts from UIUC and outside UIUC. May be repeated to a maximum of 2 hours in separate terms.

LING 506 Topics in Computational Ling credit: 4 Hours.

Provides an introduction to practical problems in computational linguistics in a laboratory setting. At the beginning of the semester, a substantial project will be assigned to the class, and the class will work as a team towards implementing a solution, and evaluating the final product against a test corpus, which will also be developed during the class. Topical readings will also be assigned and will be discussed. Approved for letter or S/U grading. May be repeated in more than one section per term to a maximum of 8 hours, if topics vary; may be repeated in subsequent terms to a maximum of 12 hours, if topics vary. Prerequisite: LING 406, and an introductory level Computer Science programming course, or consent of instructor.

LING 507 Formal Semantics I credit: 4 Hours.

Introduction to formal semantic theory for natural language, with attention to quantification, anaphora, tense, intensionality, and related topics. Same as PHIL 507. Prerequisite: LING 407 or consent of the instructor.

LING 512 Language and Culture credit: 4 Hours.

Same as ANTH 512. See ANTH 512.

LING 514 Design and Methodology in Linguistic Research credit: 4 Hours.

Introduction to a quantitatively oriented approach to research design and methodology in language study, with emphasis on the construction of appropriate research designs for different subfields of linguistics (with a particular focus on designs for research in syntax/semantics and language acquisition / bilingualism). A variety of research methods are covered in detail, including both offline and online methodologies. Term paper required. 4 graduate hours. No professional credit. Prerequisite: LING 400 or equivalent; LING 425, or EIL 489 or consent of instructor.

LING 516 Field Methods credit: 4 Hours.

Analysis of the phonetic, phonological, morphological, and syntactic structure of an undescribed language through the elicitation of data from a native language consultant. The class develops a linguistic sketch of the language, including a computerized lexicon. Prerequisite: LING 501 and LING 502.

LING 518 Language in Culture II credit: 4 Hours.

Same as ANTH 518. See ANTH 518.

LING 520 Acoustic Phonetics credit: 4 Hours.

Explores advanced issues in acoustic theory and digital signal processing in the context of linguistic phonetics and phonological research. Emphasis is placed on the spectral properties of speech sounds and their instrumental documentation. A significant portion of the course will utilize the phonetics laboratory. Prerequisite: LING 401 and LING 502.

LING 522 Articulatory Phonetics credit: 4 Hours.

Explores advanced issues in sound production in the context of linguistic phonetics and phonological research. Three main areas of focus include an overview of vocal tract physiology and anatomy, laboratory/instrumental methodology, and linguistic patterns such as assimilations and coarticulations. Prerequisite: LING 401 or equivalent.

LING 524 Dev Psycholinguistics credit: 2 or 4 Hours.

Same as MDIA 524 and PSYC 524. See PSYC 524.

LING 525 Psycholinguistics credit: 2 or 4 Hours.

Same as MDIA 525 and PSYC 525. See PSYC 525.

LING 529 Second Lang Acq & Bilingualism credit: 4 Hours.

Research seminar: students will design and execute a research project on second language acquisition and/or bilingualism. Same as PSYC 529. Prerequisite: Consent of instructor.

LING 541 Syntax II credit: 4 Hours.

Issues in the theory and practice of syntactic description, with special attention to implications for universal grammar. Prerequisite: LING 501 or consent of instructor.

LING 542 Phonology II credit: 4 Hours.

Continuation of LING 502. Prerequisite: LING 502.

LING 547 Formal Semantics II credit: 4 Hours.

A continuation of LING 507 covering advanced topics in formal semantic theory. Same as PHIL 547. Prerequisite: LING 507 or consent of instructor.

LING 550 Sociolinguistics II credit: 4 Hours.

Focus on a critical examination of issues in the theory and practice of sociolinguistics concerning the study of language variation from a cross-linguistic perspective, language diversity, multilingualism, language ideology and power. Prerequisite: LING 450 or equivalent.

LING 551 Pragmatics credit: 4 Hours.

Examination of the major theoretical frameworks in Gricean and post-Gricean pragmatics with an emphasis on theories of implicature, speech acts and im/politeness. Same as PHIL 551. Prerequisite: LING 501 and LING 507, or consent of instructor.

LING 559 Sem Romance Ling credit: 4 Hours.

Same as FR 559, ITAL 559, PORT 559, RMLG 559, and SPAN 557. See SPAN 557.

LING 560 Seminar in Bilingualism credit: 4 Hours.

Research-oriented seminar on theoretical and applied aspects of bilingualism; critical evaluation of linguistic, neurolinguistic, sociolinguistic, and psycholinguistic approaches to bilingualism; and concentration on selected case studies from Western and non-Western societies, especially Asia and Africa. May be repeated if topics vary. Prerequisite: LING 450 or an introductory course in linguistics.

LING 570 Seminar in Cognitive Science credit: 2 or 4 Hours.

Same as PSYC 514, ANTH 514, CS 549, EPSY 551, and PHIL 514. See PSYC 514.

LING 575 Exper Phon I Spch Physiol credit: 4 Hours.

Same as SHS 500. See SHS 500.

LING 576 Exper Phon II Spch Acous Perc credit: 4 Hours.

Same as SHS 501. See SHS 501.

LING 581 Topics in Syntactic Theory credit: 4 Hours.

Investigation of syntactic universals; recent developments in the theory of syntax. May be repeated if topics vary. Prerequisite: LING 541 or consent of instructor.

LING 582 Topics in Phonological Theory credit: 4 Hours.

Recent developments in the theory of phonology. May be repeated if topics vary. Prerequisite: LING 542 or consent of instructor.

LING 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, EPSY 563, FR 584, GER 584, ITAL 584, PORT 584, and SPAN 584. See SPAN 584.

LING 587 Topics in Sociolinguistics credit: 4 Hours.

Discussion of current topics in sociolinguistics that have relevance to contemporary societies. Approved for both letter and S/U grading. May be repeated in more than one section per term to a maximum of 8 hours. May be repeated in subsequent terms to a maximum of 12 hours. Prerequisite: LING 450.

LING 588 Sem Second Lang Learn credit: 4 Hours.

Same as EALC 588, FR 588, GER 588, ITAL 588, PORT 588, and SPAN 588. See SPAN 588.

LING 590 Special Topics in Linguistics credit: 2 to 8 Hours.

Individual studies in the areas of linguistics not covered by regular course offerings. May be repeated.

LING 591 Seminar in Linguistic Analysis credit: 2 or 4 Hours.

Discussion of advanced topics of current interest. May be repeated with approval. Prerequisite: LING 501 and LING 502.

LING 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

LiteraturesCulturesLinguistics (SLCL)

SLCL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SLCL>)

Courses

SLCL 200 Topics in Global Culture credit: 3 Hours.

Explores the regional and global dimensions of a cultural theme or practice; topics vary and could include Global Languages and Cultures, Global Memory Studies, Global Cinema, Languages and Cultures of the Mediterranean, and Islands and Oceans. See Class Schedule for current topics. May be repeated in separate terms up to 9 hours if topics vary. This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

SLCL 303 Intro to Research Methods credit: 3 Hours.

Introduces undergraduate students to both quantitatively and qualitatively oriented approaches to research design, data collection and data analysis in the study of language, literature, and culture. This course covers the basics of research design, archival methods, data collection, data analyses, and analytical writing appropriate for the disciplines represented in the School of Literatures, Cultures and Linguistics. Students develop their own research projects as part of the course. May be repeated in separate terms up to 6 hours if topics vary.

MBA Program (MBA)

MBA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MBA>)

Courses

MBA 500 Issues in Business credit: 0 Hours.

MBA students are faced with a wide variety of issues in the work place. This course will introduce and encourage discussions related to careers transitions, leadership, ethics, and uses of technology in the work place. Guest lecturers and experts in their field will discuss different approaches to these issues and give students the opportunity to discuss strategies and practice skills that will prepare them for the business environment. Additional fees may apply. See Class Schedule. Approved for S/U grading only. Prerequisite: Co-requisite MBA 501 and MBA 502.

MBA 501 Foundations of Business I credit: 2 Hours.

Provides foundations in the form of principles, concepts, tools, and skills important both to the study of business and to the development of business acumen. Specific foundation topics include planning and measuring firm resources, economic theory of the firm, decision making under uncertainty, consumer behavior, financial management, business communication and computing. May be repeated in the same term. Credit is not given for MBA 501 and either ACCY 500, BADM 520, BADM 572, or ECON 567. Prerequisite: Admission to the Master of Business Administration program.

MBA 502 Foundations of Business II credit: 2 Hours.

Provides additional foundations in the form of principles, concepts, tools, and skills important both to the study of business and to the development of business acumen. Specific foundation topics include organizational theory and design, financial accounting and reporting, manufacturing and services processes, marketing management, business communications and computing. May be repeated in the same term. Credit is not given for MBA 502 and either ACCY 500, BADM 509, BADM 520, or BADM 567. Prerequisite: Enrollment in good standing in the MBA program.

MBA 503 Prin & Proc of Management I credit: 2 Hours.

Presents management topics important to the study of business organizations and the economic landscapes within which they exist. Specific topics include financial resources management, human resources management, strategic management and management of technology. May be repeated in the same term. Students who receive credit for MBA 503 may not receive credit for the following courses: FIN 520, BADM 508, and BADM 544. Prerequisite: Enrollment in good standing in the MBA program.

MBA 504 Prin & Proc of Management II credit: 2 Hours.

Presents additional management topics important to the study of business organizations and the economic landscapes within which they exist. Specific topics include financial management, global strategy, decision and risk analysis, leadership, and ethics. May be repeated in the same term. Prerequisite: Enrollment in good standing in the MBA program.

MBA 505 Topics in Management credit: 2 Hours.

Special topics important to the study of business and management. Examples of topics include international business, strategic thinking, operations analysis, project management, information technology, negotiations. May be repeated in the same term. Prerequisite: Enrollment in good standing in the MBA program.

MBA 520 Corporate and Global Strategy credit: 4 Hours.

Focuses on key issues in formulating and implementing corporate strategies with an emphasis on the international operations of firms. Issues are approached from the orientation of the general manager, whose job is to diagnose what is critical in complex business situations and find realistic solutions to strategic and organizational problems. Designed to integrate various functional areas and provide a "total business" perspective on issues pertaining to corporate and international strategy. Builds on learning experiences in previous modules, and acts as an integrative capstone module. Prerequisite: Completion of the first year of the Master of Business Administration Program, including MBA 501, MBA 502, MBA 503, MBA 504, and MBA 505.

MBA 530 Internship credit: 0 Hours.

Approved for S/U grading only. May not be repeated for credit. Prerequisite: Completion of first year of Master of Business Administration program.

MBA 531 Special Projects credit: 1 to 4 Hours.

Individual projects selected by the student in consultation with a faculty member and approved by the executive officer of the program. Approved for letter and S/U grading. May be repeated in the same or subsequent terms to a maximum of 12 hours. Prerequisite: Completion of first year of Master of Business Administration program.

Materials Science & Engr (MSE)

MSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MSE>)

Courses

MSE 101 Materials in Today's World credit: 3 Hours.

Introduction to the field of materials science. Examination and demonstration of materials and their properties in the context of their use in everyday objects. Survey of the role materials have played and will continue to play in shaping society. Intended for non-engineering majors. Technical elective credit is not given to College of Engineering majors. This course satisfies the General Education Criteria for: Nat Sci Tech - Phys Sciences

MSE 182 Introduction to MatSE credit: 2 Hours.

Overview of MatSE as a basis for understanding how structure, property, and processing relationships are developed and used for different types of materials. Case studies of advances in new materials and processes illustrating the role of materials in modern society. Laboratory-discussion demonstrations and experiments. Design-team analysis or synthesis of objects that use materials creatively.

MSE 183 Freshman Materials Laboratory credit: 1 Hour.

Team-based laboratory developing concepts introduced in MSE 182. Practical descriptions of materials concepts, literature research, experimental design, concept validation, teamwork, and presentation of results. Prerequisite: MSE 182.

MSE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 5 hours. May be repeated in the same term.

MSE 201 Phases and Phase Relations credit: 3 Hours.

Understanding microstructure. Quantitative examination of phases (crystalline and non-crystalline structures) and the relationships between phases (phase diagrams). Commercial practices for producing desired microscopic phase configurations and macroscopic shapes (processing). Credit is not given for both MSE 201 and MSE 280. Prerequisite: MSE 182; credit or concurrent enrollment in CHEM 104, MATH 231 and PHYS 211.

MSE 206 Mechanics for MatSE credit: 4 Hours.

Statics, mechanics of materials, and fluid mechanics concepts pertinent to the fields of materials science and engineering: force resultants; stresses and strains produced in elastic bodies; microscopic effects of different loading states (tension, compression, torsion, and bending) on deformable bodies; beam stresses and deflections; three-dimensional stresses and strains; stress and strain-rate relationships for Newtonian and non-Newtonian fluids; conservation equations (control volume analysis) for fluid flow; Reynolds number; slow inertial and turbulent flows. Credit is not given for both MSE 206 and either TAM 251 or TAM 335. Prerequisite: MATH 225, MATH 241 and PHYS 211; credit or concurrent enrollment in CS 101 and MSE 201.

MSE 280 Engineering Materials credit: 3 Hours.

Materials science and engineering of ceramics, electronic materials, metals and polymers. Bonding; crystallography; imperfections; processing and properties of semiconductors, polymers, metals, ceramics and composites; phase diagrams. Case studies. Credit is not given for both MSE 280 and any of CEE 300, ME 330, MSE 201. Prerequisite: CHEM 102 and PHYS 211.

MSE 304 Electronic Properties of Matls credit: 3 Hours.

Electronic structure and bonding of materials, electrical conduction in metals and semiconductors, and dielectric and magnetic properties of solids. Credit is not given for both MSE 304 and PHYS 460. Prerequisite: PHYS 214.

MSE 307 Materials Laboratory I credit: 3 Hours.

Experiments using optical and scanning electron microscopy and various thermal and thermodynamic measuring techniques. Familiarization with laboratory test instruments. MSE 307 and MSE 308 are approved for General Education credit only as a sequence. Both courses must be completed to receive Advanced Composition credit. Prerequisite: Credit or concurrent registration in MSE 401 and either MSE 201 or MSE 280. This course satisfies the General Education Criteria for: Advanced Composition

MSE 308 Materials Laboratory II credit: 3 Hours.

Experiments characterizing mechanical, transport, and magnetic-electric properties of materials and the use optical and scanning electron microscopy and infrared spectroscopy. MSE 307 and MSE 308 are approved for General Education credit only as a sequence. Both courses must be completed to receive Advanced Composition credit. Prerequisite: MSE 307; credit or concurrent registration in MSE 304 and MSE 405. This course satisfies the General Education Criteria for: Advanced Composition

MSE 395 Materials Design credit: 3 Hours.

Design of various engineering devices, objects, or systems. Team-based and faculty-guided projects directed toward the development of materials-based solutions to problems originating from student, faculty, and industrial suggestions. Solutions are based on the knowledge, skills, and design experience acquired in earlier course work and incorporate engineering standards and realistic constraints such as economic, environmental, sustainability, manufacturability, ethical, health and safety, social, and political concerns. Prerequisite: This course is available to engineering majors with senior standing only.

MSE 396 Introduction to Research credit: 1 to 3 Hours.

Fundamental tenets of research including an introduction to laboratory safety, constructing a hypothesis, and the design of experiments to test the hypothesis. Basics of mathematical modeling and statistical analysis of data, including the analysis of research data. Emphasis on exposure to the basic procedures comprising engineering communication and the importance of verbal and written communication. Approved for Letter and S/U grading. May be repeated in separate terms.

MSE 397 Independent Study credit: 1 to 4 Hours.

Individual study of any topic in materials science and engineering selected by the student and conducted under the supervision of a member of the faculty. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MSE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

MSE 401 Thermodynamics of Materials credit: 3 Hours.

Basic thermodynamic principles including energy, entropy, and free energy; macroscopic properties of hard and soft materials systems, such as equilibrium states, phases, and phase transitions. Application of phase diagrams. Statistical interpretation of thermodynamics on the atomistic level. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 401 and CHEM 444 or PHYS 427. Prerequisite: MSE 201 or MSE 280; credit or concurrent registration in MATH 285.

MSE 402 Kinetic Processes in Materials credit: 3 Hours.

Kinetics of chemical reactions; rate equations, reaction mechanisms; transport processes; diffusion equations, atomic and molecular diffusion; phase transformations; nucleation, crystallization, displacive, spinodal decomposition; surface and interface phenomena; sintering, grain growth, recovery, and recrystallization. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 201 and MSE 401.

MSE 403 Synthesis of Materials credit: 3 Hours.

Fundamentals of the synthesis of materials. Principles of synthesis; processes, approaches, synthetic methodology and probes; methodologies in materials synthesis; polymerization, sol-gel processes, liquid and vapor phase synthesis, materials coupling reactions, and precursor-derived, radiation-induced and asymmetric synthesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 201; credit or concurrent registration in MSE 401.

MSE 404 Laboratory Studies in Materials Science and Engineering credit: 1.5 Hours.

Experiments include direct hands-on investigations or are performed through computational approaches. Laboratory experiences include both fundamental studies as well as investigations on more applied topics. 1.5 undergraduate hours. 1.5 graduate hours. May be repeated if topics vary. Prerequisite: MSE 307 and MSE 308 or permission of instructor. Senior standing.

MSE 405 Microstructure Determination credit: 3 Hours.

Fundamentals and applications of various forms of microscopy and diffraction for characterization of physical microstructure of materials and of various forms of spectroscopy for characterization of chemical microstructure. 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 214, CHEM 104, MSE 201, and MSE 307.

MSE 406 Thermal-Mech Behavior of Matls credit: 3 Hours.

Fundamentals of elastic, viscoelastic and plastic deformation of materials, elementary theory of statics and dynamics of dislocations; strengthening mechanisms; behavior of composites; fracture and fatigue behavior; fundamentals of thermal behavior: heat capacity, thermal expansion and conductivity; effects of thermal stress. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 406 and either ME 430 or TAM 424. Prerequisite: MSE 206; credit or concurrent registration in MSE 401.

MSE 420 Ceramic Materials & Properties credit: 3 Hours.

Ceramic material fundamentals, emphasizing structure-property relations. Development, use, and control of the properties of a wide variety of ceramic materials from a physico-chemical point of view. 3 undergraduate hours. 3 graduate hours.

MSE 421 Ceramic Processing credit: 3 or 4 Hours.

Microstructure development and processing of ceramic materials, with an emphasis on structure-property-processing relationships. Processing methodologies and their effects on microstructural development. Illustration and examination of several ceramic components within this context. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 420.

MSE 422 Electrical Ceramics credit: 3 Hours.

Electrical ceramics, from insulators to conductors, and magnetic and optical materials; the role of the processing cycle and microstructure development on the design and performance of electrical components; capacitors, resistors, and inductors; structure-property relations for pyro-, piezo-, and ferroelectric materials; perovskite and spinel based structures; varistors, thermistors, transducers, actuators, memory elements, multilayered components, and their applications. Design project. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 420.

MSE 423 Ceramic Processing Laboratory credit: 3 Hours.

Experiments and demonstrations involving a wide range of modern ceramic processing methods will be conducted to develop fundamental understanding of the relationships between raw materials, processing methods, microstructural development, and physical properties. Lab emphasis on the underlying physics and chemistry of processing and design of processing routes to achieve desired material properties. Technical reports. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 421.

MSE 440 Mechanical Behavior of Metals credit: 3 Hours.

Mechanical behavior of solids: crystal plasticity, dislocations, point defects and grain boundaries, creep and fatigue behavior, and fracture. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 406.

MSE 441 Metals Processing credit: 3 Hours.

Melt, mechanical, thermal, powder, and surface processing of metals. Extraction of metals, joining of metals, metal composites, and metal recycling. Relationships between the processing of metals, the microstructures that are produced, and the behavior of metal components. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 406.

MSE 442 Metals Laboratory credit: 3 Hours.

Advanced metallurgy laboratory. Effects of heat treatment; mechanical testing; oxidation and corrosion; metallography of selected alloys. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 308, MSE 440, and MSE 441.

MSE 443 Design of Engineering Alloys credit: 3 Hours.

Application of science and engineering principles to the design, selection, and performance of engineering alloys. Alloy classes, design, effect of alloying elements, relation to processing variables, and structure-property relationships; design project. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 401 and MSE 402.

MSE 445 Corrosion of Metals credit: 3 or 4 Hours.

Electrochemistry, thermodynamics, and kinetics of corrosion; behavior of ferrous and nonferrous metals; corrosion rates; corrosion control; cathodic and anodic protection; high-temperature corrosion; corrosion testing; electrolytic machining methods. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 450 Polymer Science & Engineering credit: 3 or 4 Hours.

Polymer solution properties, conformation, and molecular weight characterization. Rheological and viscoelastic behavior: relaxations and transitions, rubber elasticity. Crystallinity, morphology, and deformation of crystalline polymers. Blends and composites. Methods of fabrication. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 452 Polymer Laboratory credit: 3 Hours.

Experimental investigations of polymer synthesis, characterization (molecular, thermal, structural and electronic), processing and device fabrication. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 453 Plastics Engineering credit: 3 Hours.

Engineering characteristics of plastics; viscoelasticity, viscosity, yield, and fracture; reinforced polymers; processing; environmental considerations; applicability of technical data sheets; design (project); current advances. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 454 Mechanics of Polymers credit: 3 Hours.

Same as AE 427 and TAM 427. See TAM 427.

MSE 455 Macromolecular Solids credit: 3 Hours.

Mechanical behavior of amorphous and semi-crystalline polymers; overview of polymer structure and characterization; polymer morphology; orientation effects, rubber elasticity, polymer linear viscoelasticity using Boltzmann superposition and mechanical models; measurement of viscoelastic properties; relaxation and transitions; polymeric yield phenomena and plastic flow; deformation mechanisms; fracture and craze formation; impact and fatigue. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 450.

MSE 456 Mechanics of Composites credit: 3 Hours.

Behavior of composite materials and their use in engineering structures: behavior and properties of the constituent fibers and matrices, micromechanical predictions of composite properties, anisotropic elasticity, behavior of composite laminae, and classical lamination theory; fracture mechanisms, failure theories; behavior of composite plates and beams. Same as AE 428 and TAM 428. 3 undergraduate hours. 3 graduate hours. Prerequisite: AE 321, CEE 300, ME 330, or MSE 406.

MSE 457 Polymer Chemistry credit: 3 or 4 Hours.

Methods used to make polymers including reaction mechanisms, kinetics, and analytical techniques. Emphasis on understanding how macromolecule structure, composition, and properties are controlled through a variety of synthetic approaches. Same as CHEM 480. 3 undergraduate hours. 3 or 4 graduate hours.

MSE 458 Polymer Physics credit: 3 or 4 Hours.

Physics of polymer systems. Equilibrium conformation, structure, properties and phase transitions of polymer solutions, dense melts, liquid crystals, mixtures, block copolymers, surfaces and interfaces, gels and rubbers, biopolymers, and electronic polymers. Same as CHEM 482. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401.

MSE 460 Electronic Materials I credit: 3 Hours.

Materials science, engineering, and processing of semiconductors. Semiconductor structure and chemistry relationships to electronic and optical properties. Control of processing to achieve desired properties; design and production of novel materials. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340; MSE 304 or PHYS 460.

MSE 461 Electronic Materials II credit: 3 Hours.

Materials science, engineering, and processing of microlithographic materials, conductors, and dielectrics for electronic applications. Performance related to materials properties and processing. Processing commonly used in microelectronic circuit manufacture for metallization, dielectric formation, and lithography. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

MSE 462 Electronic Materials Lab credit: 3 Hours.

Fabrication, analysis, and properties of thin film materials. Principles and practice of (i) deposition of thin film materials by vacuum evaporation, sputtering and plasma assisted processes; (ii) modification of properties by thermal reaction, surface treatment, etc.; (iii) characterization of key properties including electrical conductivity, optical properties, and stress. Methods to optimize the film microstructure and engineering properties via growth techniques. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 340.

MSE 466 Materials in Electrochem Syst credit: 3 Hours.

Materials issues in electrochemical systems including fundamental thermodynamics, kinetics and electrode processes in electrochemical systems and materials specific issues in the materials design, materials in energy storage and conversion systems, and electrochemical corrosion. Emphasis placed on issues of materials selection, microstructure, systems design, materials limitations, and data analysis. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MSE 466 and CHEM 524.

MSE 470 Design and Use of Biomaterials credit: 3 Hours.

Characterization and use of biomaterials in medical applications. Concepts of biocompatibility in terms of structure and properties of materials and interactions between materials and proteins, cells, and tissue. Issues related to the design of biomaterials. Design of biomaterials to meet specific medical needs. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent registration in both MCB 252 and either CHEM 232 or MSE 403.

MSE 472 Biomaterials Laboratory credit: 3 Hours.

Experiments involving the chemistry and physics of biomaterials, biocompatibility of materials, tissue regeneration, rheology of biomaterials and tissues, structural studies of biomaterials, and controlled release of small molecules and drugs. Laboratory techniques for protein purification, cytotoxicity testing, tissue culture, mechanical testing, microscopy, and X-ray diffraction. Same as BIOE 473. 3 undergraduate hours. 3 graduate hours. Prerequisite: MSE 470.

MSE 473 Biomolecular Materials Science credit: 3 Hours.

Fundamental and unifying principles in biomolecular materials science. Nucleic acids, proteins, lipids, and sugars. Specific and non-specific interactions which govern biomolecular behavior in a wide range of contexts (e.g., self-assembly, cell adhesion). Present knowledge and empirical evidence integrated with discussions of experimental characterization and manipulation techniques in biotechnology. Application of course content and expository research into current literature via a case study term project. 3 undergraduate hours. 3 graduate hours.

MSE 474 Biomaterials and Nanomedicine credit: 3 Hours.

Design and synthesis of polymeric biomaterials and nanobiomaterials for their applications in drug and gene delivery. Part (1) fundamental biopolymer synthesis: functional group protection and de-protection; bioconjugation; protein pegylation and design and synthesis of natural and synthetic non-degradable and degradable polymers, hydrogels, bio-inspired materials, and stimuli responsive biomaterials. Part (2) preparation of nanomedicines for drug and gene delivery: nanofabrication of micelles, nanoparticles, protein conjugates, drug conjugates, nanoencapsulates, and polymeric vesicles; in-vitro and in-vivo small-molecule, gene, and protein delivery. Impact of the chemical structures of biopolymers on the stability, biocompatibility, toxicity, and in-vitro and in-vivo efficacy; clinical translation of the resulting nanomedicines in drug delivery. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 236 or MSE 457; MCB 450.

MSE 480 Surfaces and Colloids credit: 3 or 4 Hours.

Chemistry and physics of surfaces and interfaces, with emphasis on behavior in liquid media. Surface composition; surface and interfacial forces; colloidal stability and flocculation; amphiphilic molecules. Same as CHEM 488. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401.

MSE 481 Electron Microscopy credit: 3 or 4 Hours.

Theory and application of transmission electron microscopy and diffraction with emphasis on thin crystals; electron optics, interference phenomena, interpretation of images and diffraction patterns, specimen preparation. 3 undergraduate hours. 4 graduate hours. Prerequisite: MSE 405.

MSE 484 Composite Materials credit: 3 or 4 Hours.

Metal, ceramic, and polymer matrix composites. Interrelationships between processing, microstructure, and properties. Selecting composite materials for different engineering applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 201 and MSE 206.

MSE 485 Atomic Scale Simulations credit: 3 or 4 Hours.

Application of Monte Carlo and Molecular Dynamics techniques in primarily classical simulations to understand and predict properties of microscopic systems in materials science, physics, biology, and chemistry. Numerical algorithms, connections between simulation results and real properties of materials (structural or thermodynamic), and statistical and systematic error estimation using real simulation programs. Simulation project comprised of scientific research, algorithm development, and presentation. Same as CSE 485 and PHYS 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: MSE 401; one of C, C++, or Fortran programming experience.

MSE 487 Materials for Nanotechnology credit: 3 or 4 Hours.

Survey of the synthesis, processing, structure properties and technological applications of materials with nanometer dimensions. Semiconductor nanocrystals and size-dependent optical properties; metal nanostructures and plasmonics; nanowires and nanotubes; electronics and optoelectronics; nanoscale heterostructures; assembly and fabrication. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MSE 401 and PHYS 214.

MSE 488 Optical Materials credit: 3 or 4 Hours.

Optical properties of materials of current and potential technological importance and application to devices. Applicable optics fundamentals based on Maxwell's equations. Liquid crystals for displays; photopolymers for holographic data storage; electro-optic materials for high speed light modulators; electroluminescent materials for light emitting diodes. Application of optics, materials and chemistry in design of practical devices. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MATH 285 and PHYS 214.

MSE 489 Matl Select for Sustainability credit: 3 or 4 Hours.

Quantitative methods to optimize the selection of materials including traditional (minimize mass or volume, maximize performance) and sustainability (minimize energy consumption and CO₂ emission during synthesis, maximize recyclability) goals. Tradeoff methods to optimize both via engineering design and materials selection for product lifetime, economic outlay and return, time dynamics and materials consumption, recycling, and disposal. Application of commercial software to optimize selections. For engineering and science majors only. 3 undergraduate hours. 4 graduate hours.

MSE 492 Lab Safety Fundamentals credit: 1 Hour.

Key aspects of laboratory setups, operating procedures, and emergency preparedness measures necessary for the experimentalist. Same as CHEM 494. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only.

MSE 497 Independent Study credit: 1 to 4 Hours.

Individual study of any topic in materials science and engineering under the supervision of a member of the faculty. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MSE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

MSE 499 Senior Thesis credit: 1 to 5 Hours.

Individual research in an area of materials science and engineering under the supervision of members of the staff. 1 to 5 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Grade point average of 3.0 and consent of instructor.

MSE 500 Statistical Thermodyn of Matls credit: 4 Hours.

Atomistic concepts of statistical thermodynamics and their relationship to classical phenomenological thermodynamics. Application of the methods of statistical thermodynamics and statistical mechanics to describe the structure, phase behavior, and properties of both hard and soft materials. Prerequisite: MSE 401.

MSE 501 Kinetic Processes in Materials credit: 4 Hours.

Fundamentals of rate processes in materials, both from a phenomenological and an atomistic point of view, with special emphasis on the kinetics of transformations and the transport of matter in solids. Prerequisite: MSE 500 or PHYS 560.

MSE 529 Hard Materials Seminar credit: 0 to 1 Hours.

Seminar on current research in science and engineering of hard materials; presentations by visiting lecturers, staff, and students. Approved for S/U grading only. May be repeated.

MSE 559 Soft Materials Seminar credit: 0 to 1 Hours.

Seminar on current research in the science and engineering of soft materials; presentations by visiting lecturers, staff, and students. Approved for S/U grading only. May be repeated.

MSE 565 Thin Film Materials credit: 3 Hours.

Thin solid films bonded to relatively thick substrates such as microelectronic devices, thermal barrier coatings in gas turbine engines, mems devices, flexible electronics, and biomedical instruments. Quantitative understanding of the consequences of mechanical stress in film-substrate structures, arising from fabrication methods or service conditions: substrate curvature, film delamination, film fracture, dislocation formation, plastic flow and stress-driven evolution of surface morphology.

MSE 580 Diffraction Physics of Matls credit: 4 Hours.

Quantitative treatment of the physical basis of X-ray, electron, and neutron diffraction instrumentation and use for structural characterization. Applications in materials science and condensed matter physics including structure of condensed matter, defects, phase transitions, disorder, surfaces, and interfaces. Prerequisite: MSE 405 or PHYS 436.

MSE 581 Advanced Electron Microscopy credit: 4 Hours.

Theory of electron microscopy and use for materials structure characterization and microanalysis. Physics of electron microscopes; kinematic and dynamic electron diffraction theory; defect image contrast; high resolution electron microscopy; electron probe formation; STEM; inelastic scattering and microanalysis. Practical experience via laboratory demonstrations and project assignments. Prerequisite: MSE 405 and MSE 481.

MSE 582 Surface Physics credit: 4 Hours.

Theory and experiment describing atomic behavior on crystal surfaces; thermodynamics of surfaces; surface energy; diffraction and structure; gas-solid collisions; Brownian motion, diffusion, and evaporation; electron and ion emission, tunneling; Van der Waals forces; theory of chemical interactions; kinetics and statistics of adsorption. Prerequisite: MSE 501 or PHYS 560.

MSE 583 Dynamics of Complex Fluids credit: 3 or 4 Hours.

Microscopic statistical treatment of the structure and dynamics of polymers, colloids, gels, and other soft materials. Fundamental connections between molecular architecture, intermolecular forces, collective fluid structure, and time-dependent phenomena; Brownian motion, Langevin equation theory, and viscoelasticity; diffusion in colloidal suspensions, gels, and glasses; dynamics of polymer solutions and melts. Prerequisite: MSE 401.

MSE 584 Point and Line Defects credit: 4 Hours.

Formation and interactions of point and line defects in solids including metals, semiconductors, dielectrics, and ionic conductors. Theoretical treatment of thermal equilibrium and non-equilibrium conditions. Application to impurity diffusion, ion irradiation, dislocation generation and motion, ionic conductivity, and deep level electronic defects. Prerequisite: MSE 401 or MSE 501; PHYS 460 or PHYS 560.

MSE 585 Materials Engrg Practicum credit: 0 to 2 Hours.

Internships or co-ops in industrial or governmental settings pre-approved by the department to foster engineering educational aspects and utilized prior MatSE course work. A paper describing the general area of the practicum, with appropriate references and, to the extent permitted by employer confidentiality, the student's contribution required. In addition to the paper, a report documenting work completed, verified by the work supervisor, to the extent permitted by confidentiality, and a questionnaire answered by the work supervisor form the basis for the grade. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours.

MSE 590 Research Seminars credit: 0 to 1 Hours.

Discussions and lectures on current research under the direction of individual staff members. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

MSE 595 Materials Colloquium credit: 0 to 1 Hours.

Presentation of (i) cutting-edge materials research by visiting lectures from academia as well as national and industrial research laboratories and (ii) some of the current research conducted in the Department. Approved for S/U grading only. May be repeated.

MSE 597 Independent Study credit: 1 to 4 Hours.

Individual study of any topic in materials science and engineering under the supervision of a member of the faculty. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MSE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in materials science and engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

MSE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Mathematics (MATH)

MATH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MATH>)

Courses

MATH 002 Introductory Algebra credit: 3 Hours.

Methods of elementary algebra, including simplification of algebraic expressions, solving linear and quadratic equations, equations of lines, systems of linear equations, and radicals. Approved for Letter and S/U grading. Enrollment is restricted. Credit may not be used toward graduation at the University of Illinois. Prerequisite: Score on appropriate placement test, or consent of Mathematics Department.

MATH 101 Thinking Mathematically credit: 3 Hours.

Designed for students in majors that do not specifically require a mathematics course beyond the level of precalculus. Focus is on critical thinking and applications. All topics are covered from a contextual standpoint. Topics include proportional reasoning and modeling, functions, sets, consumer math, probability, and statistics. Other topics may be covered as time permits. Prerequisite: Three years of high school mathematics. Undergraduates only.

MATH 103 Theory of Arithmetic credit: 4 Hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades K-5. Topics include sets, arithmetic algorithms, elementary number theory, rational and irrational numbers, measurement, and probability. There is an emphasis on problem solving. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary or childhood education. Prerequisite: MATH 112 (formerly MATH 012) or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 112 Algebra credit: 3 Hours.

Rapid review of basic techniques of factoring, rational expressions, equations and inequalities; functions and graphs; exponential and logarithm functions; systems of equations; matrices and determinants; polynomials; and the binomial theorem. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of 1.5 units of high school algebra and 1 unit of high school geometry.

MATH 114 Trigonometry credit: 2 Hours.

Studies degrees and radians, the trigonometric functions, identities and equations, inverse functions, oblique triangles and applications. Credit is not given for MATH 114 and either MATH 014 or MATH 115. Prerequisite: 1.5 units of high school algebra; 1 unit of high school geometry.

MATH 115 Preparation for Calculus credit: 3 Hours.

Reviews trigonometric, rational, exponential, and logarithmic functions; provides a full treatment of limits, definition of derivative, and an introduction to finding area under a curve. Intended for students who need preparation for MATH 220, either because they lack the content background or because they are not prepared for the rigor of a university calculus course. Credit is not given for both MATH 115 and either MATH 014 or MATH 114. Credit is not given for MATH 115 if credit for either MATH 220 or MATH 221 has been earned. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of the topics of MATH 112. This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 117 Elementary Mathematics credit: 4 Hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades 6-8. Topics include the Real number system and field axioms, sequences and series, functions and math modeling with technology, Euclidean and non-Euclidean geometry, probability and statistics. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary education. Prerequisite: MATH 112 (formerly MATH 012) or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning I

MATH 119 Ideas in Geometry credit: 3 Hours.

General education course in mathematics, for students who do not have mathematics as a central part of their studies. The goal is to convey the spirit of mathematical thinking through topics chosen mainly from plane geometry. Prerequisite: Two units of high school algebra; one unit of high school geometry; or equivalent.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 124 Finite Mathematics credit: 3 Hours.

Introduction to finite mathematics for students in the social sciences; introduces the student to the basic ideas of logic, set theory, probability, vectors and matrices, and Markov chains. Problems are selected from social sciences and business. Prerequisite: MATH 112 (formerly MATH 012) or an adequate ALEKS score.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 125 Elementary Linear Algebra credit: 3 Hours.

Basic concepts and techniques of linear algebra; includes systems of linear equations, matrices, determinants, vectors in n -space, and eigenvectors, together with selected applications, such as Markov processes, linear programming, economic models, least squares, and population growth. Credit is not given for both MATH 125 and any of MATH 225, MATH 410, or MATH 415. Prerequisite: MATH 112 (formerly MATH 012) or an adequate ALEKS score.

MATH 181 A Mathematical World credit: 3 Hours.

Introduction to selected areas of mathematical sciences through application to modeling and solution of problems involving networks, circuits, trees, linear programming, random samples, regression, probability, inference, voting systems, game theory, symmetry and tilings, geometric growth, comparison of algorithms, codes and data management. Prerequisite: Three years of high school mathematics, including two years of algebra and one year of geometry.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 198 Freshman Seminar credit: 3 Hours.

Guides the student in the study of selected topics not considered in standard courses. Prerequisite: Enrollment in the mathematics honors program; consent of department.

MATH 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

MATH 210 Theory of Interest credit: 3 Hours.

Study of compound interest and annuities; applications to problems in finance. Prerequisite: MATH 231 or equivalent.

MATH 213 Basic Discrete Mathematics credit: 3 Hours.

Beginning course on discrete mathematics, including sets and relations, functions, basic counting techniques, recurrence relations, graphs and trees, and matrix algebra; emphasis throughout is on algorithms and their efficacy. Credit is not given for both MATH 213 and CS 173. Prerequisite: MATH 220 or MATH 221, or equivalent.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 220 Calculus credit: 5 Hours.

First course in calculus and analytic geometry; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 220 and either MATH 221 or MATH 234. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of topics of MATH 115. Students with previous calculus experience should consider MATH 221.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 221 Calculus I credit: 4 Hours.

First course in calculus and analytic geometry for students with some calculus background; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 221 and either MATH 220 or MATH 234. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/> and either one year of high school calculus or a minimum score of 2 on the AB Calculus AP exam.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 225 Introductory Matrix Theory credit: 2 Hours.

Systems of linear equations, matrices and inverses, determinants, and a glimpse at vector spaces, eigenvalues and eigenvectors. Credit is not given for both MATH 225 and any of MATH 125, MATH 410, or MATH 415. Prerequisite: MATH 220 or MATH 221; or equivalent.

MATH 231 Calculus II credit: 3 Hours.

Second course in calculus and analytic geometry: techniques of integration, conic sections, polar coordinates, and infinite series. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 234 Calculus for Business I credit: 4 Hours.

Introduction to the concept of functions and the basic ideas of the calculus. Credit is not given for both MATH 234 and either MATH 220 or MATH 221. Prerequisite: An adequate ALEKS placement score as described at <http://math.illinois.edu/ALEKS/>, demonstrating knowledge of the topics of MATH 112.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

MATH 241 Calculus III credit: 4 Hours.

Third course in calculus and analytic geometry including vector analysis: Euclidean space, partial differentiation, multiple integrals, line integrals and surface integrals, the integral theorems of vector calculus. Credit is not given for both MATH 241 and MATH 292. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 249 Honors Supplement credit: 1 Hour.

Supplemental credit hour for honors courses with additional material or special projects. Prerequisite: Concurrent registration in a specially designated honors section and consent of department.

MATH 284 Intro Differential Systems credit: 4 Hours.

First order differential equations; mathematical models and numerical methods; linear systems and matrices; higher-order linear differential equations; eigenvalues and eigenvectors; linear systems of differential equations; Laplace transform methods. Credit is not given for both MATH 284 and either MATH 285 or MATH 286. Prerequisite: MATH 231 or equivalent.

MATH 285 Intro Differential Equations credit: 3 Hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, and an introduction to partial differential equations. Intended for engineering majors and others who require a working knowledge of differential equations. Credit is not given for both MATH 285 and any of MATH 284, MATH 286, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 286 Intro to Differential Eq Plus credit: 4 Hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, linear systems of differential equations, and an introduction to partial differential equations. Covers all the MATH 285 plus linear systems. Intended for engineering majors and other who require a working knowledge of differential equations. Credit is not given for both MATH 286 and any of MATH 284, MATH 285, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 290 Symbolic Computation Lab credit: 1 Hour.

Laboratory component to courses using a symbolic programming package. Prerequisite: Consent of department; concurrent registration in a designated section of a mathematics course with symbolic computation component. May be taken only once for credit.

MATH 292 Vector Calculus Supplement credit: 2 Hours.

Course in multivariable calculus. Topics include gradient, divergence, and curl; line and surface integrals; and the theorems of Green, Stokes, and Gauss. Intended for transfer students whose multivariable calculus course did not include the integral theorems of vector calculus. Credit is not given for both MATH 292 and MATH 241. Prerequisite: Consent of instructor.

MATH 299 Topics in Mathematics credit: 1 to 4 Hours.

Topics course; see Class Schedule or department office for current topics. May be repeated in the same or subsequent semesters to a maximum of 8 hours. Prerequisite: MATH 220 or MATH 221; consent of instructor.

MATH 347 Fundamental Mathematics credit: 3 Hours.

Fundamental ideas used in many areas of mathematics. Topics will include: techniques of proof, mathematical induction, binomial coefficients, rational and irrational numbers, the least upper bound axiom for real numbers, and a rigorous treatment of convergence of sequences and series. This will be supplemented by the instructor from topics available in the various texts. Students will regularly write proofs emphasizing precise reasoning and clear exposition. Credit is not given for both MATH 347 and MATH 348. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 348 Fundamental Mathematics-ACP credit: 4 Hours.

Course is identical to MATH 347 except for the additional writing component. Credit is not given for both MATH 348 and MATH 347. Prerequisite: MATH 231 and completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Quantitative Reasoning II

MATH 357 Numerical Methods I credit: 3 Hours.

Same as CS 357. See CS 357.

MATH 362 Probability with Engrg Applic credit: 3 Hours.

Same as ECE 313. See ECE 313.

MATH 370 Actuarial Problem Solving credit: 1 Hour.

Methods and techniques of solving problems in actuarial mathematics for advanced students intending to enter the actuarial profession. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor.

MATH 390 Individual Study credit: 0 to 3 Hours.

Guided individual study of advanced topics not covered in other courses. May be repeated to a maximum of 8 hours. Approved for both letter and S/U grading. Prerequisite: Consent of instructor.

MATH 399 Math/Actuarial Internship credit: 0 Hours.

Full-time or part-time practice of math or actuarial science in an off-campus government, industrial, or research laboratory environment. Summary report required. Approved for S/U grading only. May be repeated in separate terms. Prerequisite: After obtaining an internship, Mathematics majors must request entry from the Mathematics Director of Undergraduate Studies; Actuarial Science majors must request entry from the Director of the Actuarial Science Program.

MATH 402 Non Euclidean Geometry credit: 3 or 4 Hours.

Historical development of geometry; includes tacit assumptions made by Euclid; the discovery of non-Euclidean geometries; geometry as a mathematical structure; and an axiomatic development of plane geometry. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 403 Euclidean Geometry credit: 3 or 4 Hours.

Selected topics from geometry, including the nine-point circle, theorems of Ceva and Menelaus, regular figures, isometries in the plane, ordered and affine geometries, and the inversive plane. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or 348, or equivalent; or consent of instructor.

MATH 405 Teacher's Course credit: 3 or 4 Hours.

In-depth, advanced perspective look at selected topics covered in the secondary curriculum. Connects mathematics learned at the university level to content introduced at the secondary level. Intended for students who plan to seek a secondary certificate in mathematics teaching. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MATH 406 History of Calculus credit: 3 or 4 Hours.

Examination of the historical origins and genesis of the concepts of the calculus; includes mathematical developments from the ancient Greeks to the eighteenth century. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 408 Actuarial Statistics I credit: 4 Hours.

Same as STAT 408. See STAT 408.

MATH 409 Actuarial Statistics II credit: 4 Hours.

Same as STAT 409. See STAT 409.

MATH 410 Lin Algebra & Financial Apps credit: 3 or 4 Hours.

Emphasizes techniques of linear algebra and introductory and advanced applications to actuarial science, finance and economics. Topics include linear equations, matrix theory, vector spaces, linear transformations, eigenvalues and eigenvectors and inner product spaces. In addition, current research topics such as modeling, data mining, and generalized linear models are explored. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 410 and any of MATH 125, MATH 225, MATH 415 or MATH 416. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 210 or FIN 221; or consent of instructor.

MATH 412 Graph Theory credit: 3 or 4 Hours.

Examines basic concepts and applications of graph theory, where graph refers to a set of vertices and edges that join some pairs of vertices; topics include subgraphs, connectivity, trees, cycles, vertex and edge coloring, planar graphs and their colorings. Draws applications from computer science, operations research, chemistry, the social sciences, and other branches of mathematics, but emphasis is placed on theoretical aspects of graphs. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience or CS 374.

MATH 413 Intro to Combinatorics credit: 3 or 4 Hours.

Permutations and combinations, generating functions, recurrence relations, inclusion and exclusion, Polya's theory of counting, and block designs. Same as CS 413. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience.

MATH 414 Mathematical Logic credit: 3 or 4 Hours.

Introduction to the formalization of mathematics and the study of axiomatic systems; expressive power of logical formulas; detailed treatment of propositional logical and predicate logic; compactness theorem and Godel completeness theorem, with applications to specific mathematical theories; algorithmic aspects of logical formulas. Proofs are emphasized in this course, which can serve as an introduction to abstract mathematics and rigorous proof; some ability to do mathematical reasoning required. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience. This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 415 Applied Linear Algebra credit: 3 or 4 Hours.

Introductory course emphasizing techniques of linear algebra with applications to engineering; topics include matrix operations, determinants, linear equations, vector spaces, linear transformations, eigenvalues, and eigenvectors, inner products and norms, orthogonality, equilibrium, and linear dynamical systems. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 415 and any of MATH 125, MATH 225, MATH 410, or MATH 416. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor.

MATH 416 Abstract Linear Algebra credit: 3 or 4 Hours.

Rigorous proof-oriented course in linear algebra. Topics include determinants, vector spaces over fields, linear transformations, inner product spaces, eigenvectors and eigenvalues, Hermitian matrices, Jordan Normal Form. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 416 and either MATH 410 or MATH 415. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor; MATH 347 is recommended.

MATH 417 Intro to Abstract Algebra credit: 3 or 4 Hours.

Fundamental theorem of arithmetic, congruences. Permutations. Groups and subgroups, homomorphisms. Group actions with applications. Polynomials. Rings, subrings, and ideals. Integral domains and fields. Roots of polynomials. Maximal ideals, construction of fields. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: Either MATH 416 or one of MATH 410, MATH 415 together with one of MATH 347, MATH 348, CS 374; or consent of instructor.

MATH 418 Intro to Abstract Algebra II credit: 3 or 4 Hours.

Rings of quotients of an integral domain. Euclidean domains, principal ideal domains. Unique factorization in polynomial rings. Fields extensions, ruler and compass constructions. Finite fields with applications. Modules. Structure theorem for finitely generated modules over principal ideal domains. Application to finitely generated abelian groups and canonical forms of matrices. Introduction to error-correcting codes. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 417 or consent of instructor.

MATH 423 Differential Geometry credit: 3 or 4 Hours.

Applications of the calculus to the study of the shape and curvature of curves and surfaces; introduction to vector fields, differential forms on Euclidean spaces, and the method of moving frames for low-dimensional differential geometry. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 424 Honors Real Analysis credit: 3 Hours.

A rigorous treatment of basic real analysis via metric spaces recommended for those who intend to pursue programs heavily dependent upon graduate level Mathematics. Metric space topics include continuity, compactness, completeness, connectedness and uniform convergence. Analysis topics include the theory of differentiation, Riemann-Darboux integration, sequences and series of functions, and interchange of limiting operations. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Credit is not given for both MATH 424 and either MATH 444 or MATH 447. Approved for honors grading. Prerequisite: An honors section of MATH 347 or an honors section of MATH 416, and consent of the department.

MATH 425 Honors Advanced Analysis credit: 3 Hours.

A theoretical treatment of differential and integral calculus in higher dimensions. Topics include inverse and implicit function theorems, submanifolds, the theorems of Green, Gauss and Stokes, differential forms, and applications. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Approved for honors grading. Prerequisite: MATH 424 and either MATH 415 or MATH 416, and consent of the department.

MATH 427 Honors Abstract Algebra credit: 3 Hours.

Group theory, counting formulae, factorization, modules with applications to Abelian groups and linear operators. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. Approved for honors grading. Credit is not given for both MATH 427 and MATH 417. Prerequisite: Consent of the department is required. Prerequisite courses are either an honors section of MATH 416, or MATH 415 together with an honors section of MATH 347.

MATH 428 Honors Topics in Mathematics credit: 3 Hours.

A capstone course in the Mathematics Honors Sequences. Topics will vary. As part of the honors sequence, this course will be rigorous and abstract. 3 undergraduate hours. No graduate credit. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Consent of the department.

MATH 432 Set Theory and Topology credit: 3 or 4 Hours.

Informal set theory, cardinal and ordinal numbers, and the axiom of choice; topology of metric spaces and introduction to general topological spaces. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or consent of instructor.

MATH 439 Philosophy of Mathematics credit: 3 or 4 Hours.

Same as PHIL 439. See PHIL 439.

MATH 441 Differential Equations credit: 3 or 4 Hours.

Basic course in ordinary differential equations; topics include existence and uniqueness of solutions and the general theory of linear differential equations; treatment is more rigorous than that given in MATH 285. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 441 and any of MATH 284, MATH 285, MATH 286. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348 is recommended.

MATH 442 Intro Partial Diff Equations credit: 3 or 4 Hours.

Introduces partial differential equations, emphasizing the wave, diffusion and potential (Laplace) equations. Focuses on understanding the physical meaning and mathematical properties of solutions of partial differential equations. Includes fundamental solutions and transform methods for problems on the line, as well as separation of variables using orthogonal series for problems in regions with boundary. Covers convergence of Fourier series in detail. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 444 Elementary Real Analysis credit: 3 or 4 Hours.

Careful treatment of the theoretical aspects of the calculus of functions of a real variable intended for those who do not plan to take graduate courses in Mathematics. Topics include the real number system, limits, continuity, derivatives, and the Riemann integral. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 444 and either MATH 424 or MATH 447. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent.

MATH 446 Applied Complex Variables credit: 3 or 4 Hours.

For students who desire a working knowledge of complex variables; covers the standard topics and gives an introduction to integration by residues, the argument principle, conformal maps, and potential fields. Students desiring a systematic development of the foundations of the subject should take MATH 448. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 446 and MATH 448. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241.

MATH 447 Real Variables credit: 3 or 4 Hours.

Careful development of elementary real analysis for those who intend to take graduate courses in Mathematics. Topics include completeness property of the real number system; basic topological properties of n -dimensional space; convergence of numerical sequences and series of functions; properties of continuous functions; and basic theorems concerning differentiation and Riemann integration. 3 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 447 and either MATH 424 or MATH 444. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 241 or equivalent; junior standing; MATH 347 or MATH 348, or equivalent experience; or consent of instructor.

MATH 448 Complex Variables credit: 3 or 4 Hours.

For students who desire a rigorous introduction to the theory of functions of a complex variable; topics include Cauchy's theorem, the residue theorem, the maximum modulus theorem, Laurent series, the fundamental theorem of algebra, and the argument principle. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 448 and MATH 446. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 447.

MATH 450 Numerical Analysis credit: 3 or 4 Hours.

Same as CS 450, CSE 401 and ECE 491. See CS 450.

MATH 453 Elementary Theory of Numbers credit: 3 or 4 Hours.

Basic introduction to the theory of numbers. Core topics include divisibility, primes and factorization, congruences, arithmetic functions, quadratic residues and quadratic reciprocity, primitive roots and orders. Additional topics covered at the discretion of the instructor include sums of squares, Diophantine equations, continued fractions, Farey fractions, recurrences, and applications to primality testing and cryptography. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent. This course satisfies the General Education Criteria for: Quantitative Reasoning II

MATH 461 Probability Theory credit: 3 or 4 Hours.

Introduction to mathematical probability; includes the calculus of probability, combinatorial analysis, random variables, expectation, distribution functions, moment-generating functions, and central limit theorem. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both MATH 461 and either MATH 408 or ECE 313. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 463 Statistics and Probability I credit: 4 Hours.

Same as STAT 400. See STAT 400.

MATH 464 Statistics and Probability II credit: 3 or 4 Hours.

Same as STAT 410. See STAT 410.

MATH 469 Methods of Applied Statistics credit: 3 or 4 Hours.

Same as STAT 420. See STAT 420.

MATH 471 Life Contingencies I credit: 4 Hours.

Distribution of the time-to-death random variable for a single life, and its implications for evaluations of insurance and annuity functions, net premiums, and reserves. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 408 and MATH 210.

MATH 472 Life Contingencies II credit: 3 Hours.

Continuation of MATH 471. Introduction to tabular or parametric survival models with single or multiple-life states; life insurance and annuity premium calculations; reserving and profit measures; introductions to universal life insurances, participating insurances, pension plans and retirement benefits. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 472 and MATH 565. Prerequisite: MATH 471.

MATH 473 Algorithms credit: 4 Hours.

Same as CS 473 and CSE 414. See CS 473.

MATH 475 Formal Models of Computation credit: 3 or 4 Hours.

Same as CS 475. See CS 475.

MATH 476 Investments and Financial Markets credit: 3 Hours.

Theoretical foundation in financial models and their applications to insurance and other financial risks. Topics include derivative markets, no arbitrage pricing of financial derivatives, interest rate models, dynamic hedging and other risk management techniques. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 476 and MATH 567. Prerequisite: Credit or concurrent registration in STAT 409 or STAT 410.

MATH 478 Loss Models credit: 3 Hours.

Foundation in the actuarial modeling process; construction, selection and validation of empirical models and parametric models. Also covers survival, severity, frequency and aggregate loss models; statistical methods to estimate model parameters. 3 undergraduate hours. No graduate credit. Credit is not given for MATH 478 and MATH 568. Prerequisite: MATH 408, MATH 461 or MATH 463; credit or concurrent registration in MATH 409 or MATH 464.

MATH 479 Casualty Actuarial Mathematics credit: 3 or 4 Hours.

An introduction to property/casualty actuarial science, exploring its mathematical financial, and risk-theoretical foundations. Specific topics include risk theory, loss reserving, ratemaking, risk classification, credibility theory, reinsurance, financial pricing of insurance, and other special issues and applications. 3 or 4 undergraduate hours. No graduate credit. Credit is not given for MATH 479 and MATH 569. Prerequisite: MATH 210; credit or concurrent registration in MATH 409; or consent of instructor.

MATH 481 Vector and Tensor Analysis credit: 3 or 4 Hours.

Introductory course in modern differential geometry focusing on examples, broadly aimed at students in mathematics, the sciences, and engineering. Emphasis on rigorously presented concepts, tools and ideas rather than on proofs. The topics covered include differentiable manifolds, tangent spaces and orientability; vector and tensor fields; differential forms; integration on manifolds and Generalized Stokes Theorem; Riemannian metrics, Riemannian connections and geodesics. Applications to configuration and phase spaces, Maxwell equations and relativity theory will be discussed. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 and one of MATH 415 or MATH 416 or equivalent.

MATH 482 Linear Programming credit: 3 or 4 Hours.

Rigorous introduction to a wide range of topics in optimization, including a thorough treatment of basic ideas of linear programming, with additional topics drawn from numerical considerations, linear complementarity, integer programming and networks, polyhedral methods. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 410, MATH 415, or MATH 416.

MATH 484 Nonlinear Programming credit: 3 or 4 Hours.

Iterative and analytical solutions of constrained and unconstrained problems of optimization; gradient and conjugate gradient solution methods; Newton's method, Lagrange multipliers, duality and the Kuhn-Tucker theorem; and quadratic, convex, and geometric programming. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348; or equivalent; MATH 415 or equivalent; or consent of instructor.

MATH 487 Advanced Engineering Math credit: 3 or 4 Hours.

Complex linear algebra, inner product spaces, Fourier transforms and analysis of boundary value problems, Sturm-Liouville theory. Same as ECE 493. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 488 Math Methods In Engineering credit: 3 or 4 Hours.

Matrices, determinants, bounds and approximations to eigenvalues, introduction to linear operator theory and inner product spaces, orthogonal expansions, and Fourier transforms. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

MATH 489 Dynamics & Differential Eqns credit: 3 or 4 Hours.

Studies mathematical theory of dynamical systems, emphasizing both discrete-time dynamics and nonlinear systems of differential equations. Topics include: chaos, fractals, attractors, bifurcations, with application to areas such as population biology, fluid dynamics and classical physics. Basic knowledge of matrix theory will be assumed. 3 or 4 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

MATH 490 Advanced Topics in Mathematics credit: 1 to 4 Hours.

Deals with selected topics and applications of mathematics; see Class Schedule or department office for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated with approval. Prerequisite: Consent of instructor.

MATH 492 Undergraduate Research in Math credit: 1 to 3 Hours.

Work closely with department faculty on a well-defined research project. Topics and nature of assistance vary. Capstone paper or computational project required. 1 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 8 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

MATH 495 Models in Mathematical Biology credit: 3 or 4 Hours.

Research-motivated subject material from Mathematical Biology with emphasis on modeling. 3 undergraduate hours. 4 graduate hours. Prerequisite: MATH 220 or equivalent.

MATH 496 Honors Seminar credit: 3 Hours.

Careful study of a selected area of mathematics, carried out either deductively from axioms or inductively through problems; subject matter varies with instructor. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of Mathematics Honors Committee.

MATH 499 Introduction Graduate Research credit: 1 Hour.

Seminar is required of all first-year graduate students in Mathematics. It provides a general introduction to the courses and research work in all of the areas of mathematics that are represented at the University of Illinois at Urbana-Champaign. 1 undergraduate hour. 1 graduate hour. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: Graduate standing or consent of instructor.

MATH 500 Abstract Algebra I credit: 4 Hours.

Isomorphism theorems for groups. Group actions. Composition series. Jordan-Holder theorem. Solvable and nilpotent groups. Field extensions. Algebraic and transcendental extensions. Algebraic closures. Fundamental theorem of Galois theory, and applications. Modules over commutative rings. Structure of finitely generated modules over a principal ideal domain. Applications to finite Abelian groups and matrix canonical forms. Prerequisite: MATH 417 and MATH 418.

MATH 501 Abstract Algebra II credit: 4 Hours.

Modules over non commutative rings. Direct sums and products. Direct and inverse limits. Categories and functors. Projective and injective modules. Noetherian and Artinian rings and modules. Semisimple modules. Wedderburn's theorem on semisimple Artinian rings. Application to representation theory of groups. Multilinear algebra, tensor products and flat modules. Tensor, symmetric and exterior algebras. Additional advanced topics. Prerequisite: MATH 500.

MATH 502 Commutative Algebra credit: 4 Hours.

Commutative rings and modules, prime ideals, localization, noetherian rings, primary decomposition, integral extensions and Noether normalization, the Nullstellensatz, dimension, flatness, Hensel's lemma, graded rings, Hilbert polynomial, valuations, regular rings, singularities, unique factorization, homological dimension, depth, completion. Possible further topics: smooth and étale extensions, ramification, Cohen-Macaulay modules, complete intersections. Prerequisite: MATH 501 or consent of instructor.

MATH 503 Intro Geometric Group Theory credit: 4 Hours.

Free groups, groups given by generators and relations, van Kampen diagrams. Free product with amalgamations and HNN-extensions, Bass-Serre theory. Solvable and nilpotent groups. Quasi-isometries and geometric properties of groups. Prerequisite: MATH 500 or equivalent.

MATH 505 Homological Algebra credit: 4 Hours.

Topics include: 1. Snake lemma, homology, long exact sequence in homology; 2. Projective and injective modules and resolutions; 3. Categories, functors and derived functors. Tor and Ext, local cohomology; 4. Group cohomology, bar resolution; 5. Spectral sequences, techniques of computation, Serre spectral sequence. Grothendieck spectral sequence of composite functors; 6. Time permitting: Derived categories, Gysin sequence, Kunneth formula, universal coefficient theorem, Eilenberg-Moore sequence. Prerequisite: MATH 501 or equivalent.

MATH 506 Group Representation Theory credit: 4 Hours.

Representation of groups by linear transformations, group algebras, character theory, and modular representations. Prerequisite: MATH 501 or equivalent.

MATH 510 Riemann Surf & Algebraic Curv credit: 4 Hours.

An introduction to Riemann Surfaces from both the algebraic and function-theoretic points of view. Topics include holomorphic and meromorphic differential forms, integration of differential forms, divisors and linear equivalence, the genus of a compact Riemann surface, projective algebraic curves, the Riemann-Roch theorem, and applications. Prerequisite: MATH 542.

MATH 511 Intro to Algebraic Geometry credit: 4 Hours.

An introduction to the study of algebraic sets defined by polynomial equations; affine and projective space and their subvarieties; rational and regular functions and mappings; divisors, linear systems, and projective embeddings; birational geometry, blowing up; Grassmannians and other special varieties. Prerequisite: MATH 500.

MATH 512 Modern Algebraic Geometry credit: 4 Hours.

An introduction to the tools and ideas of contemporary algebraic geometry, with particular focus on the language of schemes. 4 graduate hours. No professional credit. Prerequisite: MATH 500, and one of MATH 510, MATH 511, or consent of instructor.

MATH 514 Complex Algebraic Geometry credit: 4 Hours.

Hodge theory of complex manifolds; examples, applications, and topological invariants. 4 graduate hours. No professional credit. Credit is not given for MATH 514 if credit for MATH 524 has been earned. Prerequisite: MATH 448 or consent of instructor.

MATH 518 Differentiable Manifolds I credit: 4 Hours.

Definitions and properties of differentiable manifolds and maps, (co)tangent bundles, vector fields and flows, Frobenius theorem, differential forms, exterior derivatives, integration and Stokes' theorem, DeRham cohomology, inverse function theorem, Sard's theorem, transversality and intersection theory. Prerequisite: MATH 423 or MATH 481, or consent of instructor.

MATH 519 Differentiable Manifolds II credit: 4 Hours.

Vector bundles, principal bundles, connections, parallel transport, curvature, Chern-Weil theory, Hodge-DeRham theory. Other topics may include Riemannian geometry, symplectic geometry, spin geometry, and harmonic maps. Prerequisite: MATH 518 or consent of instructor.

MATH 522 Lie Groups and Lie Algebras I credit: 4 Hours.

A general introduction to Lie groups and algebras and their representation theory. Theory of finite group representations, Lie groups as matrix groups, and as differentiable manifolds, Lie algebras as tangent spaces and as abstract objects, and their representations. Examples of the classical groups. May be repeated up to 8 hours. Prerequisite: Undergraduate linear algebra, abstract algebra, point set topology, differentiation on manifolds.

MATH 525 Algebraic Topology I credit: 4 Hours.

Introduction to the study of topological spaces by means of algebraic invariants. Topics include the fundamental group, covering spaces and their classification, simplicial and singular homology, applications such as the Brouwer fixed point theorem and the Jordan curve theorem. Prerequisite: MATH 417 and MATH 448 or consent of instructor.

MATH 526 Algebraic Topology II credit: 4 Hours.

CW-complexes, relative homeomorphism theorem, cellular homology, cohomology, Kunneth theorem, Eilenberg-Zilber theorem, cup products, Poincaré duality, examples. Prerequisite: MATH 525, MATH 500; or consent of instructor. MATH 501 is recommended but not required.

MATH 527 Homotopy Theory credit: 4 Hours.

Homotopy groups, fibrations and cofibrations, Hurewicz theorem, obstruction theory, Whitehead theorem and additional topics perhaps drawn from Postnikov towers, Freudenthal suspension theorem, Blakers-Massey theorem, spectra. Prerequisite: MATH 526. MATH 501 is recommended but not required.

MATH 530 Algebraic Number Theory credit: 4 Hours.

Further development of the theory of fields covering topics from valuation theory, ideal theory, units in algebraic number fields, ramification, function fields, and local class field theory. Prerequisite: MATH 500 or equivalent.

MATH 531 Analytic Theory of Numbers I credit: 4 Hours.

Problems in number theory treated by methods of analysis; arithmetic functions, Dirichlet series, Riemann zeta function, L-functions, Dirichlet's theorem on primes in progressions, the prime number theorem. Prerequisite: MATH 448 and either MATH 417 or MATH 453.

MATH 532 Analytic Theory of Numbers II credit: 4 Hours.

Development of themes from MATH 531 and further topics chosen from additive number theory, asymptotic properties of multiplicative functions, circle method, diophantine approximation, lattice point problems, metric theory, modular forms, sieve theory. May be repeated. Prerequisite: MATH 531.

MATH 533 Fiber Spaces and Char Classes credit: 4 Hours.

Study of fiber bundles and their associated characteristic classes; applications to geometric problems. Prerequisite: MATH 526.

MATH 535 General Topology credit: 4 Hours.

Study of topological spaces and maps, including Cartesian products, identifications, connectedness, compactness, uniform spaces, and function spaces. Prerequisite: Consent of instructor.

MATH 540 Real Analysis credit: 4 Hours.

Lebesgue measure on the real line; integration and differentiation of real valued functions of a real variable; and additional topics at discretion of instructor. Prerequisite: MATH 447 or equivalent.

MATH 541 Functional Analysis credit: 4 Hours.

Fundamental results in functional analysis; spectral theory of compact operators; further topics chosen by the instructor. Prerequisite: MATH 540.

MATH 542 Complex Variables I credit: 4 Hours.

Topics include the Cauchy theory, harmonic functions, entire and meromorphic functions, and the Riemann mapping theorem. Prerequisite: MATH 446 and MATH 447, or MATH 448.

MATH 543 Complex Variables II credit: 4 Hours.

Continuation of MATH 542. Topics include Riemann Surfaces, Hyperbolic Metric, Potential Theory and Quasiconformal Mappings. Prerequisite: MATH 542.

MATH 545 Harmonic Analysis credit: 4 Hours.

Harmonic analysis on the circle, the line, and the integers, i.e., Fourier series and transforms; locally compact Abelian groups; convergence and summability; conjugate functions; Hardy spaces; uniqueness; Tauberian theorems; almost-periodic functions; commutative Banach algebras. Prerequisite: MATH 448 and MATH 541; knowledge of Banach spaces.

MATH 546 Hilbert Spaces credit: 4 Hours.

Geometrical properties of Hilbert spaces, spectral theorems for compact, bounded and unbounded operators, basic theory of operator algebras, and additional material depending on the instructor. Prerequisite: MATH 541.

MATH 547 Banach Spaces credit: 4 Hours.

Basic properties and fundamental theorems of Banach spaces and bounded linear maps, trace duality, absolutely summing maps, local theory, type and cotype, probabilistic techniques in Banach spaces, and further topics depending on the instructor. 4 graduate hours. No professional credit. Prerequisite: MATH 541.

MATH 550 Dynamical Systems I credit: 4 Hours.

An introduction to the study of dynamical systems. Considers continuous and discrete dynamical systems at a sophisticated level: differential equations, flows and maps on Euclidean space and other manifolds. Emphasis will be placed on the fundamental theoretical concepts and the interaction between the geometry and topology of manifolds and global flows. Discrete dynamics includes Bernoulli shifts, elementary Anosov diffeomorphisms and surfaces of sections of flows. Bifurcation phenomena in both continuous and discrete dynamics will be studied. Prerequisite: MATH 489 or consent of instructor.

MATH 551 Dynamical Systems II credit: 4 Hours.

A second course in the study of dynamical systems. Students who intend to do research in nonlinear dynamics are encouraged to take this course. A specific selection will be chosen from the following list to illustrate the theory and use of techniques from global analysis and nonlinear dynamics: (1) discrete dynamical systems, (2) global theory of ordinary differential equations, (3) Hamiltonian systems, (4) KAM theory, (5) bifurcation and stability, (6) Hopf index theory of vector fields, (7) Morse theory of gradient vector fields, (8) Lyapunov theory, (9) infinite dimensional dynamical systems, (10) structural stability. Prerequisite: Consent of instructor.

MATH 553 Partial Differential Equations credit: 4 Hours.

Basic introduction to the study of partial differential equations; topics include: the Cauchy problem, power-series methods, characteristics, classification, canonical forms, well-posed problems, Riemann's method for hyperbolic equations, the Goursat problem, the wave equation, Sturm-Liouville problems and separation of variables, Fourier series, the heat equation, integral transforms, Laplace's equation, harmonic functions, potential theory, the Dirichlet and Neumann problems, and Green's functions. Prerequisite: Consent of instructor.

MATH 554 Linear Analysis and Partial Differential Equations credit: 4 Hours.

Course will provide students with the basic background in linear analysis associated with partial differential equations. The specific topics chosen will be largely up to the instructor, but will cover such areas as linear partial differential operators, distribution theory and test functions, Fourier transforms, Sobolev spaces, pseudodifferential operators, microlocal analysis, and applications of the above topics. 4 graduate hours. No professional credit. Prerequisite: MATH 553 or consent of instructor.

MATH 555 Nonlinear Analysis and Partial Differential Equations credit: 4 Hours.

Course will provide students with the basic background in nonlinear analysis associated with partial differential equations. The specific topics chosen will be largely up to the instructor, but will cover such areas as existence and uniqueness techniques, nonexistence and finite time blow-up results, hyperbolic conservation laws, weak solutions, stability theory, nonlinear elliptic theory, regularity theory. 4 graduate hours. No professional credit. May be repeated as topics vary. Prerequisite: Consent of instructor.

MATH 558 Methods of Applied Mathematics credit: 4 Hours.

Introduction to modern methods of applied mathematics, including nondimensionalization and scaling analysis, regular and singular asymptotics, analysis of multiscale systems, and analysis of complex systems. Each technique is illustrated with applications from science and engineering. The mathematical frameworks will include ordinary, partial and stochastic differential equations, point processes, and Markov chains. Prerequisite: Undergraduate background in ODEs, PDEs, and probability theory (MATH 441, MATH 442, and MATH 461, or equivalents), or consent of instructor.

MATH 561 Theory of Probability I credit: 4 Hours.

Mathematical foundations of probability and stochastic processes; probability measures, random variables, distribution functions, convergence theory, the Central Limit Theorem, conditional expectation, and martingale theory. Same as STAT 551. Prerequisite: MATH 541 or consent of instructor.

MATH 562 Theory of Probability II credit: 4 Hours.

Continuation of MATH 561. Same as STAT 552. Prerequisite: MATH 561.

MATH 563 Risk Modeling and Analysis credit: 4 Hours.

Quantitative tools for measuring risks and modeling dependencies. Topics include risk measures, stochastic orders, copulas, dependence measures, and their statistical inferences. Same as STAT 558. 4 graduate hours. No professional credit. Prerequisite: MATH 408 or MATH 461.

MATH 564 Applied Stochastic Processes credit: 4 Hours.

Introduction to topics such as spectral analysis, filtering theory, and prediction theory of stationary processes; Markov chains and Markov processes. Same as STAT 555. Prerequisite: MATH 446 and MATH 447.

MATH 565 Actuarial Models for Life Contingencies credit: 4 Hours.

Tabular and parametric survival models with single or multiple-life states; life insurance and annuity premium calculations; reserving, and profit measures; introduction to universal life insurances, participating insurances, pension plans and retirement benefits. 4 graduate hours. No professional credit. Credit is not given for MATH 472 and MATH 565. Prerequisite: MATH 471.

MATH 567 Actuarial Models for Financial Economics credit: 4 Hours.

Theoretical basis of financial models and their applications to insurance and other financial risks. Topics include derivative markets, no-arbitrage pricing of financial derivatives, interest rate models, dynamic hedging and other risk management techniques. 4 graduate hours. No professional credit. Credit is not given for MATH 476 and MATH 567. Prerequisite: MATH 409 or MATH 464.

MATH 568 Actuarial Loss Models credit: 4 Hours.

Introduction to the actuarial modeling process: construction, selection and validation of empirical and parametric models. Survival, severity, frequency and aggregate loss models; statistical methods to estimate model parameters. 4 graduate hours. No professional credit. Credit is not given for MATH 478 and MATH 568. Prerequisite: MATH 408, MATH 461 or MATH 463.

MATH 569 Casualty Actuarial Science credit: 4 Hours.

Principles and fundamental techniques of ratemaking for casualty and property insurances; risk classification; coinsurance; estimation of claim liabilities; financial reporting; catastrophe modeling. 4 graduate hours. No professional credit. Credit is not given for MATH 479 and MATH 569. Prerequisite: MATH 408.

MATH 570 Mathematical Logic credit: 4 Hours.

Development of first order predicate logic; completeness theorem; formalized number theory and the Godel incompleteness theorem. Prerequisite: MATH 417 or consent of instructor.

MATH 571 Model Theory credit: 4 Hours.

Techniques for constructing models, including compactness and Lowenheim-Skolem theorems, unions of elementary chains, and omitting types construction; categorical theories; ultraproducts; saturated models; quantifier elimination; applications to algebraically closed fields, real closed fields, and other fundamental structures of mathematics. Prerequisite: MATH 570 or consent of instructor.

MATH 573 Recursive Function Theory credit: 4 Hours.

Various characterizations of the class of recursive (i.e., computable) functions; the Church-Turing thesis; unsolvability of the halting problem; the recursion theorem and the enumeration theorem; relative computability, the jump operation, and the arithmetical hierarchy; recursively enumerable sets; degrees of unsolvability; and the priority method. Prerequisite: MATH 570 or consent of instructor.

MATH 574 Set Theory credit: 4 Hours.

Zermelo-Fraenkel axiomatic set theory; basic concepts in set theory such as ordinal, cardinal, rank, and definition by transfinite recursion; Godel's constructible universe; introduction to forcing; Boolean valued universes; large cardinals; consistency and independence of the continuum hypothesis and the axiom of choice. Prerequisite: MATH 570 or consent of instructor.

MATH 580 Combinatorial Mathematics credit: 4 Hours.

Fundamental results on core topics of combinatorial mathematics: classical enumeration, basic graph theory, extremal problems on finite sets, probabilistic methods, design theory, discrete optimization. Same as CS 571. Prerequisite: Consent of instructor.

MATH 581 Extremal Graph Theory credit: 4 Hours.

Extremal problems and parameters for graphs. Distance and connectivity, matching and factors, vertex and edge colorings, perfect and imperfect graphs, intersection classes and intersection parameters, Turan's theorem, graph Ramsey theory, graph decomposition and other extremal problems. Same as CS 572. Prerequisite: MATH 580 or consent of instructor.

MATH 582 Structure of Graphs credit: 4 Hours.

Structure of graphs and properties of special classes of graphs. Degree sequences and reconstruction, structure of k-connected graphs, Hamiltonian cycles and circumference, planar graphs and their properties, graph minors, cycle coverings, matroidal and algebraic aspects of graphs. Prerequisite: MATH 580 or consent of instructor.

MATH 583 Partial Orders and Comb Optim credit: 4 Hours.

Combinatorial aspects of partially ordered sets and their relation to optimization problems. Structure of posets and lattices, Dilworth's theorem and generalizations, linear extensions and sorting, dimension of posets, order ideals, extremal set theory, integer programming and minmax relations, matroids and their applications. Prerequisite: MATH 580 or consent of instructor.

MATH 584 Methods of Combinatorics credit: 4 Hours.

Combinatorial methods and other mathematical methods for combinatorial problems. Enumeration by bijections and generating functions, probabilistic methods for existence proofs and asymptotic analysis, randomized algorithms, Ramsey's theorem and related topics, combinatorial designs and their applications, geometric problems and methods. Same as CS 575. Prerequisite: MATH 580 or consent of instructor.

MATH 585 Probabilistic Combinatorics credit: 4 Hours.

Techniques and applications of probabilistic methods in combinatorics. Draws applications from a variety of areas, but emphasizes theoretical aspects of random graphs, including connectivity, trees & cycles, planarity, and coloring problems. Techniques include the second moment method, Lovasz Local Lemma, martingales, Talgrand's Inequality, the Rodl Nibble, and Szemerédi's Regularity Lemma. Applications may come from discrete geometry, coding theory, algorithms & complexity, additive number theory, percolation, positional games, etc. Prerequisite: MATH 580 or consent of instructor.

MATH 588 Optimization in Networks credit: 4 Hours.

Theory and methods for optimization over directed graphs; paths, cuts, flows, and potentials; matchings; PERT and CPM; max flow, min path, out-of-kilter, Hungarian, and other algorithms; nonlinear cost functionals; painting theory; and existence and duality. Prerequisite: MATH 412 or 413 or equivalent.

MATH 589 Conjugate Duality and Optim credit: 4 Hours.

Convex analysis for constrained extremum problems; convex sets, cones, and functions; separation; Fenchel transform; duality correspondences; differential theory; nonlinear programming; sensitivity; and perturbational duality for primal, dual, and Lagrangian problems. Prerequisite: MATH 415 and MATH 447, or consent of instructor.

MATH 593 Mathematical Internship credit: 0 Hours.

Full-time or part-time practice of graduate-level mathematics in an off-campus government, industrial, or research laboratory environment. Summary report required. 0 graduate credit. No professional credit. Approved for S/U grading only. May be repeated in separate terms.

MATH 595 Advanced Topics in Mathematics credit: 1 to 4 Hours.

See Class Schedule for current topics. 1 to 4 graduate hours. No professional credit. May be repeated in the same or separate semesters. Prerequisite: Consent of instructor.

MATH 597 Reading Course credit: 1 to 8 Hours.

Independent study in Mathematics. 1 to 8 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in the same or separate terms, with a maximum of 8 hours per semester. Prerequisite: Consent of instructor.

MATH 598 Literature Seminar in Math credit: 0 to 4 Hours.

Seminar on topics of current interest in mathematics. Students present seminars and discussions on various topics. See Class Schedule for current topics. Recommended for all Mathematics students. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in the same or separate semesters as topics vary. Prerequisite: Consent of instructor.

MATH 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

Mechanical Engineering (ME)

ME Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ME>)

Courses

ME 170 Computer-Aided Design credit: 3 Hours.

Geometry and topology of engineered components: creation of engineering models and their presentation in standard 2D blueprint form and as 3D wire-frame and shaded solids; meshed topologies for engineering analysis and tool-path generation for component manufacture; ISO and ANSI standards for coordinate dimensioning and tolerancing; geometric dimensioning and tolerancing. Use of solid-modeling software for creating associative models at the component and assembly levels with automatic blueprint creation, interference checking, and linked bill of materials. Credit is not given for both ME 170 and GE 101.

ME 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

ME 270 Design for Manufacturability credit: 3 Hours.

Introduction to DFM methodologies and tools; material selection (new and traditional materials); designing for primary manufacturing processes (cutting fundamentals, casting, forming, and shaping); designing with plastics (snap-fits, integral hinges, etc.); design for assembly (DFA); geometric dimensioning and tolerancing (GD&T). Same as TAM 270. Prerequisite: ME 170. ME and EM majors only.

ME 297 Introductory Independent Study credit: 1 to 3 Hours.

Independent study and/or individual projects related to mechanical engineering. Approved for Letter and S/U grading. May be repeated to a maximum of 6 credit hours for letter grade; no limit for S/U grade mode. Prerequisite: Consent of Instructor.

ME 300 Thermodynamics credit: 3 Hours.

Classical thermodynamics through the second law; system and control-volume analyses of thermodynamic processes; irreversibility and availability; relations for ideal gas mixtures. Prerequisite: MATH 241.

ME 310 Fundamentals of Fluid Dynamics credit: 4 Hours.

Fundamentals of fluid mechanics with coverage of theory and applications of incompressible viscous and inviscid flows, and compressible high speed flows. Credit is not given for both ME 310 and TAM 335. Prerequisite: MATH 285; credit or concurrent registration in ME 300.

ME 320 Heat Transfer credit: 4 Hours.

Principles and application of heat transfer by conduction, convection, and thermal radiation. Prerequisite: ME 310 or TAM 335.

ME 330 Engineering Materials credit: 4 Hours.

Structures of polymers, metals, and ceramics as the basis for their mechanical behavior. Manipulation of structure through such processes as heat treatment and solidification. Mechanisms of material failure in service (yielding, fracture, fatigue, creep, corrosion, and wear) and simple design techniques to avoid these failures. Strategies for materials selection in design. Credit is not given for both ME 330 and either CEE 300 or MSE 280. Prerequisite: CHEM 102 and TAM 251.

ME 340 Dynamics of Mechanical Systems credit: 3.5 Hours.

Dynamic modeling of mechanical components and systems; time-domain and frequency-domain analyses of linear time-invariant systems; multi-degree-of-freedom systems; linearization of nonlinear systems. Credit is not given for both ME 340 and either GE 320 or AE 353. Prerequisite: MATH 285 and TAM 212; credit or concurrent registration in ECE 205, ECE 206, and MATH 415.

ME 351 Analysis of Mfg Processes credit: 3 Hours.

Mechanistic and empirical modeling of manufacturing processes including metal cutting theory, casting analysis, forging analysis, sheet metal forming, plastics molding, welding and mechanical joining assembly analysis. Also, hands-on exposure to manufacturing processes, CAD/CAM software (MasterCam), 5 axis machining (ShopBot), Wire EDM machining, statistical process control (SPC), and geometric dimensioning and tolerancing (GD&T) metrology principles using CMM. Prerequisite: ME 270.

ME 360 Signal Processing credit: 3.5 Hours.

Basic electromechanical techniques used in modern instrumentation and control systems. Use of transducers and actuators. Signal conditioning, grounding, and shielding. Analog and digital signal processing and feedback control methods with emphasis on frequency domain techniques. Frequency response of continuous and discrete systems. Credit is not given for both ME 360 and ABE 425. Prerequisite: ME 340.

ME 370 Mechanical Design I credit: 3 Hours.

Kinematics and dynamics of machinery, including analytical kinematics, force analysis, cam design and balancing. Application of elementary mechanics of solids to analyze and size machine components for stress and deflection. Finite-element analysis with emphasis on beam and plate models. Prerequisite: ME 170, TAM 212, and TAM 251.

ME 371 Mechanical Design II credit: 3 Hours.

Design and analysis of machinery for load-bearing and power transmission. Consideration of material failure modes, including yielding, fracture, fatigue, and creep. Design and selection of machine elements: bolts, springs, rolling-element bearings, fluid-film lubrication, and power transmissions, including gears and friction drives. Prerequisite: ME 330 and ME 370.

ME 390 Seminar credit: 0 Hours.

Lectures by faculty and invited authorities, concerning the ethics and practices of mechanical engineering/engineering mechanics, as well as its relationship to other fields of engineering, to economics, and to society. Offered fall term only. Approved for S/U grading only.

ME 400 Energy Conversion Systems credit: 3 or 4 Hours.

Processes and systems for energy conversion, including power and refrigeration cycles, air conditioning, thermoelectrics and fuel cells; ideal-gas mixtures and psychrometrics. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 300.

ME 401 Refrigeration and Cryogenics credit: 3 or 4 Hours.

Theory of operation and design of equipment for production of low temperatures, from below ambient to near absolute zero; industrial, consumer, aerospace, medical, and research applications. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 300, ME 310, and ME 320.

ME 402 Design of Thermal Systems credit: 3 or 4 Hours.

Selection of components in fluid- and energy-processing systems to meet system-performance requirements; computer-aided design; system simulation; optimization techniques; investment economics and statistical combinations of operating conditions. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in ME 320.

ME 403 Internal Combustion Engines credit: 3 or 4 Hours.

Theory and analysis of reciprocating internal-combustion engines; fuels, carburetion, combustion, exhaust emissions, detonation, fuel injection, and factors affecting performance; laboratory work on variables that affect performance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Credit or concurrent registration in ME 400 or ABE 466.

ME 404 Intermediate Thermodynamics credit: 4 Hours.

Classical thermodynamics, including the TdS equations and the Maxwell relations; development of thermodynamic property relations, behavior of real gases, thermodynamics of mixtures, phase equilibrium and chemical reactions and equilibrium with an emphasis on combustion reactions; statistical thermodynamics including the effect of molecular and atomic structure, statistical concepts and distributions, calculation of thermodynamic properties of gas-phase atoms and molecules, kinetic theory of gases, and vibrations in crystals and the electron gas in metals; selected applications. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ME 404 and any of PHYS 427, CHEM 442, or CHEM 444. Prerequisite: ME 300.

ME 410 Intermediate Gas Dynamics credit: 4 Hours.

Solution of internal compressible-flow problems by one-dimensional techniques, both steady and unsteady; flows with smooth and abrupt area change, with friction, with heat addition, and with mass addition; flows with weak and strong waves, multiple confined streams, and shock waves. 4 undergraduate hours. 4 graduate hours. Prerequisite: ME 300 and ME 310; or one of AE 311, TAM 335.

ME 411 Viscous Flow & Heat Transfer credit: 4 Hours.

Same as AE 412. See AE 412.

ME 412 Numerical Thermo-Fluid Mechs credit: 2 to 4 Hours.

Numerical techniques for solving the equations governing conduction and convective heat transfer in steady and unsteady fluid flows: finite-difference and finite-volume techniques, basic algorithms, and applications to real-world fluid-flow and heat-transfer problems. Same as CSE 412. 2 or 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 310 and ME 320.

ME 420 Intermediate Heat Transfer credit: 4 Hours.

Conduction heat transfer, radiation heat transfer, mass transfer, phase change, heat exchangers; numerical methods. 4 undergraduate hours. 4 graduate hours. Prerequisite: ME 310 and ME 320.

ME 430 Failure of Engrg Materials credit: 3 or 4 Hours.

Material anisotropy and elasto-plastic properties at the crystal level; microstructural basis for fatigue, fracture, and creep in metals, polymers, and ceramics; failure mechanisms and toughening in composites; structure and behavior of metal-matrix composites, ceramic-matrix composites, and polymer composites. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 330.

ME 431 Mechanical Component Failure credit: 3 or 4 Hours.

Relationship of materials and mechanics concepts to the design of structures and components: elasticity, plasticity, thermal loading, creep, fatigue, fracture, and residual-life assessments as they relate to materials selection and design. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 330 and ME 371; Recommended: ME 430.

ME 432 Fundamentals of Photovoltaics credit: 3 or 4 Hours.

In this course, we will develop a fundamental understanding of how solar cells convert light to electricity, how solar cells are made, how solar cell performance is evaluated, and the photovoltaic technologies that are currently on the market and/or under development. Using thermodynamics, materials physics, and engineering analysis we will assess and critique the potential and drawbacks of modern photovoltaic technologies, including single- and multi-crystalline silicon, tandem cells, CdTe, CIGS, PVT, bulk heterojunctions (organic), Graetzel cells, nanostructure-based, and third generation PV. 3 undergraduate hours. 4 graduate hours. Approved for Letter and S/U grading. Prerequisite: PHYS 212 and ME 330 or equivalent.

ME 440 Kinem & Dynamics of Mech Syst credit: 3 or 4 Hours.

Kinematics and dynamics of constrained rigid-body mechanical systems; use of modern computer-based analysis software packages. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 370.

ME 445 Introduction to Robotics credit: 4 Hours.

Same as AE 482 and ECE 470. See ECE 470.

ME 446 Robot Dynamics and Control credit: 4 Hours.

Same as ECE 489 and SE 422. See SE 422.

ME 450 Modeling Materials Processing credit: 3 Hours.

Manufacturing processes for metals and polymers; creation of process models based on momentum, heat, and mass transfer; model simplification by estimation and scaling; applications to casting, microstructure evolution, polymer molding and extrusion, and welding. 3 undergraduate hours. 3 graduate hours. Prerequisite: ME 320 and ME 330.

ME 451 Computer-Aided Mfg Systems credit: 3 or 4 Hours.

The application of computer technology and operations research to manufacturing systems. Use of microprocessors for direct numeric control of machine tools, adaptive control and optimization, and integrated manufacturing systems. Applications of industrial robots. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 270.

ME 452 Num Control of Mfg Processes credit: 3 or 4 Hours.

Numerical control systems, manufacturing processes, principles and practices basic to numerical control, and programming methodology for numerical control. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 101 and ME 270.

ME 455 Micromanufacturing Process & Automation credit: 3 or 4 Hours.

Scaling laws in miniaturization, Micro-machine tools design and characterization, Micromanufacturing process modeling, simulation and automation, Micro-metrology and Micro-assembly systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: ME 270 or equivalent or consent of instructor.

ME 460 Industrial Control Systems credit: 4 Hours.

Industrial control techniques; case studies of industrial systems; design, selection, and maintenance of industrial control systems, including electromechanical, pneumatic, thermal, and hydraulic systems. 4 undergraduate hours. 4 graduate hours. Credit is not given for both ME 460 and ECE 486. Prerequisite: ME 340 and ME 360.

ME 461 Computer Cntrl of Mech Systems credit: 3 or 4 Hours.

Microcomputer control of thermal and mechanical systems: sensors and transducers, signal transmission and conversion, and regulator actuation. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: ME 360 or ABE 425.

ME 470 Senior Design Project credit: 3 Hours.

Solution of a real-world design problem: development, evaluation, and recommendation of alternative solutions subject to realistic constraints that include most of the following considerations: economics, environment, sustainability, manufacturability, ethics, health and safety, society, and politics. 3 undergraduate hours. No graduate credit. Departmental approval required. Prerequisite: Concurrent enrollment in no more than two required ME courses; completion of all required courses.

This course satisfies the General Education Criteria for: Advanced Composition

ME 471 Finite Element Analysis credit: 3 or 4 Hours.

The finite element method and its application to engineering problems: truss and frame structures, heat conduction, and linear elasticity; use of application software; overview of advanced topics such as structural dynamics, fluid flow, and nonlinear structural analysis. Same as AE 420 and CSE 451. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Credit is not given for both ME 471 and CEE 470. Prerequisite: CS 101 and ME 370.

ME 472 Introduction to Tribology credit: 3 or 4 Hours.

Friction, wear, and lubrication; engineering surfaces; surface properties and surface topography; Hertzian contacts and contact of rough surfaces; friction of surfaces in contact; wear and surface failures; boundary lubrication; fluid properties; hydrodynamic lubrication; elastohydrodynamic lubrication; bearing selection; introductory micro- and nanotribology. 3 undergraduate hours. 3 or 4 graduate hours.

ME 481 Whole-Body Musculoskel Biomech credit: 3 or 4 Hours.

Exploration of the human musculoskeletal system with an emphasis on the whole-body or organism level; modeling and analysis techniques for examining human movement, such as rigid-body modeling techniques, forward and inverse dynamics, and Lagrangian mechanics; examination of current topics, such as orthopedic biomechanics, prosthetics and orthotics, postural control, and locomotion; use of computerized motion-capture equipment and software to examine, simulate, and analyze human movement. Same as BIOE 481. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 212 and TAM 251.

ME 482 Musculoskel Tissue Mechanics credit: 3 or 4 Hours.

Composition-structure-function relationships for musculoskeletal tissues, including bone, tendon, ligament, cartilage, and muscle; hierarchical structure of tissues from the macro- to nano-scales; relation of composition to mechanical properties of health and diseased tissue; experimental methods used to obtain mechanical properties. Same as BIOE 482. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: TAM 251.

ME 483 Mechanobiology credit: 4 Hours.

Integrative approach to mechanobiology; mechanics of cell adhesion; cytoskeletal structure and mechanics; mechanotransduction; mechanics of cell proliferation, apoptosis, cancer cells, and stem cells; aging; critical issues facing the mechanobiological sciences. 4 undergraduate hours. 4 graduate hours. Prerequisite: CHEM 103 and TAM 251.

ME 485 MEMS Devices & Systems credit: 3 Hours.

Same as ECE 485. See ECE 485.

ME 487 MEMS-NEMS Theory & Fabrication credit: 4 Hours.

Physical and chemical theory, design, and hands-on fabrication of micro- and nano-electromechanical systems (MEMS and NEMS); cleanroom fabrication theory, including general cleanroom safety, lithography, additive and subtractive processes, bulk and surface micromachining, deep reactive ion etching (DRIE), lithographic Galvanoformung Abformung (LIGA), packaging, scaling, actuators, and micro-nanofluids; fabrication of two take-home devices, such as piezoresistive sensors and microfluidic logic chips, that demonstrate advanced fabrication processing. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 212.

ME 496 Honors Project credit: 1 to 4 Hours.

Special project or reading course for James Scholars in engineering. 1 to 4 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Consent of instructor.

ME 497 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to mechanical engineering. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

ME 498 Special Topics credit: 0 to 4 Hours.

Subject offerings of new and developing areas of knowledge in mechanical engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 0 to 4 undergraduate hours. 0 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 hours.

ME 501 Combustion Fundamentals credit: 4 Hours.

Fundamentals of kinetic theory, transport phenomena, chemical equilibria, and reaction kinetics; flames, their gross properties, structure, and gas dynamics including oscillatory and turbulent burning; solid and liquid propellant combustion; one-dimensional detonation theory including structure and initiation; three-dimensional and other complex detonation waves; supersonic burning. Same as AE 538. Prerequisite: AE 311 or ME 410.

ME 502 Thermal Systems credit: 4 Hours.

Steady-state simulation and optimization of thermal systems, dynamic performance, and probabilities in system design. Prerequisite: ME 402.

ME 503 Design of IC Engines credit: 4 Hours.

Design of internal combustion engines, including gas forces, inertia loads, bearing analysis, torsional vibration, balance, lubrication, valve and cam design, and stress analysis of major engine components. Prerequisite: ME 403.

ME 504 Multiphase Systems & Processes credit: 4 Hours.

Dynamics and thermodynamics of multiphase and multicomponent systems with special relevance to air-pollution control and energy conversion; relaxation phenomena; general motion of systems of disparate elemental masses; diffusion in gravitational and electric fields, and boundary-layer motion with mass transport; dispersion and collection of particulate matter; transport with surface reactions. Prerequisite: ME 404.

ME 510 Advanced Gas Dynamics credit: 4 Hours.

Theoretical gas dynamics; fundamental laws and basic equations for subsonic, transonic, and supersonic steady and unsteady flow processes. Same as AE 510. Prerequisite: ME 410.

ME 520 Heat Conduction credit: 4 Hours.

Fundamentals of heat conduction in isotropic and anisotropic materials; methods of solution to steady and transient heat conduction problems in one, two, and three dimensions; internal heat sources; periodic flow of heat; problems involving phase change; approximate analytical techniques; numerical methods; study of current articles on the subject. Prerequisite: ME 420.

ME 521 Convective Heat Transfer credit: 4 Hours.

Fundamentals of convective heat transfer; calculation of heat transfer within ducts and over submerged objects for laminar and turbulent flow; natural convection; film condensation and boiling; liquid metals. Prerequisite: ME 411.

ME 522 Thermal Radiation credit: 4 Hours.

Fundamentals of radiant-energy transport in absorbing and nonabsorbing media; pyrometry; applications to selected problems involving combined energy-transport mechanisms. Prerequisite: ME 420.

ME 523 Nanoscale Energy Transport credit: 4 Hours.

An advanced treatment of diverse transport phenomena at the nanometer scale involving solids, liquids and gases emphasizing common features in transport by molecules, electrons, phonons, photons, and other quasi-particles of interest, oriented toward applied research in the areas of nanoscale heat transfer and nanoscale energy conversion. Topics include intermolecular forces at surfaces and in the bulk, momentum and species transport in microfluidics, linear response theory, free molecular flow in gases, electron and phonon transport in crystals, Boltzmann equation and its moments, ballistic and diffusive transport, thermoelectric energy conversion, interfacial transport, energy transport in nanostructures and radiative transport in the near-field. Approved for letter and S/U grading.

ME 530 Fatigue Analysis credit: 4 Hours.

Fatigue analysis methods for the design of structures and components: stress-life, strain-life, and crack-propagation approaches; multiaxial and high-temperature fatigue; interrelationship among material properties, geometry, and design methodology appropriate for a wide range of mechanical engineering components. Prerequisite: ME 430.

ME 531 Inelastic Design Methods credit: 4 Hours.

Material deformation under combined mechanical and thermal loading; constitutive equations and their application in engineering design and in inelastic finite element methods; material and structural degradation under fatigue and creep conditions. Prerequisite: ME 471 and ME 430.

ME 532 Fracture Resistant Design credit: 4 Hours.

Application of fracture mechanics and microstructural behavior to materials selection for design; practical approximation of linear and inelastic fracture parameters for evaluation of complex components; destructive and nondestructive tests for control of toughness in manufacture; residual life assessment involving time-dependent fracture (creep, fatigue, stress, corrosion); case studies; design project. Prerequisite: ME 430.

ME 533 Physical Basis for Plasticity credit: 4 Hours.

Physical and mathematical foundation for plasticity in crystalline materials, with application to deformation processes. Metal forming; deformation processes in other materials, such as slip in geological materials and polymers; rate dependence of plastic flow, with underlying physical mechanisms; kinetics of dislocation motion, mechanisms of work hardening, and crystallographic texture; theoretical framework for modeling the constitutive response of rate-dependent materials undergoing crystallographic slip, and allied computational procedures. Prerequisite: TAM 445.

ME 540 Control System Theory & Design credit: 4 Hours.

Same as ECE 515. See ECE 515.

ME 541 Control of Machine Systems credit: 4 Hours.

Modeling machining processes and machine tools. Mechanistic modeling of machining processes, machine-tool errors, characterization of machined surfaces, machine-tool system dynamics and stability, and topics in motion control. 4 graduate hours. No professional credit. Prerequisite: ME 340 and ME 270.

ME 544 Dynamic System Reliability credit: 4 Hours.

Same as ECE 554. See ECE 554.

ME 546 Analysis of Nonlinear Systems credit: 4 Hours.

Same as ECE 528 and SE 520. See ECE 528.

ME 550 Solidification Processing credit: 4 Hours.

Principles of control of structure, properties, and shape in processes involving liquid-solid transformations; stresses, heat flow, mass transport, solute redistribution, and nucleation and growth kinetics; relationship between process variables and structures and properties in the resultant material; examples are drawn from existing commercial and new developing processes. Prerequisite: ME 450.

ME 554 Computational Process Modeling credit: 4 Hours.

Development and application of computer models to solve practical problems involving fluid flow, heat transfer, and deformation phenomena. Advanced topics in computational methods for materials process modeling; case studies. Same as CSE 561. Prerequisite: ME 412 or ME 471; ME 450.

ME 561 Convex Methods in Control credit: 4 Hours.

Use of convex optimization in analysis and control of dynamical systems; robust control methods and the use of semidefinite programming; linear matrix inequalities, operator theory, model reduction, H-2 and H-infinity optimal control, S-procedure and integral quadratic constraints, structured singular value and mu-synthesis, and Markovian jump systems; applications in control design. Prerequisite: ECE 515.

ME 562 Robust Adaptive Control credit: 4 Hours.

Mathematical foundation for synthesis and analysis of adaptive control systems: Lyapunov stability theory; methods of direct and indirect model reference adaptive control; recent methods, such as L1 adaptive control, that enable adaptive control with desired transient and steady-state performance specifications. Prerequisite: Any of ECE 486, ECE 515, ECE 528, GE 424, ME 460.

ME 570 Nonlinear Solid Mech Design credit: 4 Hours.

Optimality conditions; finite element methods; design sensitivity analysis; nonlinear analysis; transient analysis; thermo-mechanical solid mechanics. Prerequisite: One of AE 420, CEE 470, ME 471, TAM 470; TAM 445, TAM 551.

ME 586 Mechanics of MEMS credit: 4 Hours.

Mechanics and dynamics of microelectromechanical systems (MEMS); scaling laws in electrostatics, magnetics, and fluidics; analytical models for thin-film growth and etching; effect of surface tension in small dimensions in relations to stability of MEMS during web fabrication; size effects on mechanical properties of MEMS materials; equations of motion for MEMS, involving coupled elastic and electric fields that give rise to nonlinear dynamical behavior; Mathieu behavior and chaotic systems. Prerequisite: ME 485.

ME 590 Seminar credit: 1 Hour.

Presentation and discussion of significant developments in mechanical engineering. Approved for S/U grading only. May be repeated.

ME 591 Interest Group Seminar credit: 1 Hour.

Seminars on current topics in mechanical science and engineering. May be repeated in the same term if topics vary. May be repeated in separate terms.

ME 597 Independent Study credit: 1 to 4 Hours.

Independent study of advanced problems related to mechanical engineering. May be repeated in the same term or in separate terms if topics vary to a maximum of 12 hours. Prerequisite: Consent of instructor.

ME 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in mechanical engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

ME 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Media (MDIA)

MDIA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MDIA>)

Courses

MDIA 100 College of Media Orientation credit: 1 Hour.

College of Media Orientation is designed to build academic and social integrity and to give students the resources they need to be responsible members of the University of Illinois community who earn degrees in a timely manner.

MDIA 199 Special Topics credit: 1 to 3 Hours.

Subject offerings of new and developing areas of knowledge and practice in the fields of media. The course is intended to augment the existing curriculum. See Class Schedule or college course information for topics and prerequisites. Approved for letter and S/U grading. May be repeated in the same term to a maximum of 6 hours if topics vary; may be repeated in separate terms to a maximum of 12 hours if topics vary.

MDIA 223 Watching the Environment credit: 3 Hours.

This course examines how films portray the health environment and the need for environmental protection. The course focuses on series of questions including: To what extent does a film suggest that the world has environmental concerns? What are the constraints that narrative form, production routines, financing and distribution put on representing environmental problems and environmentalists? Is the information in the film to be trusted? In documentaries, are physical and social scientists' explanations of environmental problems and solutions reliable? What cues can we use from within and outside the film to evaluate the film for credibility? During the course participants will compare the science and economics of selected environmental issues with film presentations, examine what drives of environmental participation (and the limits of film in presenting science), and look at the constraints of producing special interest versus broad distribution films on presentations of the environment. Class includes viewing blockbuster, Oscar, and award-winning documentaries. Lecture attendance is mandatory. Same as NRES 223.

This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

MDIA 270 Introduction to Media Sales credit: 3 Hours.

This course is guided by theory related to persuasion and social influence as it explores prevalent inter-personal and business-focused communication styles, methods and techniques used in the media sales industry. The course will cover the entire media sales cycle, from planning, to research, to setting sales objectives/strategies/goals and then how to effectively negotiate, "pitch" and "close" the sale, and evaluate and measure the sale once it is completed. It will consist of class lectures, in-class activities, role-playing exercises and also include guest lectures brought in from the sales industry.

MDIA 290 Undergraduate Open Seminar credit: 1 to 3 Hours.

Experimental course on special topics pertinent to the disciplines studied within the College of Media. Topics will vary. Approved for letter and S/U grading. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary.

MDIA 299 Media Study Abroad credit: 0 to 18 Hours.

Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made upon the student's completion of the work. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 44 hours. Prerequisite: One year of residence at UIUC, good academic standing, and prior approval of the College of Media.

MDIA 320 Media Sales Management credit: 3 Hours.

This course addresses conceptual and methodological issues related to the management of sales within media organizations. Responsibilities, function and skills necessary to be an effective media sales manager are covered, including an evaluation of sales organization structures, recruiting, selecting, testing, and training of media salespeople. Related topics include compensation plans, controlling expenses, sales forecasting/projections, routing, quotas, ethics and motivation. It will consist of class lectures, in-class activities, role playing exercises and also include guest lecture from industry leaders/alumni with experience in media sales management. Prerequisite: MDIA 270 (Introduction to Media Sales).

MDIA 370 Advanced Media Sales credit: 3 Hours.

This course focuses on consultative and persuasive selling and interpersonal relationship building, with an emphasis on specific media vehicles (broadcast, print, digital, out-of-home, non-traditional, etc.). It will discuss how to be a successful media salesperson for each medium (listed above), including major account selling, value-added selling, coordination between salespeople and the firm's other functional areas, team selling, negotiating, communication styles, career management, and personal development. The course will also cover the relationship between advertising agencies, advertising clients and salespeople. It will include mock interviews, written sales proposals, and role-playing exercises that will facilitate application of effective media sales techniques. It will also feature exposure to media sales experts for each medium covered in class. Prerequisite: MDIA 270 (Introduction to Media Sales).

MDIA 380 21st Century Documentaries credit: 3 Hours.

Documentary has exploded in the past decade, with more being created, screened and watched than at any time in history. But what has this growth meant to documentary, and how has it impacted what we see on screen and how documentary stories are being told? We will examine the changes and trends taking place in film and television documentaries over the past decade. We will watch and analyze a variety of contemporary documentaries, examining some of the different stylistic, production, and story-telling methods that have developed over this time. If you enjoy watching documentaries and want to learn more about them, you will find this an enjoyable and thought-provoking course.

MDIA 390 Special Topics in Media credit: 1 to 3 Hours.

Special topics course focusing on cultural, economic, historical, political, and social themes and issues that influence or are influenced by the media. Topics will vary. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated for a maximum of 6 hours if topics vary. Prerequisite: One year of Media courses, Junior or senior standing in the College of Media, or consent of instructor.

MDIA 400 Special Topics credit: 1 to 3 Hours.

Varying topics including the cultural, social, historical, legal, economic, political, and other issues that influence or are influenced by Media. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary. Prerequisite: Previous classes in either AGCM, ADV, JOUR, or MACS.

MDIA 512 History of Libraries credit: 2 or 4 Hours.

Same as IS 512. See IS 512.

MDIA 524 Dev Psycholinguistics credit: 2 or 4 Hours.

Same as LING 524 and PSYC 524. See PSYC 524.

MDIA 525 Psycholinguistics credit: 2 or 4 Hours.

Same as LING 525 and PSYC 525. See PSYC 525.

MDIA 560 Feminist Media Studies credit: 4 Hours.

Addresses major areas of theoretical debate or interest in the broad topic of "Feminist Media Studies" and looks in depth at a number of theoretical issues which define it. Develops an understanding of historical, psychoanalytic, interpretive, and social scientific approaches to the study of film and television texts, their reception, and their production. Readings are extensive and directed toward illustrating the range of theoretical and empirical approaches applied to addressing questions of central interest in the field. Viewings will emphasize some lesser-known historical texts central to theoretical debates in the field. Viewings and readings are focused on "popular" film and television. Same as GWS 560.

MDIA 568 Political Economy of Comm credit: 4 Hours.

Analyzes the structure, policy, and behavior of such media of communication as newspapers, magazines, books, postal service, telegraph, telephone, broadcasting, and film; special emphasis on their relationships to the political order and the economy. Prerequisite: Consent of department.

MDIA 570 Popular Culture credit: 4 Hours.

Examines problems of cultural analysis related to the media of communications and the social implications of communications research.

MDIA 571 Proseminar I credit: 4 Hours.

Addresses the mass media of communications, their role as social institutions, and their control and support. Examines evolution of research on mass media content, audience, and effects. Prerequisite: Consent of department.

MDIA 572 Proseminar II credit: 4 Hours.

Addresses the problems of communications, including the individual as a communicating system, symbolic processes, analysis of messages, psycholinguistics, and language as social behavior. Prerequisite: Consent of department.

MDIA 573 Freedom of Expression credit: 4 Hours.

Examines the development of the Anglo-American press system and the idea of freedom of the press; explores contemporary mass media and their implications for freedom and democracy.

MDIA 575 Cultural Studies and Critical Interpretation credit: 4 Hours.

Same as EPS 575. See EPS 575.

MDIA 577 Philosophy of Technology credit: 4 Hours.

Introduces students to those thinkers who understand technology philosophically as a central component in modern culture. Examines major perspectives on the nature of technology, rooted in Norbert Weiner, Karl Marx, and Martin Heidegger. Links media technologies, information systems, and global communications background problems and basic issues to technology more generally. Develops instrumentalism, feminist and critical approaches, ethical concerns, and alternative technologies in the context of technology as a cultural activity.

MDIA 578 Communication Ethics credit: 4 Hours.

This course introduces the latest literature in, or directly relevant to, communication, media and information ethics. It examines current efforts in applied and professional ethics, feminist ethics, and social ethics to develop ethical models that are cross-cultural, gender inclusive and international. The major ethical issues are considered in such areas as global communication, new media technologies, information systems, news, and entertainment.

MDIA 580 Advanced Interpretive Methods credit: 4 Hours.

Same as SOC 580. See SOC 580.

MDIA 590 Special Topics credit: 2 to 8 Hours.

May be repeated in the same or in multiple semesters if topics vary.

MDIA 592 Quantitative Methods credit: 4 Hours.

Introduces the methods of empirical research in the behavioral sciences applicable to research problems in human communication, with emphasis on studies of mass communication. Lectures, readings, and laboratory practice.

MDIA 593 Qualitative Methods credit: 4 Hours.

Introduces qualitative concepts and strategies in the social sciences and humanities which apply to research problems in mass communications.

MDIA 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated to a maximum of 16 hours.

Media and Cinema Studies (MACS)

MACS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MACS>)

Courses

MACS 100 Intro to Popular TV & Movies credit: 3 Hours.

The goal of this course is for students to begin to develop a critical understanding of the role of popular movies and television in their own lives and in U.S. culture. The course looks at issues of the relationship of media to social violence, gender identities, sexual identities, adolescents, minority cultures, and the role of the U.S. media globally. It also considers some of the major media genres that characterize U.S. popular television and movies.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

MACS 101 Intro to the Media credit: 3 Hours.

Introduces students to core issues in communication, ranging from the role of language in human history to political questions posed by electronic and digital technologies. Exploring key contemporary problems through timely readings, students learn and write about how the media affect everyday life. Prerequisite: Freshman or sophomore standing.

This course satisfies the General Education Criteria for:

Advanced Composition

MACS 104 Intro to Film credit: 3 Hours.

Same as ENGL 104. See ENGL 104.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 117 Shakespeare on Film credit: 3 Hours.

Same as ENGL 117. See ENGL 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 166 Contemporary Media Literacy credit: 3 Hours.

Develops critical media production skills to assess the importance of new media in contemporary culture. The course emphasizes both social and technical aspects of media. As part of the course, students prepare their own media and evaluate current media literacy projects.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours in separate semesters if topics vary.

MACS 202 Social Aspects Info Tech credit: 3 Hours.

Same as INFO 202 and IS 202. See INFO 202.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

MACS 203 Contemporary Movies credit: 3 Hours.

Provides a critical context for recent international cinema by exploring several kinds of genres, aesthetics, and technologies. We will discuss transnational trends in cinema relating to the influence of other media such as gaming, social networking, and personal electronics, as well as consider impacts of economic structures of global filmmaking production and exhibition. We will view popular and art movies, and query longstanding categories such as the teen pic, "woman's" film, and documentary.

MACS 205 Introduction to Documentary credit: 3 Hours.

This course introduces students to one of the fastest growing areas in media today: the documentary. It's designed for students who want to expand their knowledge and appreciation of documentaries in all their forms. Using weekly in-class screenings, discussion, readings, and writing, students will examine a wide variety of documentaries, looking at their styles, purposes, and storytelling "voices", as well as learning the language and other fundamentals of documentary. We will also cover some of the basic methods involved in planning and creating a documentary. Please note: this is NOT a hands-on production course. Prerequisite: Sophomore standing or above required.

MACS 207 Indian Cinema in Context credit: 3 Hours.

Same as CWL 207. See CWL 207.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

MACS 211 Intro to African-American Film credit: 3 Hours.

Examination of the history, theory, and aesthetics of African-American filmmaking from the silent era to the present. Films are analyzed within their sociocultural contexts, with particular attention to how constructions of race, identity, and community interact with class, gender, and sexuality; and the link between film and other forms of Black expressive culture. The impact of African-American film on popular culture, links to the African Diaspora, and relations with other communities of color will also be discussed. Same as AFRO 211.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

MACS 224 Sportsmedia Technology & Culture credit: 3 Hours.

This course is designed for students who are curious about (a) how new technologies are changing sportsmedia cultures, and (b) the kinds of knowledges and skills needed to effectively engage with this powerful cultural and economic industry. We'll use four primary focal points (ESPN, Sport Fandom, Action-Sports, Data Production / Smart Stadiums) to help us understand today's sportsmedia cultural industry's challenges and possibilities, and the kinds of challenges and possibilities that the sportsmedia cultural industry creates for society. We'll also use our course focal points and related industry websites to concretize the key concepts (drawn from theoretical readings and applied studies in media studies, sociology, sport studies, and technology studies).

MACS 227 Studies in Black Television credit: 3 Hours.

Same as AFRO 227. See AFRO 227.

MACS 250 Latina/os on the Bronze Screen credit: 3 Hours.

Same as LLS 250. See LLS 250.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

MACS 261 Survey of World Cinema I credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from its origins through the coming of sound; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 262 Survey of World Cinema II credit: 3 Hours.

Survey of the development of equipment, techniques, and themes of the cinema from the coming of sound to the present; lectures, discussions, and showings of selected films.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MACS 264 Creative and Information Economies credit: 4 Hours.

An introduction to the political economy of the media in the U.S. The purpose of the class is to acquaint students with a core understanding of how the media system operates, and with what effects, in a capitalist society. The course examines the role of advertising, public relations, corporate concentration, and government regulation upon journalism, entertainment, culture, and participatory democracy. The class also examines issues such as the Internet, globalization, and public broadcasting.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

MACS 273 American Cinema Since 1950 credit: 3 Hours.

Same as ENGL 273. See ENGL 273.

MACS 275 Am Indian and Indigenous Film credit: 3 Hours.

Same as AIS 275 and ENGL 275. See AIS 275.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - US Minority

MACS 295 Intro Media/Cinema Topics credit: 3 Hours.

Introduction to the study of special topics in media and cinema studies, including cultural, social, historical, economic, and/or political issues in media and/or cinema. Topics vary but may include: genres, stars, historical movements, thematic studies, television, convergence culture, new media. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary.

MACS 300 Topics in Film and History credit: 3 Hours.

Same as HIST 300. See HIST 300.

MACS 317 Media History credit: 3 Hours.

Presents the nature and development of communication systems; history of communication media; history of journalism, advertising, and broadcasting; and communications in the modern world.

MACS 320 Popular Culture credit: 3 Hours.

Examines the critical literature on mass media entertainment; reviews significant contemporary issues and develops perspectives for understanding popular culture.

MACS 321 Film Culture credit: 3 Hours.

Introduces students to key issues of, major theoretical approaches to, and current debates about the cultural function of films. Course addresses theories of spectatorship, the politics of pleasure, the culture of entertainment, and the cinematic construction of race, class, and gender.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 322 Politics and the Media credit: 3 Hours.

Same as CMN 325 and PS 312. See PS 312.

MACS 323 Studies Film/Media Production credit: 1 to 3 Hours.

Provides analytical framework for pursuing film/media production. Emphasizes critical analysis of various aspects of production: e.g., scriptwriting, storyboarding, cinematography, editing, set and costume design, location and studio shooting, sound. Covers theories of representation, narrative, meaning-making, experimentation, and audience in relation to film/media production practices. Does not, however, teach students how to do film and media production (e.g., how to work a camera, etc.). Therefore, students must come to the course with experience in film and/or media production (can be self-taught). Both individual and group projects are encouraged. Students should expect to work as crew for other students in class. Culminates in a public screening at which students present an analysis of their own project—both the process and the finished product. To apply for course, students (individually or in groups) must propose an idea or concept for a film/media project they would like to produce during the class. May be repeated in separate terms to a maximum of 6 hours. May be repeated by students who wish to pursue a longer project in two consecutive semesters (may include summer). Students may not repeat the course to pursue separate projects. Prerequisite: Consent of instructor.

MACS 326 New Media, Culture & Society credit: 3 Hours.

Digital media is an immensely pervasive and powerful form of communication that despite its rapid growth has yet to reach most of the world's population. This lecture-based survey course for undergraduates traces the history and formation of personal computing and the Internet, the development of virtual communities and virtual worlds, evolving forms of digital representation and communication, digital visual cultures, features of new media industries, and the rise of participatory media. Evaluation and assessment is based on written exams, quizzes, class discussion in section, and practice-based assignments using new media technologies such as wikis, blogs, games, and digital video. Emphasis is on mastering key concepts of digital media through theory and history, and on critical discussion of distinctive features of digital media objects. Lectures and discussion sections are held in computer-equipped classrooms. Same as INFO 326.

MACS 331 Media and Democracy credit: 3 Hours.

Studies the philosophical bases of the functions and the responsibilities of mass communications.

MACS 335 Film, TV, and Gender credit: 3 Hours.

Same as GWS 335. See GWS 335.

MACS 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, INFO 345, and SOC 345. See GWS 345.

MACS 346 Case Study: Endless Summer credit: 3 Hours.

Same as KIN 346 and RST 346. See KIN 346.

MACS 351 Social Aspects of Media credit: 3 Hours.

Explores media structures in relation to cultural content and social functions; examines problems of life and society as treated in mass-produced communications. Same as SOC 351.

MACS 352 Attitude Theory and Change credit: 3 Hours.

Same as PSYC 352 and SOC 300. See PSYC 352.

MACS 356 Sex & Gender in Popular Media credit: 3 Hours.

Examines the notion that the mass media influence our development as gendered individuals, looking at those who argue for and against this notion. Considers different forms of feminist theory applied to the study of mass media, the history and scholarly criticisms of the media and their portrayal of women, and feminist attempts to create alternatives to mainstream media images. Throughout, the course considers representation of minorities in the dominant media and examines newly created alternative representations. Same as GWS 356.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

MACS 361 Film Theory and Criticism credit: 3 Hours.

Study of major aesthetic and critical theories about film; study of theory and practice of film criticism.

MACS 364 Topics in Media Business credit: 3 Hours.

Addresses the business, industry, and economic implications of the interaction of Internet, television, radio, film, and print outlets through digitization-driven platform and interactive technologies. Explores historical and emergent business models, ownership and work patterns, and investment arrangement related to media convergence. Investigates novel forms of individual and collective labor structures and globally distributed modes of production and consumption. Includes attention to economic and scholarly models seeking to analyze media business structures. Specific topics vary by semester, but may include Google, Disney, and Hollywood studio system, or activist media organizations. May be repeated for a maximum of 6 hours if topics vary.

MACS 365 Asian American Media and Film credit: 3 Hours.

Same as AAS 365. See AAS 365.

MACS 373 Special Topics in Film Studies credit: 3 Hours.

Same as ENGL 373. See ENGL 373.

MACS 375 Latina/o Media in the US credit: 3 Hours.

Examines the portrayal and participation of Latinas and Latinos in the U.S. media using a variety of interdisciplinary approaches. Addresses historical and political movements that have been critical to Latina/Latino print, broadcast, and electronic communication within the broader context of cultural diversity. Same as LLS 375.

MACS 377 Global Communications credit: 3 Hours.

Introduces students to the multiple dimensions of cross-national and comparative communications. Specific topics will vary according to instructor's focus, but may include human dimensions of global communication, intercultural communication, media impact, structure and processes of institutional communication (i.e. propaganda, diplomacy).

MACS 381 Black Women and Film credit: 3 Hours.

Same as AFRO 381. See AFRO 381.

MACS 382 French & Comparative Cinema I credit: 3 Hours.

Same as CWL 387, FR 387, and HUM 387. See FR 387.

MACS 383 French & Comparative Cinema II credit: 3 Hours.

Same as CWL 389, FR 389, and HUM 389. See FR 389.

MACS 389 International Communications credit: 3 Hours.

Provides an interdisciplinary approach to international communications; its structure and content; the role of international communications in conflict and conflict resolution; the semantics of international communication; the technical and economic aspects of international mass communications; and government-industry relations in communications. Same as PS 389.

MACS 391 Individual Study credit: 0 to 3 Hours.

Individual research and exploration of media and cinema studies topics under the guidance of a faculty advisor. May be repeated in the same or in multiple semesters, if topics vary. Prerequisite: Consent of instructor.

MACS 395 Special Media/Cinema Topics credit: 3 Hours.

Cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include: genres, historical movements, thematic studies, television, convergence culture, new media. May be repeated to a maximum of 6 hours if topics vary.

MACS 408 TV Studies credit: 3 or 4 Hours.

Examines factors reshaping TV and its relationship to culture, including genres, industry practices (advertising, production, distribution), new media technologies (YouTube, Twitter, and newer developments), and computer gaming. Analyzes places/spaces of television, mobility, surveillance, television as instruction/guide (dating, cooking, fashion), citizenship, consumption, and TV in everyday life. Focuses on contemporary aspects of TV, with some attention to earlier forms and practices of television. Students required to view and analyze some television programs outside of class. 3 undergraduate hours. 4 graduate hours.

MACS 410 Media Ethics credit: 3 or 4 Hours.

Surveys the major ethical problems in news, advertising, publications and entertainment media; includes case studies and moral reasoning on confidentiality, privacy, conflicts of interest, deception, violence, and pornography. 3 undergraduate hours. 4 graduate hours.

MACS 419 Russian & East European Film credit: 3 or 4 Hours.

Same as SLAV 419. See SLAV 419.

MACS 423 Language Acquisition credit: 3 or 4 Hours.

Same as LING 423 and PSYC 423. See PSYC 423.

MACS 425 Intro to Psycholinguistics credit: 3 or 4 Hours.

Same as LING 425. See LING 425.

MACS 432 Commodifying Difference credit: 3 or 4 Hours.

Same as AAS 435, AFRO 435, GWS 435, and LLS 435. See LLS 435.

MACS 461 Politics of Popular Culture credit: 3 or 4 Hours.

Same as AIS 461. See AIS 461.

MACS 464 Film Festivals credit: 3 or 4 Hours.

Examines the history and significance of film festivals: What they mean for the film industry (marketing, distribution, production), audiences (both at the festival and beyond), film history, and the evolution of filmmaking. Covers specific local, national, and international festivals including festivals focused on particular issues (e.g., Chicago International Children's Film Festival, San Francisco International Asian American Film Festival, Miami Gay and Lesbian Film Festival, and our own local IUB 48-Hour Film Contest). Coordinated with Roger Ebert's Film Festival (which is held in Champaign every April) including internship/volunteer opportunities, screenings, and meetings with guests. Class culminates with a UIUC student film festival, organized, judged, and sponsored by the class. 3 undergraduate hours. 4 graduate hours.

MACS 466 Japanese Cinema credit: 3 or 4 Hours.

Examines the influence of Japan's traditional aesthetics on its cinema and surveys its major film movements, genres, and directors. Same as EALC 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in the College of Media or East Asian Languages and Cultures, or consent of instructor.

MACS 470 Topics in Italian Cinema credit: 3 or 4 Hours.

Same as ITAL 470. See ITAL 470.

MACS 490 Green Screen: Film and Nature credit: 3 or 4 Hours.

Same as EURO 489 and SCAN 490. See SCAN 490.

MACS 492 Scandinavian Cinema credit: 3 or 4 Hours.

Same as SCAN 492. See SCAN 492.

MACS 493 German Cinema I credit: 3 Hours.

Same as GER 493. See GER 493.

MACS 494 German Cinema II credit: 3 Hours.

Same as GER 494. See GER 494.

MACS 495 Internship Seminar credit: 0 to 1 Hours.

Seminar based on internship experience. Offered for College of Media students who complete an approved internship. 0 to 1 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 undergraduate hours. May be repeated in separate terms to a maximum of 3 undergraduate hours. Prerequisite: Consent of instructor.

MACS 496 Advanced Media/Cinema Topics credit: 3 or 4 Hours.

Advanced study of cultural, social, historical, economic, and/or political issues in media and/or cinema; topics vary but may include national and transnational cinemas, directors, genres, historical movements, social and political movements, thematic studies, television, convergence culture, new media. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or separate terms to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: One College of Media course or consent of instructor.

MACS 498 Senior Seminar credit: 3 Hours.

Seminar and tutorial in selected Media and Cinema Studies topics. 3 undergraduate hours. No graduate credit. May be repeated in the same or subsequent semesters to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies major, or consent of instructor.

MACS 499 Senior Thesis credit: 3 Hours.

Individual research for majors in Media and Cinema Studies leading to the completion of a thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing, a declared Media and Cinema Studies Major, and consent of advisor.

MACS 503 Historiography of Cinema credit: 4 Hours.

Seminar on historical perspectives on cinema as an institution, a body of signifying practices, a product to be consumed, a phenomenon of modernity, and a cultural artifact, and on cinema in relation to other screen media. Same as CWL 503 and ENGL 503.

MACS 504 Theories of Cinema credit: 4 Hours.

Seminar on influential theories and accompanying debates about the textual/extra-textual mechanisms and cultural/political impact of cinema and related screen media. Same as CWL 504 and ENGL 504.

Medical Scholars Program (MSP)

MSP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MSP>)

Courses

MSP 600 MSP: Pre-M1 Completion credit: 0 to 20 Hours.

MSP 601 MSP: Post-M1 Completion credit: 0 to 20 Hours.

MSP 620 Nursing Holding Sections credit: 0 Hours.

Medieval Studies (MDVL)

MDVL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MDVL>)

Courses

MDVL 111 Ancient to Medieval Art credit: 4 Hours.

Same as ARTH 111. See ARTH 111.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

MDVL 122 Swords, Sorcery & Sex: The Middle Ages in Popular Culture credit: 3 Hours.

Same as ENGL 122. See ENGL 122.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

MDVL 201 Medieval Lit and Culture credit: 3 Hours.

Same as CWL 253 and ENGL 202. See ENGL 202.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

Cultural Studies - Western

MDVL 216 Legends of King Arthur credit: 3 Hours.

Same as CWL 216 and ENGL 216. See ENGL 216.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

Cultural Studies - Western

MDVL 222 Medieval Art credit: 3 Hours.

Same as ARTH 222. See ARTH 222.

MDVL 231 Northern Renaissance Art credit: 3 Hours.

Same as ARTH 231. See ARTH 231.

MDVL 240 Italy Middle Ages & Renaiss credit: 3 Hours.

Same as CWL 240 and ITAL 240. See ITAL 240.

This course satisfies the General Education Criteria for: Humanities - Lit Arts

MDVL 245 Women & Gender Pre-Mod Europe credit: 3 Hours.

Same as GWS 245 and HIST 245. See HIST 245.

This course satisfies the General Education Criteria for: Humanities - Hist Phil

Cultural Studies - Western

MDVL 247 Medieval Europe credit: 3 Hours.

Same as HIST 247. See HIST 247.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

MDVL 251 Viking Mythology credit: 3 Hours.

Same as CWL 251, REL 251, and SCAN 251. See SCAN 251.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

MDVL 252 Viking Sagas in Translation credit: 3 Hours.

Same as CWL 252 and SCAN 252. See SCAN 252.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

MDVL 255 British Isles to 1688 credit: 3 Hours.

Same as HIST 255. See HIST 255.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

MDVL 344 Medieval Jewish Thought credit: 3 Hours.

Same as REL 344. See REL 344.

MDVL 345 Medieval Civilization credit: 3 Hours.

Same as HIST 345 and REL 345. See HIST 345.

MDVL 346 The Age of the Renaissance credit: 3 Hours.

Same as HIST 346 and REL 346. See HIST 346.

MDVL 403 European Education to 1600 credit: 2 to 4 Hours.

Same as EPS 403 and HIST 440. See EPS 403.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Western

MDVL 407 Introduction to Old English credit: 3 or 4 Hours.

Same as ENGL 407. See ENGL 407.

MDVL 410 Topics in Medieval Brit Lit credit: 3 or 4 Hours.

Same as CWL 417 and ENGL 412. See ENGL 412.

MDVL 411 Chaucer credit: 3 or 4 Hours.

Same as ENGL 411. See ENGL 411.

MDVL 412 Medieval Architecture credit: 3 Hours.

Same as ARCH 412. See ARCH 412.

MDVL 413 Dante credit: 3 or 4 Hours.

Same as CWL 413 and ITAL 413. See ITAL 413.

MDVL 414 Petrarch & Boccaccio credit: 3 or 4 Hours.

Same as CWL 414 and ITAL 414. See ITAL 414.

MDVL 415 Classical Rhetorics credit: 3 or 4 Hours.

Same as CLCV 415 and CMN 415. See CMN 415.

MDVL 417 History of the French Language credit: 3 or 4 Hours.

Same as FR 417. See FR 417.

MDVL 420 Masterpieces Renaiss Lit credit: 3 or 4 Hours.

Same as CWL 420 and ITAL 420. See ITAL 420.

MDVL 423 Romanesque Art credit: 3 or 4 Hours.

Same as ARTH 423. See ARTH 423.

MDVL 424 Gothic Art credit: 3 or 4 Hours.

Same as ARTH 424. See ARTH 424.

MDVL 431 Topics: Northern Art 1300-1500 credit: 3 or 4 Hours.

Same as ARTH 431. See ARTH 431.

MDVL 433 Fifteenth-Century Italian Art credit: 3 or 4 Hours.

Same as ARTH 433. See ARTH 433.

MDVL 440 Early Christian Thought credit: 3 or 4 Hours.

Same as REL 440. See REL 440.

MDVL 443 Byzantine Empire AD 284-717 credit: 3 or 4 Hours.

Same as HIST 443. See HIST 443.

MDVL 444 Medieval England credit: 2 to 4 Hours.

Same as HIST 445. See HIST 445.

MDVL 460 Medieval Latin credit: 3 or 4 Hours.

Same as LAT 460. See LAT 460.

MDVL 470 Middle Ages to Baroque credit: 3 Hours.

Same as GER 470. See GER 470.

MDVL 500 Seminar in Medieval Studies credit: 4 Hours.

Team-taught, interdisciplinary seminar on varying topics in Medieval Studies drawing on faculty from UIUC and invited scholars from other universities. Approved for letter and S/U grading. May be repeated to a maximum of 12 hours.

MDVL 501 Topics in Medieval Studies credit: 1 to 4 Hours.

Experimental and Temporary Courses. May be repeated in separate terms as topics vary.

MDVL 504 Genesis in History credit: 4 Hours.

Same as REL 504. See REL 504.

MDVL 505 Old Norse-Icelandic I credit: 4 Hours.

Same as SCAN 505. See SCAN 505.

MDVL 506 Old Norse-Icelandic II credit: 4 Hours.

Same as SCAN 506. See SCAN 506.

MDVL 508 Beowulf credit: 4 Hours.

Same as ENGL 508. See ENGL 508.

MDVL 511 Chaucer credit: 4 Hours.

Same as ENGL 511. See ENGL 511.

MDVL 512 Seminar in Medieval Arch credit: 3 Hours.

Same as ARCH 512. See ARCH 512.

MDVL 514 Seminar in Medieval Literature credit: 4 Hours.

Same as ENGL 514. See ENGL 514.

MDVL 515 Middle High German credit: 4 Hours.

Same as GER 515. See GER 515.

MDVL 522 Studies in Medieval Art credit: 4 Hours.

Same as ARTH 522. See ARTH 522.

MDVL 530 Old High German credit: 4 Hours.

Same as GER 530. See GER 530.

MDVL 540 Seminar in N. Renaissance Art credit: 4 Hours.

Same as ARTH 531. See ARTH 531.

MDVL 542 Problems in Medieval History credit: 4 Hours.

Same as HIST 542. See HIST 542.

MDVL 543 Seminar in Medieval History credit: 4 Hours.

Same as HIST 543. See HIST 543.

MDVL 570 Seminar Old French Literature credit: 4 Hours.

Same as FR 570. See FR 570.

MDVL 571 Medieval German Studies credit: 4 Hours.

Same as GER 571. See GER 571.

Microbiology (MICR)

MICR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MICR>)

Courses

MICR 590 Individual Topics credit: 1 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

MICR 595 Microbiology Graduate Seminar credit: 0 to 1 Hours.

Required of all graduate students whose major is microbiology. Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

MICR 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Military Science (MILS)

MILS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MILS>)

Courses

MILS 101 Introduction to Leadership credit: 2 Hours.

This course introduces you to the personal challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

MILS 102 Introduction to the Profession of Arms credit: 2 Hours.

This course introduces you to the professional challenges and competencies that are needed for effective execution of the profession of arms and Army communication. Through this course, you will learn how Army ethics and values shape the U.S. Army and the specific ways that these factors are inculcated into Army culture. You will gain a better understanding of the Laws of the Land Warfare and the Principles of War and how they affect and Army Leader's decision making process. You will understand the fundamentals of military and USGS map reading including methods such as intersection and resection, terrain association, and orienteering.

MILS 112 Leadership Laboratory credit: 0 Hours.

Introductory practical application of military skills and leadership; includes basic military mountaineering and rappelling, first aid, individual marching and weapons familiarization. Field trip may be required. Approved for S/U grading only. May be repeated.

MILS 114 Leadership Laboratory credit: 0 Hours.

Continuation of MILS 112 to include actual firing of weapons. Field trip may be required. Approved for S/U grading only. May be repeated.

MILS 120 Intro to US Armed Forces credit: 3 Hours.

Surveys the four major branches of the United States military (Army, Navy, Marines, and Air Force) and their historical development into Professions of Arms. Topics include historical surveys of each branch highlighting key historical developments, organization, structure and customs. Other topics include a discussion of the United States National Command Authority, United States joint military operations and structure, the relationship of the United States Military with its civilian constituency and a survey of emerging Department of Defense issues. Same as AFAS 120 and NS 120.

This course satisfies the General Education Criteria for: Humanities - Hist Phil

MILS 201 Individual Leadership Studies credit: 2 Hours.

Establishes a foundation in military land navigation and offensive tactics; Explores the dimensions of creative leadership strategies and styles by examining team dynamics and leadership theories; also explores military mountaineering. Prerequisite: Class is only available to students who have less than 60 credit hours.

MILS 202 Leadership and Teamwork credit: 2 Hours.

Fundamentals of rifle marksmanship. Systematic study of the maintenance, operation, and employment of the U.S. Army's primary individual weapon system, the M16 rifle. Also includes instruction on weapons safety, military marksmanship techniques and tactics, an introduction to risk assessment and management, and an integration of a live-fire M16 range. Includes field trips. Prerequisite: Only available to students who have less than 60 credit hours.

MILS 212 Leadership Laboratory credit: 0 Hours.

Intermediate level practical application of military skills and leadership; includes mountaineering and rappelling, first aid, small unit marching, weapons firing, and physical fitness. Field trip required. Approved for S/U grading only. May be repeated.

MILS 214 Leadership Laboratory credit: 0 Hours.

Continuation of MILS 212 to include military radio communication procedures and small unit tactics. Field trip required. Approved for S/U grading only. May be repeated.

MILS 301 Leadership and Problem Solving credit: 3 Hours.

Fundamentals of small unit military operations including operations planning, military orders, troop leading procedures, small unit offensive and defensive operations. Includes field practical application. Prerequisite: Successful completion of MILS 101, MILS 102, MILS 201 and MILS 202 is required to enroll in MILS 301.

MILS 302 Leadership and Ethics credit: 3 Hours.

Principles of leadership including management practices and their relationship to leadership, problem solving, decision making, human behavior and motivation, superior-subordinate relations, and leadership problems in the military environment. Includes field practical application. Prerequisite: Successful completion of MILS 301 is required to enroll in MILS 302.

MILS 312 Leadership Laboratory credit: 0 Hours.

Advanced level practical application of military skills and leadership with emphasis on the student's ability to direct and supervise others; includes advanced land navigation, advanced first aid, platoon and company drill and ceremonies, and advanced communications procedures. Field trip required. Approved for S/U grading only. May be repeated.

MILS 314 Leadership Laboratory credit: 0 Hours.

Continuation of MILS 312 to include small unit tactics and patrolling techniques. Field trip required. Approved for S/U grading only. May be repeated.

MILS 322 Leadership Laboratory credit: 0 Hours.

Unique opportunity for advanced course students to fully plan, execute, and supervise the military training and activities of other military science students. Emphasis is on leadership, organizing and managing activities, decision making, and effective instructional techniques. Field trip required. Approved for S/U grading only. May be repeated.

MILS 324 Leadership Laboratory credit: 0 Hours.

Continuation of MILS 322. Field trip required. Approved for S/U grading only. May be repeated.

MILS 325 Independent Study credit: 1 or 2 Hours.

Supervised reading and research in a selected area of Military Science. May be repeated to a maximum of 6 hours.

MILS 341 Leadership and Management credit: 3 Hours.

Fundamentals of military law including Law of Land Warfare, the application of federal law to the military, and the military justice system. Examines ethics, values, and professional standards through case studies. Includes introductory instruction on training management. Prerequisite: Successful completion of MILS 301 and MILS 302 is required to enroll in MILS 341.

MILS 342 Officership credit: 3 Hours.

Basic examination of all military management systems: personnel, supply, logistics, training, maintenance, finance, and administration. Includes instruction on military administrative skills - written and verbal communications, meeting management, and briefing techniques. Discusses motivation and counseling techniques. Basic instruction on Army environmental protection policies. Prerequisite: Successful completion of MILS 341 required to enroll in MILS 342.

Modern Greek (GRKM)

GRKM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/GRKM>)

Courses

GRKM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated in separate terms.

GRKM 201 Elementary Modern Greek I credit: 5 Hours.

Develops elementary proficiency in spoken and written Modern Greek, and introduces elements of cultural knowledge. Familiarizes beginning students with the Greek alphabet and modern Greek pronunciation rules, and introduces Modern Greek morphology and syntax. Emphasizes listening comprehension, reading skills, and basic conversational skills. Online language laboratory and internet assignments required. Same as GRK 251.

GRKM 202 Elementary Modern Greek II credit: 5 Hours.

Develops elementary proficiency in spoken and written Modern Greek, including familiarity with elements of cultural knowledge and Modern Greek morphology and syntax. Emphasizes listening comprehension, reading skills, writing and conversational abilities. Online language laboratory and internet assignments required. Same as GRK 252. Prerequisite: GRKM 201.

GRKM 403 Intermediate Modern Greek I credit: 4 Hours.

Advances students' knowledge of Modern Greek grammar and vocabulary and enables them to converse in Modern Greek by exposing them to different uses of Modern Greek in day-to-day communication, and to expand their knowledge of Modern Greek culture. Online language laboratory and internet assignments required. Same as GRK 403. 4 undergraduate hours. 4 graduate hours. Prerequisite: GRKM 202 or consent of the instructor.

GRKM 404 Intermediate Modern Greek II credit: 4 Hours.

Consolidates students' knowledge of Modern Greek grammar and vocabulary and enables them to converse in Modern Greek by exposing them to different uses of Modern Greek in day-to-day communication. Also offers an introduction to aspects of Modern Greek literature. In addition to listening comprehension and reading skills, the course emphasizes writing and conversational abilities. Online language laboratory and internet assignments required. Same as GRK 404. 4 undergraduate hours. 4 graduate hours. Prerequisite: GRKM 403 or consent of instructor.

GRKM 453 Advanced Modern Greek I credit: 3 Hours.

Practice to enable students to attain conversational fluency and to become independent users of the language who deal effectively and with a good deal of accuracy with familiar communication situations. 3 undergraduate hours. 3 graduate hours. Prerequisite: GRKM 404 or consent of instructor.

GRKM 454 Advanced Modern Greek II credit: 4 Hours.

Continued practice to enable students to improve their fluency and use Modern Greek effectively in a variety of contexts. 4 undergraduate hours. 4 graduate hours. Offered Spring terms only. Prerequisite: GRKM 453 or consent of instructor.

Molecular and Cell Biology (MCB)

MCB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MCB>)

Courses

MCB 100 Introductory Microbiology credit: 3 Hours.

Introduction to the principal activities and properties of microorganisms, including bacteria, yeasts, molds, and viruses; consideration of the role of natural processes, such as photosynthesis; and man's use and control of microorganisms in the production of antibodies and vaccines in industrial fermentations, in sanitation and public health, and in agriculture. Credit is not given for both MCB 100 and MCB 300. Prerequisite: There are no prerequisites for MCB 100, but some chemistry is recommended. This course satisfies the General Education Criteria for: Nat Sci Tech - Life Sciences

MCB 101 Intro Microbiology Laboratory credit: 2 Hours.

Laboratory introduction to the techniques employed in the investigation of microbial activities and properties; experiments designed to familiarize the student with the handling, identification, and characterization of microorganisms and their activities, particularly those of interest to man. Credit is not given for both MCB 101 and MCB 301. Prerequisite: Credit or concurrent registration in MCB 100.

MCB 150 Molec & Cellular Basis of Life credit: 4 Hours.

Introductory course focusing on the basic structure, metabolic, and molecular processes (including membranes, energy metabolism, genes) common to all cells. Emphasis on unique properties that differentiate the major sub-groups of organisms (Archaea, Bacteria, plants, and animals), and will discuss how cells are integrated into tissues and organs in multicellular organisms.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

MCB 151 Molec & Cellular Laboratory credit: 1 Hour.

Introductory laboratory course focusing on basic techniques in molecular and cellular biology. Credit is not given for MCB 151 for students majoring in Molecular and Cellular Biology, or Integrative Biology; Credit is not given for both MCB 151 and MCB 251. Prerequisite: Concurrent enrollment in MCB 150.

MCB 170 Society and the Brain credit: 3 Hours.

Presents recent findings concerning the brain-society interaction. The facts will span many levels, from molecular and cellular interactions, to the functions of specific brain regions, and on to the behaviors of individuals, groups and societies. Intended to bring a broad range of neurobiological data and ideas into an interesting and relevant context. This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

MCB 180 Human Reproduction & Society credit: 3 Hours.

Lectures and discussions on topics in human reproduction where technological and clinical advances are having economic, social, and ethical consequences.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

MCB 198 Internship credit: 0 Hours.

Full-time or part-time internship at another University or an off-campus medical facility, research institute or other approved institution. Approved for S/U grading only. May be repeated. Prerequisite: For MCB and Biochemistry majors only.

MCB 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 10 hours.

MCB 215 Foundation in Mol & Cell Bio credit: 3 Hours.

Online course that will provide transfer students with the essential bases in Molecular and Cellular Biology needed to succeed in the MCB core curriculum, when entering it at the sophomore level. Students will be exposed to the major concepts and the experimental aspects of MCB and be presented with an integrated view of a cell and its inner workings. In addition, a strong peer mentoring program will help students transitioning from their previous institutions by introducing them to the complex setting of a large undergraduate campus. Prerequisite: Successful completion of two semesters of college biology. Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent, or consent of instructor.

MCB 244 Human Anatomy & Physiology I credit: 3 Hours.

Organ system biology with an emphasis on normal human anatomy and physiology, physiological processes and associated disease processes of the following systems; skeletal, muscle, nervous, sensory, and endocrine. Prerequisite: Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 245 Human Anat & Physiol Lab I credit: 2 Hours.

Laboratory exploration of normal human anatomy and physiology and relevant disease processes for the following systems: tissue, skeletal, nervous, muscular, sensory, and endocrine. Previously dissected human cadavers are an important part of the learning experience in this course, but students will not dissect human cadavers. Neither animal dissection or animal use are elements of this course. Prerequisite: Credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 246 Human Anatomy & Physiology II credit: 3 Hours.

Organ system biology with an emphasis on normal human anatomy and physiology, physiological processes and associated disease processes of the following systems: digestion, cardiovascular, respiratory, renal, and reproductive. Prerequisite: MCB 244 and credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent or consent of instructor.

MCB 247 Human Anat & Physiol Lab II credit: 2 Hours.

Laboratory exploration of normal human anatomy and physiology and relevant disease processes for the following systems: digestive, cardiovascular, respiratory, renal, and reproductive. Previously dissected human cadavers are an important part of the learning experience in this course, but students will not dissect human cadavers. Neither animal dissection or animal use are elements of this course. Prerequisite: MCB 245 and credit or concurrent enrollment in CHEM 101, CHEM 102, or equivalent; or consent of instructor.

MCB 250 Molecular Genetics credit: 3 Hours.

Fundamentals of molecular biology including structure of DNA, RNA and proteins, mechanisms of DNA replication, transcription and translation, gene organization, genetic variation and repair, and regulation of gene expression in Bacteria, and Eukarya. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: MCB 150, CHEM 102 and CHEM 104, or equivalents or consent of instructor.

MCB 251 Exp Techniqs in Molecular Biol credit: 2 Hours.

Laboratory course emphasizing a range of molecular biology questions, and the experimental approaches and methodologies needed to answer these questions. Lectures will accompany labs to explain theoretical background and experimental rationale. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Credit is not given for both MCB 251 and MCB 151. Prerequisite: Concurrent or prior enrollment in MCB 250 or consent of instructor.

MCB 252 Cells, Tissues & Development credit: 3 Hours.

Functional organization and physiology of cells and tissues, including cellular signaling, cellular interactions, and developmental processes. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Prerequisite: MCB 250 or equivalent with consent of instructor.

MCB 253 Exp Techniqs in Cellular Biol credit: 2 Hours.

Laboratory course emphasizing experimental techniques in cellular biology, cellular physiology, and developmental biology. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. Credit is not given for both MCB 253 and MCB 151. Prerequisite: Concurrent or prior enrollment in MCB 252 or consent of instructor.

MCB 270 Medical Genetics credit: 3 Hours.

Addresses key issues in medical genetics, defined as human genetics for pre-health care professionals. The course covers basic principles of medical ethics, modes of inheritance, the molecular basis of genetic disorders, treatment approaches, gene therapy and emerging technologies like whole genome sequencing. Prerequisite: MCB 252 or equivalent or consent of instructor.

MCB 290 Undergraduate Research credit: 1 to 5 Hours.

Students assist in and /or conduct research under faculty supervision in an MCB research laboratory. The topics and nature of the work will vary but will be defined as work conducted in MCB research laboratories. For each hour of course credit in fall and spring terms, the student will be expected to complete 5 hours of work in the lab as directed. 75-80 total hours would be the expectation for 1 credit hour during 15-16 week terms. May be repeated to a maximum of 10 hours. Prerequisite: Consent of instructor.

MCB 291 Undergraduate Research Abroad credit: 1 to 5 Hours.

Students engage in research under faculty supervision at a location outside of the United States. Topics and precise nature of assistance to be determined by MCB faculty in consultation with faculty at the institution. May be repeated in separate terms up to 10 hours. Prerequisite: Consent of MCB faculty who has approved the proposed research plan; consent of faculty member at institution abroad who will be supervising the work and has approved the proposed research plan; evidence of adequate preparation for such study; consent of School of MCB. Not available to freshman.

MCB 297 MCB Honors Discussion credit: 1 Hour.

Honors discussion section associated with MCB 250, MCB 252, and MCB 354. Concurrent enrollment in the appropriate lecture course is required. May be repeated in separate terms to a maximum of 3 hours.

MCB 298 MCB Honors Lab Discussion credit: 1 Hour.

Discussion section associated with the Honors lab sections of MCB 251 and MCB 253. Concurrent enrollment in the appropriate Honors lab section is required. May be repeated in separate terms to a maximum of 2 hours.

MCB 299 MCB Merit Program Discussion credit: 1 Hour.

Provides the extra earned credit hours for students enrolled in the Merit Program in MCB 250, MCB 252, or MCB 354. Approved for letter and S/U grading. May be repeated up to 6 hours in a semester, to a maximum of 10 total hours. Prerequisite: Consent of instructor.

MCB 300 Microbiology credit: 3 Hours.

Emphasizes fundamental concepts of microbiology, including nutrition, physiology, genetics, molecular biology, ecology and evolution of microorganisms, and their role in nature, human health and disease. Credit is not given for both MCB 300 and MCB 100. Prerequisite: MCB 250 and credit or concurrent registration in MCB 252 or consent of instructor.

MCB 301 Experimental Microbiology credit: 3 Hours.

Laboratory emphasizing the fundamentals of microbiology. Topics include growth, isolation, and identification of bacteria; restriction endonuclease analysis of DNA, genetic cloning, and gene transfer. Computer methods are used for the identification of microorganisms and for the analysis of recombinant DNA molecules. Prerequisite: MCB 250 and 251 and credit or concurrent registration in MCB 300, or consent of instructor.

MCB 314 Introduction to Neurobiology credit: 3 Hours.

Introduction to functional and organizational principles of the mammalian nervous system. Topics include the function of nerve cells, neural signaling, sensory and motor systems, learning and memory, attention, motivation, emotions, language, neural development and neurological disorders. A general introduction appropriate for all majors. Same as NEUR 314. Prerequisite: Junior or senior standing.

MCB 316 Genetics and Disease credit: 4 Hours.

Introduction of the structure, expression, and regulation of genes of higher eukaryotes with an emphasis upon animal cells. Specific topics will include chromatin structure and its relation to gene expression, regulation of gene expression during development, recombination, molecular genetic technologies, gene replacement therapy, and the molecular genetics of cancers. Credit is not given for both MCB 316 and MCB 317. Prerequisite: MCB 150 and credit or concurrent registration in MCB 250 or consent of instructor.

MCB 317 Genetics and Genomics credit: 4 Hours.

Study of genetics as a discipline, genetic analysis as a tool to understand biology and the role of genome sciences in biology. Credit is not given for both MCB 317 and MCB 316. Prerequisite: MCB 250, MCB 251, MCB 252, and MCB 253; or consent of instructor.

MCB 320 Mechanisms of Human Disease credit: 3 Hours.

The advent of molecular biology and the Human Genome Project has dramatically increased our understanding of the mechanisms of human disease. The underlying molecular causes for many diseases have been elucidated. This course examines how abnormalities that occur at the molecular and cellular level manifest as pathologies affecting the structure and function of human tissues and organs. In addition, this course focuses on the pathophysiology of common human diseases and the environmental, genetic and epigenetic causes of specific disease types. Prerequisite: MCB 252 or consent of instructor.

MCB 354 Biochem & Phys Basis of Life credit: 3 Hours.

Introduction to biochemistry and structural biology emphasizing the physical and chemical properties of macromolecules. Credit is not given for both MCB 354 and MCB 450. Prerequisite: CHEM 232 or CHEM 236, and MCB 250 and MCB 252, or consent of instructor.

MCB 395 Special Topics in Human Physiology credit: 2 Hours.

This course consists of 2 components: (1) a journal club, in which students explore current advances in the diagnosis, treatment, and understanding of human diseases by reading, presenting and discussing primary research articles; and (2) instructional support for MCB 244, in which students hold open office hours and make brief (10-15 minute) instructional videos that highlight advanced topics covered in journal club. Prerequisite: MCB 244 and MCB 246 and instructor approval.

MCB 396 Special Topics in Human Health and Disease credit: 2 Hours.

This course consists of 2 components: (1) a journal club, in which students explore current advances in the diagnosis, treatment, and understanding of human diseases by reading, presenting and discussing primary research articles; and (2) instructional support for MCB 246, in which students hold open office hours and make brief (10-15 minute) instructional videos that highlight advanced topics covered in journal club. Prerequisite: MCB 244 and MCB 246 and instructor approval.

MCB 400 Cancer Cell Biology credit: 3 Hours.

Principles of eukaryotic cell biology with an emphasis on cancer cell biology; consideration of molecular and fine structural components of the cell with an emphasis on experimental analysis of the relationship of structure to function of gene, membrane, cytoskeleton, and extracellular matrix. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 251, MCB 252, MCB 253, and credit or concurrent registration in MCB 354 or MCB 450 or consent of instructor.

MCB 401 Cell & Membrane Physiology credit: 3 Hours.

Cellular and molecular basis of physiological process with an emphasis on phenomena taking place at the membrane of cells and organelles (e.g., signal transduction, ion transport, synaptic transmission, nerve conduction, bioelectricity, synaptic plasticity.) Structure and function of biological membranes through a quantitative lens. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 402 Sys & Integrative Physiology credit: 3 Hours.

Examines human systems physiology. Topics to be covered include the nervous and endocrine systems, muscle physiology, cardiac physiology, respiratory physiology, blood and immune homeostasis, renal physiology, and gastrointestinal physiology and energy homeostasis. Special emphasis is on homeostatic control and integration of body systems in both health and disease. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 403 Cell & Membrane Physiology Lab credit: 1 or 2 Hours.

Experimental investigation of cellular functions common to most eukaryotic cells; emphasis on biochemical, electrical, and mechanical recording techniques. Some animal dissection and the use of animal tissues are required in this course. Alternatives are not available. Inquiries concerning the use of or the dissection of animal tissues can be directed to the Instructor or Head of the Department. 2 undergraduate hours. 1 graduate hour. Prerequisite: Credit or concurrent registration in MCB 401 and previous biology laboratory experience.

MCB 404 Sys & Integrative Physiol Lab credit: 1 to 2 Hours.

Experimental investigation of organ systems of vertebrates with emphasis on biochemical, electrical and physical recording techniques. Some animal dissection and the use of animal tissues are required in this course. Alternatives are not available. Inquiries concerning the use of, or the dissection of animal tissues can be directed to the instructor or Head of the Department. 2 undergraduate hours. 1 graduate hour. Prerequisite: Credit or concurrent registration in MCB 402 and previous biology laboratory experience.

MCB 406 Gene Expression & Regulation credit: 3 Hours.

Provides in-depth and up-to-date coverage of gene expression and regulation. Lectures are centered on the principles of regulating gene expression in eukaryotic cells. The course covers macromolecule structure and function in gene expression; molecular mechanisms of the key gene expression events including transcription, RNA processing, localization and translation. Applications of these principles in medicine and therapeutics such as aging, cancer and drug design are also discussed. Same as BIOC 406. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 354 or consent of instructor.

MCB 408 Immunology credit: 3 Hours.

Introduction to fundamentals of immunology with emphasis on biological application; basic background for understanding immunological responses and techniques applicable to biological research. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 251, MCB 252, MCB 253, and MCB 354; or consent of instructor.

MCB 410 Developmental Biology, Stem Cells and Regenerative Medicine credit: 3 Hours.

Survey of molecular and cellular mechanisms involved in development and growth of animals, as well as recent advancement in stem cell and Regenerative medicine research. Topics to be covered include fertilization and early cell lineage, body axis formation, gastrulation, neural induction and patterning, segmentation, and other aspects of pattern formation including organogenesis and limb development, as well as embryonic stem cells, induced pluripotent stem cells, adult stem cells, regeneration and regenerative medicine. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 413 Endocrinology credit: 3 Hours.

Physiology and biochemistry of the endocrine system and its hormones with special reference to vertebrates and to human endocrine disorders. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor. One semester of biochemistry is recommended.

MCB 419 Brain, Behavior & Info Process credit: 3 Hours.

Exploration of the neural basis of animal behavior. Emphasis on the information processing problems that animals face in complex natural environments and how nervous systems have evolved to solve these problems. Introduction to the use of computer modeling and simulation techniques for exploring principles of nervous system design and function. Current literature in computational neurobiology and neuroethology will be incorporated in readings and class discussion. Same as BIOP 419 and NEUR 419. 3 undergraduate hours. 3 graduate hours. Prerequisite: CS 101; and PHYS 102 or PHYS 212; and MCB 252; or equivalent or consent of instructor.

MCB 421 Microbial Genetics credit: 3 Hours.

Prokaryotic microbial genetic systems; emphasis on typical data analyses, together with the basic classes of genetic phenomena. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or consent of instructor.

MCB 424 Microbial Biochemistry credit: 3 Hours.

Examines the biochemical ecology of diverse microbial groups with emphasis on anaerobic systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250 and MCB 354 or MCB 450, or consent of instructor.

MCB 426 Bacterial Pathogenesis credit: 3 Hours.

Emphasizes prokaryotes that cause important diseases in humans and other animals; host-parasite bacteriology; and chemistry and genetics of mechanisms of pathogenesis. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and MCB 354, or consent of instructor.

MCB 428 Microbial Pathogens Laboratory credit: 2 Hours.

Laboratory study of methods of recognition and differentiation, diagnostic tests, and mechanisms of bacterial and viral pathogenesis. Topics include infections of the urinary tract, respiratory tract, gastrointestinal tract, and sexually transmitted diseases. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 300 and MCB 301 or consent of instructor.

MCB 429 Cellular Microbiology & Disease credit: 3 Hours.

Emphasizes cell biology of infectious diseases, using cellular, molecular, and animal models. Will stress molecular cross-talk that drives host-pathogen interactions, state-of-the art approaches for investigating host and microbial cell and molecular biology, latest paradigms in host cell biology, and the evolutionary basis by which pathogens can manipulate host cell cytoskeleton, membranes, organelles, cell cycle, gene expression, and signaling in eukaryotic cells. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and MCB 354 or consent of instructor.

MCB 430 Molecular Microbiology credit: 3 Hours.

Modern contributions to the science of microbiology; emphasizes the structure, function, and synthesis of informational macromolecules and on the role microorganisms have played in molecular biology. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 and credit or concurrent registration in MCB 354, or consent of instructor.

MCB 431 Microbial Physiology credit: 3 Hours.

Examines bacterial physiology, including discussions of energetics, regulation of metabolism, and cell structure. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or equivalent; credit or concurrent registration in a biochemistry course.

MCB 432 Computing in Molecular Biology credit: 3 Hours.

Examination of computational aspects of biology with an emphasis on the relationships between biological questions and their recastings as mathematical or logical problems. Topics are drawn from biochemistry, genetics, molecular sequence analysis, and molecular structure. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 252, MCB 354, and calculus I (MATH 220 or MATH 221), and calculus II (MATH 231) or biostatistics (STAT 212); or consent of instructor.

MCB 433 Virology & Viral Pathogenesis credit: 3 Hours.

Same as PATH 433. See PATH 433.

MCB 434 Food & Industrial Microbiology credit: 3 Hours.

Same as FSHN 471. See FSHN 471.

MCB 435 Evolution of Infectious Disease credit: 3 Hours.

Understanding the evolution and ecology of the microbial world is of great importance to human health and the health of our planet. Students will explore the ecology and evolution principles that apply to viruses, microbial eukaryotes, archaea and bacteria. The primary literature on historical and emerging infectious diseases will be used to illustrate critical applications of these basic principles. Examples include applying genomics tools to understand the evolutionary basis for antibiotic resistance, the spread of emerging pathogens, and the ecology of probiotics and the human microbiome. The objective of this class is to better understand how humans shape the diversity and dynamics of the microbial world living in and around us every day. Same as IB 442. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or consent of instructor.

MCB 436 Global Biosecurity credit: 1 Hour.

Designed to provide students with broad coverage of key areas of scientific, legal, social, ethical, and political aspects of biosecurity, emphasizing current problems and research in the areas of biodefense, emerging infectious diseases, synthetic biology, and other topics. In combination with related reading assignments, the weekly special topics-based seminar will integrate knowledge of modern biomedical research, advances in biotechnology, and natural and manmade biological threats with the skills to analyze and develop public policies and strategies for enhancing global biosecurity. 1 undergraduate hour. 1 graduate hour. Prerequisite: MCB 150 or the equivalent or consent of instructor.

MCB 442 Comparative Immunobiology credit: 4 Hours.

Same as ANSC 450 and PATH 410. See ANSC 450.

MCB 446 Physical Biochemistry credit: 3 Hours.

Same as CHEM 472 and BIOC 446. See BIOC 446.

MCB 450 Introductory Biochemistry credit: 3 Hours.

Chemistry and metabolism of carbohydrates, lipids, proteins, nucleic acids, vitamins, and coenzymes and their relation to the regulation and processes of organisms, cells, and subcellular components. Students who enter the University Fall 2011 or later are responsible for additional course-based tuition of \$300 unless they are already paying differential tuition during the term of course enrollment. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Credit is not given for both MCB 450 and MCB 354. Prerequisite: CHEM 232 or CHEM 236, or equivalent, or consent of instructor. Not intended for students in the MCB or biochemistry curricula.

MCB 458 Basic Human Pathology credit: 3 Hours.

Introduction to the basic mechanisms of human disease with a focus on the building blocks of pathological processes at the sub-organismal and organismal level. Basic biological processes will be stressed including tissue adaptation, injury, inflammation, repair and neoplasia. Pathology synthesizes cellular and molecular biology, biochemistry and immunology holistically so as to understand the body's limited responses to the cornucopia of experienced physiological insults. 3 undergraduate hours. No graduate credit. Prerequisite: MCB 354 or equivalent, or consent of instructor. For MCB and Biochemistry undergraduate majors only.

MCB 460 Regeneration and Medicine credit: 3 Hours.

A survey of regeneration biology and medicine at the organ, tissues, and cellular/genetic/molecular/levels. Basic concepts are presented with a focus on contemporary methods and seminal experiments. Students will learn to think critically and creatively about experimentation and analyses of three regenerative medicine strategies: stem cell transplantation, bioartificial tissues, and chemical induction of regeneration in vivo. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 410 or consent of instructor. Recommended: knowledge of vertebrate histology and anatomy.

MCB 461 Cell & Molecular Neuroscience credit: 3 Hours.

Designed as an in-depth foundation course for graduate and undergraduate students with strong neuroscience interests. Covers up-to-date cellular and molecular neurobiology (including basic principles of neuronal function, signaling, and plasticity) and introductory brain anatomy that underlie brain function and animal behaviors. Pathogenic mechanisms of neurological diseases and disorders from the latest research will be heavily explored. Same as NEUR 461. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252, MCB 250 or equivalent, or consent of instructor. May be taken concurrently with MCB 462.

MCB 462 Integrative Neuroscience credit: 3 Hours.

Employs integrative, multi-level systems approaches to nervous system and behavior. Focuses on neural circuits in sensory integration, pattern generation, the integration of sensation, internal states and learning in behavioral decision, the neuronal natures of pain, sleep, and biological rhythms, neuroeconomics, new vistas in neural modeling and interfacing brain and machine. Students are presented in neuroethological contexts of evolution and the economics of behavior and physiology. Same as NEUR 462. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 252 or consent of instructor. May be taken concurrently with MCB 461.

MCB 465 Human Metabolic Disease credit: 3 Hours.

Examination of the molecular and physiological basis of human metabolic disease. Disruption of metabolic and energy homeostasis plays key roles leading to metabolic disorders. We will examine how lipid/glucose levels and energy balance are controlled in health and how they are abnormally regulated in disease states. In addition, we will cover current topics related to control of metabolism including aging and circadian rhythms. Methodologies leading to scientific discoveries and potential preventive and therapeutic agents will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250, MCB 252, or consent of instructor.

MCB 471 Cell Structure and Dynamics credit: 3 Hours.

Molecular basis of cellular organization focusing on how cells secrete, move, adhere, divide, communicate, and die. Material will emphasize critical analysis of experiments, current controversies and hypothesis testing. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 250 and MCB 252 or consent of instructor. Prior or concurrent enrollment in MCB 354 desirable.

MCB 480 Eukaryotic Cell Signaling credit: 2 Hours.

General principles of molecular signaling regulating membrane, cytoplasmic, and nuclear events in eukaryotic cells with emphasis on mammalian systems. Contemporary methods of investigation and the principles of identifying and solving problems related to signal transduction will be emphasized. 2 undergraduate hours. 2 graduate hours. Prerequisite: MCB 252 or consent of instructor.

MCB 481 Developmental Neurobiology credit: 3 Hours.

Principles of vertebrate and invertebrate developmental neurobiology with emphasis on the molecular and cellular mechanisms controlling neuronal determination, axon pathfinding, synapse formation, and plasticity. Same as NEUR 481. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 400 or MCB 461 or consent of instructor.

MCB 492 Senior Thesis credit: 3 to 5 Hours.

Research conducted under the direction of a faculty member in the School of Molecular and Cellular Biology. Normally, the student enrolls in MCB 492 during the last semester on campus prior to graduation. In the semester preceding enrollment, interested students should consult with their faculty advisors concerning enrollment procedures. A minimum of 3 credit hours is required, and a thesis must be presented for credit to be received. Successful completion of MCB 492 is required in order to be eligible for graduation with distinction in MCB. 3 to 5 undergraduate hours. No graduate credit. Prerequisite: Two consecutive semesters of at least 2 credit hours of MCB 290 under the guidance of the same faculty member, or consent of instructor.

MCB 493 Special Topics Mol Cell Biol credit: 1 to 4 Hours.

Discussion of current topics of interest within the broad domain of molecular and cellular biology; seminar or lecture format. Topics vary. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing and consent of instructor.

MCB 501 Advanced Biochemistry credit: 4 Hours.

Focuses upon structure-function analyses of biomolecules and the chemical and evolutionary foundations of metabolic networks. Emphasis is on research methodology and current problems.

MCB 502 Advanced Molecular Genetics credit: 4 Hours.

An advanced course in molecular genetics. Emphasis is on research methodology and current problems.

MCB 508 Intro to Systems Neuroscience credit: 4 Hours.

Same as NEUR 508 and PSYC 508. See PSYC 508.

MCB 509 Curr Topics Mol & Int Physiol credit: 2 Hours.

Advanced seminars in current physiological research. May be repeated once for credit. Prerequisite: Consent of instructor.

MCB 511 Mol Bio of Microbe-Plant Inter credit: 3 Hours.

Same as PLPA 509. See PLPA 509.

MCB 512 Advanced Endocrinology credit: 2 Hours.

Seminars, lectures, student reports, and discussions of recent advances in endocrinology. Same as ANSC 530 and CB 512. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

MCB 513 Survey of Neurobiology credit: 1 Hour.

Overview of the functional and organizational principles of the mammalian nervous system. Intended for graduate students with little or no prior coursework in neurobiology. Students will read and discuss current scientific papers from the neurobiological literature. Same as NEUR 513.

MCB 520 Advanced Molecular Biology credit: 1 Hour.

Advanced graduate level, primary literature-based discussion course on molecular microbiology. Graduate level companion course for MCB 430. Prerequisite: Concurrent registration in MCB 430 or consent of instructor.

MCB 521 Advanced Microbial Genetics credit: 1 Hour.

Advanced level, primary literature-based discussion course on microbial genetics. Graduate level companion course for MCB 421. Prerequisite: Concurrent or prior enrollment in MCB 421 or consent of instructor.

MCB 526 Adv Bacterial Pathogenesis credit: 1 Hour.

Advanced primary literature-based discussion course on bacterial pathogenesis. Graduate level companion course for MCB 426. Prerequisite: Concurrent or prior enrollment in MCB 426 or consent of instructor.

MCB 529 Special Topics Cell Devel Biol credit: 1 to 4 Hours.

Discussion of current topics of interest in higher eukaryotic cellular and molecular biology, development, neurobiology; seminar or lecture format. Topics vary. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

MCB 530 Reproductive Physiol Seminar credit: 1 Hour.

Presentation and discussion of current literature as well as graduate student and staff research proposals and findings in reproductive physiology. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MCB 532 Advanced Microbial Physiology credit: 1 Hour.

Advanced primary literature-based discussion course on microbial physiology. Graduate level companion course for MCB 431. Prerequisite: Concurrent or prior registration in MCB 431 or consent of instructor.

MCB 533 Repro Physiology Lab Methods credit: 1 to 3 Hours.

Same as ANSC 533 and CB 533. See ANSC 533.

MCB 534 Advanced Microbial Metabolism credit: 1 Hour.

Advanced primary literature-based discussion course on microbial metabolism. Graduate level companion course for MCB 424. Prerequisite: Concurrent or prior enrollment in MCB 424 or consent of instructor.

MCB 539 Advanced Cellular Microbiology credit: 1 Hour.

Advanced primary literature-based discussion course on cellular microbiology and underlying infectious diseases. Graduate level companion course for MCB 429. Prerequisite: Concurrent or prior enrollment in MCB 429 or consent of instructor.

MCB 540 Scientific Writing credit: 3 Hours.

Study of scientific communication, geared toward biologists. Topics include writing mechanics, grammar and sentence structure, abstracts for different audiences and purposes, grant writing, manuscript preparation, figure construction, oral presentations, and the grant-review process. Class consists of both lectures and time working in small groups to revise writing assignments. Assignments include weekly writing exercises, a full NIH-style grant proposal and grant reviews for a mock study section. 2 graduate hours. No professional credit.

MCB 545 Functional Genomics in Principle and Practice credit: 3 Hours.

Experimental and analytical foundations of functional genomics, tailored to experimental biologists who are using high-throughput sequencing technologies to analyze function in animal genomes. Lectures cover experimental methods and tools available for bioinformatics analysis; students will gain experience in the use of online or command-line bioinformatics tools through weekly assignments. Advanced knowledge in eukaryotic molecular genetics is needed but bioinformatics skills are not required. 3 graduate hours. No professional credit. Students must have access to a networked computer on which they can load software in order to complete required assignments for the course. Prerequisite: MCB 502 or equivalent or consent of instructor.

MCB 550 Biomolecular Physics credit: 4 Hours.

Same as BIOP 550 and PHYS 550. See PHYS 550.

MCB 553 Enzyme Reaction Mechanisms credit: 3 or 4 Hours.

Same as CHEM 572. See CHEM 572.

MCB 555 Anlys Biochemical Literature credit: 2 Hours.

Discussions of current research and literature. Required of all graduate students whose major is biochemistry. Same as BIOC 555. Prerequisite: Second year graduate standing in biochemistry or consent of instructor.

MCB 561 Mechanisms Viral Pathogenesis credit: 3 Hours.

Same as PATH 519. See PATH 519.

MCB 571 Bioinformatics credit: 4 Hours.

Same as ANSC 543, CHBE 571, and STAT 530. See CHBE 571.

MCB 580 Res Ethics & Responsibilities credit: 1 Hour.

Lecture/discussion course focusing on research ethics and a variety of related issues that can influence success in graduate school in the biological sciences, including scientific integrity and compliance with regulations for laboratory research. Approved for letter and S/U grading. Prerequisite: Consent of instructor.

MCB 581 Laboratory Rotation I credit: 3 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in molecular and cellular biology research. Required of all first-year students entering MCB. Meets first five weeks of each term. Approved for S/U grading only. Prerequisite: First-year graduate status and consent of MCB graduate programs; concurrent registration in MCB 582.

MCB 582 Laboratory Rotation II credit: 3 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in molecular and cellular biology research. Required of all first-year students entering MCB. Meets second five weeks of each term. Approved for S/U grading only. Prerequisite: First-year graduate status and consent of MCB graduate programs; concurrent registration in MCB 581.

MCB 583 Laboratory Rotation III credit: 3 Hours.

Laboratory research methods; familiarization of first-year graduate students with experimental methods used in molecular and cellular biology research. Required of all first-year students entering MCB. Meets third five weeks of each term. Approved for S/U grading only. Prerequisite: First-year graduate status and consent of MCB graduate programs; concurrent registration in MCB 581 and MCB 582.

MCB 585 Current Topics in Microbiology credit: 1 Hour.

Discussions, reviews, and appraisal of special topics in microbiology and molecular biology; seminar or lecture. Topics vary. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

MCB 586 Concepts/Topics Immunology credit: 2 Hours.

Same as PATH 518. See PATH 518.

MCB 595 MCB Graduate Seminar credit: 1 Hour.

Advanced seminars on current topics of interest in molecular and cellular biology. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor.

Molecul & Integrative Physiol (MIP)

MIP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MIP>)

Courses

MIP 590 Individual Topics credit: 1 to 16 Hours.

For graduate students wishing to study individual problems or topics not assigned in other courses. Approved for S/U grading only. May be repeated. Prerequisite: Approval of department.

MIP 595 Seminars in Physiology credit: 0 to 1 Hours.

Advanced seminars on current topics of interest in physiology. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

MIP 599 Thesis Research credit: 0 to 16 Hours.

Research may be conducted under supervision of the thesis advisor in the following areas: (a) cellular and molecular physiology; (b) comparative physiology; (c) mammalian physiology; (d) human physiology; (e) endocrinology; (f) neurophysiology; (g) radiobiology; and (h) environmental and stress physiology. Approved for S/U grading only. May be repeated.

Museum Studies (MUSE)

MUSE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MUSE>)

Courses

MUSE 200 Introduction to Museums credit: 3 Hours.

A broad introduction to the museum world, focusing on what a museum is, what differentiates various types of museums, and how museums function. Examines museums in terms of education, curation, exhibition, public relations, research, administration, ethical and legal obligations, funding and knowledge. Prerequisite: One year of college coursework.

MUSE 250 The World Through Museums credit: 3 Hours.

Examination of contemporary museums around the world, evaluating their roles as social institutions and communicators of heritage in increasingly global contexts. The first half of the course develops a framework for museum literacy (how to read museums) that incorporates anthropological, globalization, media and critical theories. The second half of the course is a virtual tour and evaluates museums using this analytical skill set. Same as ANTH 250.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - Western

MUSE 330 Learning in Museums credit: 3 Hours.

An applied course in the multiple responsibilities of professionals in the field of Museum Education. Examines how people, ideas and objects connect in museums; trends in interpretation and museum ethics; best practice and current learning theories; and exemplary programs involving highly varied audiences, community collaboration and advanced technology. Provides practical experience in program development, facilitation, documentation and assessment. Requires some in-museum work outside of regularly scheduled class hours. Includes field trips to local museums. Prerequisite: MUSE 200.

MUSE 389 Seminar in Museum Studies credit: 3 Hours.

Study of special themes, selected topics or current issues in museum studies for undergraduate students with backgrounds in museology. Course may be in seminar or lecture format. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: MUSE 200 and ANTH 462.

MUSE 390 Museum Internship credit: 3 Hours.

Supervised field experience in museums, both on and off-campus, designed to introduce students to professional practice. Builds on museum studies coursework, and provides opportunities for applying academic knowledge and analyzing personal development. Students work part-time (150 hours) in a program-approved museum under the guidance of an instructional team. Requires an internship contract before the term, regular reporting and documentation during the term, and compilation of a project portfolio at the end of the term. May be repeated in same and separate terms to a maximum of six hours. Prerequisite: Three courses (nine hours) within the undergraduate minor in Museum Studies. Requires approval of the Museum Studies program advisor.

MUSE 420 Collections Management credit: 3 or 4 Hours.

An applied course in the preservation, documentation, and maintenance of the physical integrity of museum collections. Examines agents of deterioration and how to mitigate damage to collections; the chemical and physical properties of inorganic, organic, composite and textile materials; collections packing, shipping and storage methods; and collections hazards, safety and emergency planning. Provides practical experience and encourages skills development in collections management. Requires some in-museum work outside of regularly scheduled class hours. 3 undergraduate hours. 4 graduate hours. Prerequisite: MUSE 200 or MUSE 500.

MUSE 440 Museum Registration credit: 3 or 4 Hours.

An applied course in the management and care of museum collections through registration and records. Examines legal and ethical issues of collections stewardship, and current professional practices and standards. Provides practical experience and encourages skills development in museum registration. Requires some in-museum work outside of regularly scheduled class hours. Includes a field trip to a local museum. 3 undergraduate hours. 4 graduate hours. Prerequisite: MUSE 200 or MUSE 500.

MUSE 500 Core Prob Museum Theory & Prac credit: 4 Hours.

A critical examination of both historical and current theoretical issues in museum practice. Addresses the development of museums within varied social, cultural and intellectual contexts, and the conceptualizations and criticisms of museums in terms of paradigmatic, institutional, symbolic and other theories. In addition to surveying the broad range of theoretical frameworks adopted in contemporary museum scholarship, students will examine and evaluate curatorial and institutional strategies for responding to the myriad external pressure (including multiple constituencies, standards and best practices) currently placed on museums. Prerequisite: Graduate standing.

MUSE 589 Special Topics Museum Studies credit: 2 or 4 Hours.

Intensive study of selected topics and problems of special interest in Museum Studies. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

MUSE 590 Museum Studies Capstone credit: 0 to 4 Hours.

Supervised individual study involving a museum-based internship, museum-related project or museum-related research paper and fulfilling the capstone requirement for the Graduate Minor in Museum Studies. Approved for letter and S/U grading. Credit is not given for MUSE 590 and either LIS 591 or ARTH 595. Prerequisite: Approval of the Museum Studies Steering Committee.

Music (MUS)

MUS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/MUS>)

Courses

MUS 090 Seminar in Music Education credit: 0 Hours.

Seminar for students preparing to enter student teaching. Students should enroll in the semester prior to student teaching. Approved for letter and S/U grading. Prerequisite: Music education majors or consent of instructor.

MUS 101 Music Theory and Practice I credit: 2 Hours.

Fundamental theory including terminology and notation; visual analysis of music elements, procedures, and forms; written applications in short projects. Credit is not given for both MUS 101 and MUS 103. Prerequisite: Placement by examination.

MUS 102 Music Theory and Practice II credit: 2 Hours.

Continuation of MUS 101. Credit is not given for both MUS 102 and MUS 104. Prerequisite: MUS 101 or placement by examination.

MUS 103 Rudiments of Music Theory I credit: 3 Hours.

Introduces non-music majors to basic terminology, technology, notation and concepts of music, with a co-emphasis on digital audio. Credit is not given for both MUS 103 and MUS 101.

MUS 104 Rudiments of Music Theory II credit: 3 Hours.

Continuation of MUS 103. Includes study of modulation, chromatic harmony, form, and an introduction to twentieth-century composition and inter-disciplinary music techniques. Credit is not given for both MUS 104 and MUS 102. Prerequisite: MUS 103 or placement by examination; non-music majors only.

MUS 105 Computation and Music I credit: 2 Hours.

Applies foundational concepts in computer science to the composition and analysis of symbolic music information. Course proceeds in parallel with CS 125 (Introduction to Computer Science) and MUS 101 (Music Theory and Practice I) to integrate key CS techniques with music concepts. Course is run as a workshop presenting eight large programming projects in which students design and implement software systems that analyze and compose musical scores in different formats. Prerequisite: Concurrent enrollment with CS 125 and MUS 101. Restricted to entering CS+Music students and Music Technology students with strong programming experience, or consent of the instructor.

MUS 106 Beginning Composition credit: 2 Hours.

Class instruction in contemporary compositional practice at the beginning stages. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor on the basis of a student portfolio of composition submitted to the composition-theory faculty and accepted after evaluation.

MUS 107 Musicianship I credit: 2 Hours.

Beginning aural skills training in the areas of intervals, scales, chords, rhythm, melody, and harmony.

MUS 108 Musicianship II credit: 2 Hours.

Continuation of aural skills training from MUS 107. Development of performance, notational, and listening skills in the areas of rhythm, melody, harmony, counterpoint, and formal aspects of musical structure; emphasizes tonal pitch structures. Prerequisite: MUS 101 and MUS 107, or placement by examination.

MUS 110 Introd Art Mus: Intl Perspect credit: 2 Hours.

Surveys the history of European and American art music in an international context; examines major artistic styles, representative composers and works, and their relationship to pertinent non-western musical traditions and philosophies; reviews fundamental music concepts; strengthens aural analytical skills; familiarizes students with the music library, and research and writing techniques. Prerequisite: First year standing in music or consent of instructor.

MUS 120 English Diction credit: 1 Hour.

Phonetics applied to English song literature; individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Freshman standing in voice or consent of instructor.

MUS 121 Italian Diction credit: 1 Hour.

Phonetics applied to Italian song literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Freshman standing in voice or consent of instructor.

MUS 122 German Diction credit: 1 Hour.

German pronunciation applied to German vocal literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: Sophomore standing in voice or consent of instructor.

MUS 123 French Diction credit: 1 Hour.

French pronunciation applied to French vocal literature; class and individual clinical analysis and practice. To be taken with MUS 181. Prerequisite: At least one semester of French or equivalent required, sophomore standing in voice, or consent of instructor.

MUS 125 English Diction and Dialects credit: 1 Hour.

English Diction and Dialects introduces students to the variety of sounds of spoken English throughout the world. Coursework will include study of recorded resources, IPA (International Phonetic Alphabet) transcription, and performance of monologues, scenes, and musical numbers in a variety of dialects. Transcription will consist of both written IPA and imitative listening and speaking. Coursework will consist of in-class presentations, quizzes, transcriptions, and assessments of video and audio resources. Prerequisite: Restricted to students majoring in Music, or by consent of instructor.

MUS 130 Introd to the Art of Music credit: 3 Hours.

Provides non-music majors with basic listening skills, the ability to discuss music intelligently, and an acquaintance with many types of music. Prerequisite: For non-music majors only. This course satisfies the General Education Criteria for: Humanities - Lit Arts Cultural Studies - Western

MUS 132 Popular Music Studies credit: 3 Hours.

Courses within this rubric provide an analytical and historical introduction to genres of popular music from the United States and around the world. Iterations of the course may focus on a specific genre, such as Rock, Reggae, or Afropop, or may deal with broader subjects, such as the continua of styles including R&B, Soul, Funk, and Hip Hop, or the pan-generic, international phenomenon of pop music globalization in the twentieth century. This course satisfies the General Education Criteria for: Humanities - Lit Arts Cultural Studies - US Minority

MUS 133 Introduction to World Music credit: 3 Hours.

A survey of various musical traditions from different regions and peoples of the world. This course satisfies the General Education Criteria for: Humanities - Lit Arts Cultural Studies - Non-West

MUS 134 History of Musical Events credit: 3 Hours.

Focuses on seminal performances of musical works such as, but not limited to, premiere performances and/or recordings. Prerequisite: For non-music majors only. This course satisfies the General Education Criteria for: Humanities - Lit Arts

MUS 140 String Instrument Class credit: 2 Hours.

Class instruction to enable students to demonstrate proper technique and a characteristic sound on two bowed string instruments (violin or viola, and cello or double bass) in order to teach, via demonstration, beginning string students toward their maximum technical and musical development. May be repeated to a maximum of 4 hours. Prerequisite: For music education majors only, with two semesters required for music education string majors.

MUS 144 Supp WW Inst: Clarinet credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the clarinet. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for woodwind majors in the BME instrumental concentration.

MUS 146 Supp WW Inst: Flute credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the flute. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 147 Supp WW Inst: Oboe credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the oboe. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Oriented for music majors in the BME instrumental concentration.

MUS 148 Supp WW Inst: Saxophone credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the saxophone. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 149 Supp WW Inst: Bassoon credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the bassoon. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 151 Supp Brass Inst: Trumpet credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the trumpet. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for brass majors in the BME instrumental concentration.

MUS 153 Supp Brass Inst: Horn credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the horn. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 154 Supp Brass Inst: Trombone credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the trombone. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 155 Supp Brass Inst: Euph/Tuba credit: .5 Hours.

Class instruction in the fundamentals of playing and teaching the euphonium and tuba. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 158 Supp Percussion Instruments credit: 2 Hours.

Class instruction in the fundamentals of playing and teaching percussion instruments. Acquire knowledge on recommended instruments and equipment, maintenance procedures, and training materials. Prerequisite: Intended for music majors in the BME instrumental concentration.

MUS 160 Jazz Piano Improvisation I credit: 2 Hours.

Study of jazz theory, harmony, and improvisational techniques at the piano; includes experience in solo and ensemble situations, and a historical survey of jazz development from about 1910. Prerequisite: Completion of MUS 174 or equivalent; MUS 202 and MUS 208 or equivalent; consent of instructor.

MUS 161 Jazz Piano Improvisation II credit: 2 Hours.

Continuation of MUS 160. Study of jazz theory, harmony, and improvisational techniques at the piano; includes experience in solo and ensemble situations, and a historical survey of jazz development from about 1910. Prerequisite: MUS 160 or consent of instructor.

MUS 163 Jazz Keyboard Studies I credit: 2 Hours.

Prepares the student (through class participation) to perform one jazz standard on a functional level. Includes basic technique, chord voicing, comping, and lead sheet realization with functional fluency in all keys. Furnishes the student with class instruction on piano, focusing on jazz and improvisational idioms. An in-depth study of overall instrument technique, eminent styles, and other performance practices relevant to jazz piano and improvisation. Prerequisite: MUS 172 and MUS 173, or consent of the instructor.

MUS 164 Jazz Keyboard Studies II credit: 2 Hours.

Continuation of materials presented in MUS 163, focusing on improvisational idioms of jazz piano. Prepares the student (through class participation) to perform three jazz standards on a functional level. Emphasizes the blues form, minor II-V-I chord progressions with both hands, and introduces all major modes. Includes technique, chord voicing concepts, comping, and lead sheet realization with mid-level fluency in all keys. A continuing in-depth study of overall instrument technique, eminent styles, and other performance practices relevant to jazz piano and improvisation. Prerequisite: MUS 163, or placement exam, or consent of the instructor.

MUS 165 Applied Jazz Instruction credit: 2 to 4 Hours.

Instruction at the undergraduate level in voice or instruments normally associated with the jazz idiom. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Successful performance audition for the jazz faculty.

MUS 166 Class Jazz Improvisation I credit: 2 Hours.

Examines the dynamics of group improvisation at a fundamental level. Techniques of individual melodic development, group melodic development, and group contouring will be discussed and practiced. Requires preparation of group improvisations using the blues, a 32-bar song form, and a modal form, as well as class presentations and group demonstrations of basic group improvisational techniques.

MUS 167 Class Jazz Improvisation II credit: 2 Hours.

Continues to examine the dynamics of group improvisation as presented in MUS 166. Discussion and practical application of techniques of individual melodic development, group melodic development, and group contouring. Requires preparation of group improvisations using blues, 32-bar song form, and free group improvising forms, as well as class presentations and group demonstrations of more advanced improvisational techniques. Prerequisite: MUS 166.

MUS 169 Unit One Sem Instruct in Music credit: 0 to 2 Hours.

Experimental seminar courses to introduce non-music majors to contemporary ideas in music. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: For non-music majors only.

MUS 170 Grp Instr Pno NonMus Maj I credit: 2 Hours.

Beginning piano for non-music majors. Includes fundamentals of reading, technique, and creative activities; study and performance of simple solo and ensemble repertoire.

MUS 171 Grp Instr Pno NonMus Maj II credit: 2 Hours.

Continuation of basic skills presented in MUS 170. Elementary piano for non-music majors. Includes reading, technique, creative activities; simple solo and ensemble repertoire. Prerequisite: MUS 170 or equivalent.

MUS 172 Grp Instr Pno for Mus Major I credit: 2 Hours.

Group instruction in beginning piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Study of simple piano literature, development of skills in technique, sight reading, harmonization, transposition, improvisation, and analysis. This is the first of two courses that addresses the keyboard competency policy for non-piano majors.

MUS 173 Grp Instr Pno for Mus Maj II credit: 2 Hours.

Continuation of skills introduced in MUS 172. Group instruction in elementary piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Sight-reading, harmonization, transposition, and improvisation. Easy solos from the main historical periods with appropriate technical development; introduction to piano ensemble literature. This is the second of two courses that addresses the keyboard competency policy for non-piano majors. Prerequisite: MUS 101 and MUS 107; MUS 172 or equivalent; or consent of instructor.

MUS 174 Grp Instr Pno for Mus Maj III credit: 2 Hours.

Continuation of skills introduced in MUS 173. Group instruction in intermediate piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Study of intermediate level solos and ensemble compositions, harmonization with chromatic chords, sight reading, transposition of four-voice works, improvisation, and learning of patriotic songs. Prerequisite: MUS 102 and MUS 108; MUS 173 or equivalent; or consent of instructor.

MUS 175 Grp Instr Pno for Mus Maj IV credit: 2 Hours.

Continuation of skills introduced in MUS 174. Group instruction in moderately advanced piano for music majors whose principal performing medium is voice, or an orchestral or band instrument. Emphasis on solos, ensemble compositions, technical development, and more advanced work in sight reading, harmonization, improvisation, transposition, and aural skills. Prerequisite: MUS 201 and MUS 207; MUS 174 or equivalent; or consent of instructor.

MUS 178 Guitar credit: 2 to 4 Hours.

Instruction in guitar at the undergraduate level, predominantly classical. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 179 Harpsichord credit: 2 to 4 Hours.

Instruction in harpsichord at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 180 Piano credit: 2 to 4 Hours.

Instruction in piano at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 181 Voice credit: 2 to 3 Hours.

Instruction in voice at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 182 Organ credit: 2 to 4 Hours.

Instruction in organ at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 183 Violin credit: 2 to 4 Hours.

Instruction in violin at the undergraduate level. Music majors must register concurrently in MUS 250. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 184 Viola credit: 2 to 4 Hours.

Instruction in viola at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 185 Cello credit: 2 to 4 Hours.

Instruction in cello at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 186 Double Bass credit: 2 to 4 Hours.

Instruction in double bass at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. Music majors must register concurrently in MUS 250.

MUS 187 Harp credit: 2 to 4 Hours.

Instruction in harp at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 188 Flute credit: 2 to 4 Hours.

Instruction in flute at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 189 Clarinet credit: 2 to 4 Hours.

Instruction in clarinet at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 190 Oboe credit: 2 to 4 Hours.

Instruction in oboe at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 191 Bassoon credit: 2 to 4 Hours.

Instruction in bassoon at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 192 Saxophone credit: 2 to 4 Hours.

Instruction in saxophone at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 193 Trumpet credit: 2 to 4 Hours.

Instruction in trumpet at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 194 Horn credit: 2 to 4 Hours.

Instruction in horn at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 195 Trombone credit: 2 to 4 Hours.

Instruction in trombone at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 196 Euphonium credit: 2 to 4 Hours.

Instruction in euphonium at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 197 Tuba credit: 2 to 4 Hours.

Instruction in tuba at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 198 Percussion credit: 2 to 4 Hours.

Instruction in percussion at the undergraduate level. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 16 hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course.

MUS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated to a maximum of 12 hours.

MUS 201 Music Theory and Practice III credit: 2 Hours.

Continuation of MUS 102. Gradually increased emphasis on contrapuntal techniques, dissonance in tonal music, and musical form. Prerequisite: MUS 102 and MUS 108, or placement by examination.

MUS 202 Music Theory and Practice IV credit: 2 Hours.

Continuation of MUS 201. Study of twentieth century compositional methods. Prerequisite: MUS 201 and MUS 207, or placement by examination.

MUS 205 Computation and Music II credit: 2 Hours.

A follow-up course to Computation and Music I that introduces students to programming music applications with special emphasis on issues related to real-time audio system design. The class will begin by introducing students to the fundamentals of real-time audio synthesis using a graphical audio language such as Max/MSP, and then turn to hands-on design of real-time audio systems using an industry standard language such as C++. The course content reinforces materials presented in CS 126 (Software Design), including GUI frameworks, prototyping, user interface design, code refactoring and debugging. Prerequisite: CS 125, CS 126, and MUS 101, or consent of instructor. Restricted to CS+Music students and Music Technology students with strong programming experience, or by consent of the instructor.

MUS 206 Intermediate Composition credit: 2 Hours.

Class instruction in contemporary compositional practice at the secondary stages. May be repeated to a maximum of 6 hours. Prerequisite: MUS 106 and consent of composition-theory faculty.

MUS 207 Musicianship III credit: 2 Hours.

Continuation of MUS 108. Emphasis on extensions of tonality by means of changing tonal centers and altered chords. Prerequisite: MUS 102 and MUS 108, or placement by examination.

MUS 208 Musicianship IV credit: 1 Hour.

Continuation of MUS 207. Emphasis on atonal pitch structures and complex rhythmic organization. Prerequisite: MUS 201 and MUS 207, or placement by examination.

MUS 209 Music, Sound, Technology credit: 3 Hours.

This course examines the role modern digital technology plays in musical performance, composition, listening, and analysis. The course is divided into three large subject areas each lasting approximately five weeks: (1) sound, sound fields, and digital recording, (2) digital technology in composition and performance, and (3) psychoacoustics and digitized music analysis. Within each subject area, students are first introduced to relevant acoustic and musical principles, then learn about their implementation in the digital domain, and lastly gain practical experience with the subject matter through hands-on projects involving the capture, creation, editing and analysis of musical sound using standard hardware and computer applications. Prerequisite: Restricted to Music Technology students, or by consent of instructor.

MUS 240 Orientation Mus Tchgr Lrng K-HS credit: 1 Hour.

Provides guided practice in observing music teaching and learning in a variety of settings. Develops professional perspective and vocabulary for analyzing effective teaching, diverse learning styles, and patterns of music instruction in a variety of contexts. Includes early field experience hours. Must complete criminal background check prior to observing in schools. Prerequisite: Music education majors accepted into Teacher Certification Track.

MUS 242 Elements of Conducting credit: 2 Hours.

Fundamental elements of conducting, score analysis and preparation, transcription and transposition for choral and instrumental ensembles. Focused on development of conducting skills appropriate for use in public school teaching. A special section is offered for music majors not majoring in music education. Prerequisite: Music majors or consent of instructor.

MUS 243 Introductory Music Ed Tech credit: 2 Hours.

Overview and exploration of the ways that technology benefits music education. Opportunities for practical development of skills, work, and play with a variety of software and hardware, and group projects that tie multiple technologies together in larger curricular units. Recent research readings. Consideration of the appropriateness for technology with special learners, as well as in ensemble and early childhood settings. Prerequisite: Music education majors or consent of instructor.

MUS 244 Social Foundations of Music Ed credit: 3 Hours.

Explores the social and cultural contexts of music teaching and learning from multiple perspectives. Examines contemporary and historical American music education philosophy, practice, and policy as well as music education's place within broader systems of education. Special emphasis will be placed on issues of cultural diversity and social justice and problematizing dominant narratives and potential assumptions relevant to music education. Employs scholarship within and beyond music education concerned with critical theories, history, philosophy, and sociology. Prerequisite: MUS 240 and completion of campus Composition I general education requirement. For music education majors only.

This course satisfies the General Education Criteria for:
Advanced Composition

MUS 250 University Orchestra credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 252 Ethnomusicology Perf Ensembles credit: 1 Hour.

Instruction and experience in the performance of various non-Western and vernacular music traditions such as African mbira, Andean panpipes, North American string band, European traditional music, etc. Topics vary according to available instructors. May be repeated in the same or subsequent terms. Prerequisite: Consent of instructor.

MUS 253 Collegium Musicum credit: 1 Hour.

Performs medieval, renaissance, and baroque music; various small groups formed for the performance of sonatas and cantatas of Bach and Handel, wind serenades of Mozart, etc. Interested students may play on lute, harpsichord, and other instruments from the University's collection. May be repeated. Prerequisite: Consent of instructor.

MUS 254 String Ensemble credit: 1 Hour.

Participation in trios, quartets, quintets, etc., for the study of chamber music literature. May be repeated. Prerequisite: Consent of instructor.

MUS 255 Woodwind Ensemble credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 256 Brass Ensemble credit: 1 Hour.

Ensembles of mixed brasses in both small and large forms. May be repeated. Prerequisite: Consent of instructor.

MUS 257 Percussion Ensemble credit: 1 Hour.

May be repeated in the same term. Prerequisite: Consent of instructor.

MUS 258 Piano Ensemble credit: 1 Hour.

May be repeated. Prerequisite: Consent of instructor.

MUS 260 Oratorio Society credit: 1 Hour.

An advanced mixed-voice chorus open to students, faculty, and members of the community. Performance of oratorios and other major choral works in cooperation with the University Symphony Orchestra or Wind Symphony. May be repeated. Prerequisite: Consent of instructor.

MUS 261 Choral Ensemble credit: 1 Hour.

A mixed-voice chorus for average and beginning singers open to students, faculty, and members of the community. Performance of cantatas and other choral works. May be repeated. Prerequisite: Consent of instructor.

MUS 262 Women's Glee Club credit: 1 Hour.

Practical experience in the rehearsal and public performance of choral music of various periods and styles. Open to all women students. May be repeated. Prerequisite: Consent of instructor.

MUS 263 Men's Glee Club credit: 1 Hour.

Practical experience in the rehearsal and public performance of choral music of various periods and styles. Open to all men students. May be repeated. Prerequisite: Consent of instructor.

MUS 264 Concert Choir credit: 1 Hour.

A highly advanced group of competent student singers. Practical experience in mixed-voice singing of accompanied and unaccompanied music of various periods and styles. May be repeated. Prerequisite: Consent of instructor.

MUS 265 Opera credit: 1 Hour.

Preparation and public performance of grand or light opera. Includes only singing and acting (students desiring experience in costuming, stage management, scenery, publicity, etc., should apply to the University Theatre Department, which cooperates in the opera productions). May be repeated. Prerequisite: Consent of instructor.

MUS 266 Jazz Ensemble credit: 1 Hour.

Ensembles of various sizes designed to acquaint proficient instrumentalists with jazz compositions, arrangements, and improvisational procedures, and to promote a high degree of stylistic and technical competence in performance. May be repeated. Prerequisite: Consent of instructor.

MUS 267 Chamber Music credit: 1 Hour.

Students will be assigned to chamber groups that will be coached on a weekly basis by members of the faculty. One public performance per term may be required. May be repeated. Prerequisite: Music majors or consent of instructor.

MUS 268 Wind Symphony credit: 1 Hour.

Maintains a complete large wind ensemble instrumentation for the study and performance of band/wind ensemble/chamber wind literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the ensemble. May be repeated. Prerequisite: Consent of instructor.

MUS 269 Wind Orchestra credit: 1 Hour.

Maintains a large wind ensemble instrumentation for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 270 Harding Symphonic Band credit: 1 Hour.

Maintains a complete symphonic band instrumentation for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 271 Hindsley Symphonic Band credit: 1 Hour.

Maintains the instrumentation of a standard concert band. The literature studied and performed is of the highest caliber and technical difficulty. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 272 Concert Band credit: 1 Hour.

Maintains the instrumentation of a large concert band. The high quality band literature is technically less difficult than that of MUS 268-MUS 271. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated in separate terms. Prerequisite: Consent of instructor.

MUS 273 Marching Illini credit: 1 to 3 Hours.

Prepares and performs music of the highest available quality in at least six shows per football season. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 274 Basketball Band credit: 1 Hour.

Performs for home basketball games. May be repeated. Credit is given for spring term only. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. Prerequisite: Band Division audition during early October, or consent of instructor.

MUS 275 Brass Band credit: 1 Hour.

Maintains a complete British Brass Band instrumentation for the study and performance of all types and styles of brass band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the bands. May be repeated. Prerequisite: Concurrent registration in MUS 268, MUS 269, MUS 270, MUS 271, or MUS 272, and consent of instructor.

MUS 276 Summer Band credit: 1 Hour.

Maintains the instrumentation of the standard band for the study and performance of all types of band literature. Open to all students who have been accepted by audition, with assignments made according to proficiency and instrumentation. Completion of each course involves, in addition to the regular schedule of rehearsals, participation in public performances by the band. May be repeated. Prerequisite: Consent of instructor.

MUS 299 Thesis/Adv UG Honors in Music credit: 1 or 2 Hours.

Special individual research projects. Required of seniors in the history of music and music theory curricula; open also to advanced undergraduates, including James Scholars, who have achieved university or college honors and who desire to do research in specialized areas of music, including performance. May be repeated to a maximum of 4 hours. Counts for advanced hours in LAS. Prerequisite: Senior standing in the history of music or music theory curricula, or consent of instructor.

MUS 313 The History of Music I credit: 3 Hours.

Survey of music and its development in Western civilization to about 1750. Emphasis on an acquaintance with representative musical works and style, and on understanding musical concepts in the light of their historical and general cultural context. Prerequisite: MUS 110 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MUS 314 The History of Music II credit: 3 Hours.

Survey of the development of music as an art in Western civilization from about 1750 to the present. Emphasizes an acquaintance with formal and stylistic problems through the study of representative works and on understanding specific musical concepts in the light of their historical and general cultural context. Prerequisite: MUS 313 or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

MUS 317 Intro to Piano Literature credit: 3 Hours.

Overview of representative works for the piano, from Scarlatti to the present. Prerequisite: MUS 314.

MUS 320 Pre-Student Tchng Experience credit: 1 or 2 Hours.

Early Field Experiences in music teacher education. Includes supervised practicum work in observation, co-teaching, and individual teaching in local public schools. Twenty-seven (27) clock hours of EFE required for each hour of credit. May be repeated to a maximum of 4 hours, but only 2 hours may be applied toward the degree. Prerequisite: Music education majors or consent of instructor.

MUS 326 Practicum in Piano Teaching credit: 2 Hours.

Coordinates lesson planning for teaching pre-college piano pupils with extensive teaching experience; gives close examination to beginning and intermediate teaching literature.

MUS 330 Advanced Choral Conducting I credit: 2 Hours.

Laboratory/practicum course for review and development of choral conducting skills and their integration into the student's full complement of teaching skills and knowledge. Score analysis and preparation lead to the application of teaching and rehearsal skills. Prerequisite: Music education majors; MUS 242; concurrent registration in MUS 348 is required.

MUS 331 Advanced Choral Conducting II credit: 2 Hours.

Practicum course emphasizing teaching and rehearsal techniques, score preparation, and interpretation. Focuses on the integration of aural, vocal, keyboard, and conducting skills for the choral teacher/conductor. Prerequisite: MUS 330; music education majors, or consent of instructor.

MUS 332 Advanced Wind Band Conducting and Rehearsal Strategies credit: 3 Hours.

Develops skills in rehearsal techniques and aural skills. Application of teaching strategies and learning theory. Refinement of fundamental concepts of gesture; development of advanced conducting skills and score reading skills; development of score analysis techniques. Prerequisite: MUS 242; instrumental music education majors, or consent of instructor.

MUS 333 Cond/Teach Strings-Grp Setting credit: 3 Hours.

Survey of concert and training literature for school orchestras; refinement of fundamental concepts of gesture; development of advanced skills in conducting, score reading, and score analysis. Prerequisite: MUS 242; music education majors, or consent of instructor.

MUS 335 Elem and Mid Sch Instrum Music credit: 2 Hours.

Examines pedagogical and organizational techniques for teaching elementary and middle school instrumental music. Must be taken concurrently with MUS 320 WP or MUS 320 S, an Early Field Experience. Prerequisite: May only be taken one or two semesters prior to student teaching; music education majors, or consent of instructor.

MUS 336 Service Learning in Music Education credit: 3 Hours.

Service Learning and participatory action research in music education. Students facilitate music learning in cooperation with community partners in Champaign-Urbana, Illinois and surrounding communities. Collaborative planning, learning through inquiry, engaged scholarship, and democratic teaching practices. Student teams develop or work on ongoing projects with community teachers, musicians, or organizations. May be repeated in separate terms.

MUS 339 Princpls and Technqs in Mus Ed credit: 3 Hours.

Overview of music education in K-12 settings, emphasizing philosophy and history of music education, jazz education, methodologies commonly utilized in school curricula, music in special education, and classroom/rehearsal management. Five weeks are devoted to content exploring basic statistical techniques and procedures. Prerequisite: Senior standing in music education, or consent of instructor, plus 80 hours of early field experiences in the teaching of music; completion of the Quantitative Reasoning I requirement.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

MUS 342 Music in Childhood credit: 3 Hours.

Provides a model of comprehensive musicianship in general music K-5. Considers musical and conceptual development of learners at various ages. Includes lesson planning and assessment strategies for classroom music instruction including listening, performing, and composing experiences. Prerequisite: MUS 240.

MUS 343 Music in Adolescence credit: 3 Hours.

Detailed consideration of the general music program in both middle school and high school. Emphasis on adolescent characteristics and alternative methods of instruction. Prerequisite: Restricted to Music Education majors or consent of instructor.

MUS 344 Wind Band Methods for Secondary Ensembles credit: 2 Hours.

Surveys concert and training literature for the high school band; develops administrative skills for organizing a school music program; increases skills in rehearsal techniques and addresses current issues in music education. Prerequisite: MUS 332; junior standing in instrumental music education; completion of campus Composition I general education requirement; approval of instructor.

This course satisfies the General Education Criteria for:
Advanced Composition

MUS 345 Mus Methods in Early Childhood credit: 2 Hours.

Approaches for teaching music to children ages 2 through 8 in preschool and early elementary school settings. Focuses on understanding the role of music in early childhood, developing musical concepts, and organizing appropriate learning experiences.

MUS 346 Choral Methods for Secondary Ensembles credit: 2 Hours.

Lecture/discussion methods course that addresses curriculum development, organization/administration, repertoire, vocal pedagogy and the changing voice, diction, and additional topics typical of secondary school choral music program. Prerequisite: Music education majors or consent of instructor. Concurrent enrollment in MUS 348 required.

MUS 348 Choral Literature credit: 1 Hour.

Exploration of choral literature appropriate for middle and high school music programs. Students carry out lesson plans through peer teaching/rehearsal sequences, culminating in public performance. May be repeated to a maximum of 2 hours. Prerequisite: MUS 242. Restricted to Music Education majors, or consent of instructor.

MUS 350 Music Teaching in Ens Settings credit: 5 Hours.

Emphasizing the collaborative nature of teaching and learning, this team-taught, comprehensive course engages students in teaching music through school ensembles of all kinds. Topics include comprehensive musicianship, creativity and composition, instructional planning, management structures and routines, and inclusive practices in music education. Prerequisite: MUS 240 and MUS 242. Music education majors only. Junior standing required.

MUS 352 Tchng Strings in Grp Settings credit: 3 Hours.

Organize and teach sequential string playing technique to students in a group setting to develop their aural skills and left hand and right hand technique; refresh and improve the string performance skills gained in MUS 140; survey materials for string classes; develop awareness of personal teaching delivery skills. Offered only in spring semesters. Prerequisite: Music Education major, completion of MUS 320S, or consent of instructor.

MUS 360 Jazz Improv:Theory and Prac I credit: 2 Hours.

Fundamentals of jazz improvisation, with an emphasis on aural recognition of jazz chord voicings, harmonic progressions, and scales. Includes interactive software related to jazz improvisation ear-training. Application of melodic, harmonic, and rhythmic materials with regard to improvisation. Prerequisite: MUS 102 and MUS 108; MUS 167; or placement by exam with consent of instructor.

MUS 361 Jazz Improv:Theory and Prac II credit: 2 Hours.

Continuation of MUS 360. Exploration of advanced harmonic procedures with an emphasis on aural recognition of advanced forms of jazz harmonic structures, scales, chord qualities, and chord progressions. Additional emphasis on scales, chord/scale relationships, and standard jazz harmonic forms such as blues, standard jazz tunes, and modal tunes. Prerequisite: MUS 360, or placement by exam with consent of instructor.

MUS 362 Jazz Arranging I credit: 3 Hours.

Fundamentals of jazz arranging with an introduction to techniques such as schematic design, score layout, analysis, voicing, section writing, and orchestration. Emphasis on arranging for rhythm section, along with part layout and forms, voicing techniques, and basic harmonic concepts. Three major written projects are required. Prerequisite: MUS 166, or placement by exam/portfolio with consent of instructor.

MUS 363 Jazz Arranging II credit: 3 Hours.

Advanced melodic, harmonic, and rhythmic arranging techniques as applied to jazz instrumentation. Emphasis on practice in analysis, voicing and orchestration techniques such as 4-way closed position double lead, 4-way closed-position drop-2 double lead, 4-way closed position drop-2, and 4-and 5-way closed position. Three major written projects are required. Prerequisite: MUS 362, or placement by exam/portfolio with consent of instructor.

MUS 364 Jazz Composition I credit: 2 Hours.

Examines the basic elements of jazz composition from melodic, harmonic, rhythmic, and tone color perspectives focusing on distinctive styles of jazz. Promotes a better understanding of various jazz compositional styles, jazz composers, creative elements and abilities, melody writing, harmonic systems, rhythmic compositional devices, and jazz reharmonization techniques. Prerequisite: MUS 363.

MUS 365 Jazz Composition II credit: 2 Hours.

Examines advanced elements of jazz composition such as melody construction, harmonic devices, and rhythmic devices used in modern jazz compositions as a continuation and expansion of materials presented in MUS 364. Melodic and harmonic contouring, asymmetrical forms, advanced chromatic-modal construction, and creative practices will be discussed and practiced through written assignments and projects. Prerequisite: MUS 364, or consent of instructor upon approval of a portfolio of jazz compositions.

MUS 368 Jazz Improvisation Styles I credit: 2 Hours.

Survey of improvisational/jazz artists. Students write and present four papers over the course of the semester, accompanied by four transcriptions of four major improvisational/jazz artists representing four distinct improvisational/jazz styles. All presentations will be done in class. Prerequisite: Consent of instructor.

MUS 369 Jazz Improvisation Styles II credit: 2 Hours.

A continuation of the survey of improvisational/jazz artists at an advanced level. Students write and present four papers and associated recording transcriptions of four advanced improvisational/jazz artists representing four distinct and advanced improvisational/jazz styles. All presentations will be done in class. Prerequisite: MUS 368 or consent of instructor.

MUS 400 Counterpoint and Fugue credit: 3 Hours.

Study of contrapuntal writing, including fugue, with emphasis on the works of J.S. Bach. Includes analysis of contrapuntal writing. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208, or consent of instructor.

MUS 404 Contemp Compos Techniques credit: 2 Hours.

Studies in specialized areas of composition for advanced undergraduates and graduates majoring in composition-theory. May be elected by others with consent of instructor. 2 undergraduate hours. 2 graduate hours. May be repeated. Prerequisite: MUS 106, MUS 202 and MUS 208, or consent of instructor.

MUS 405 Analytical Systems 20thC Mus credit: 3 Hours.

Study of various analytical techniques developed for music written in the twentieth century based on compositional procedures other than those derived from the common practice period. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208, or consent of instructor.

MUS 406 Advanced Composition credit: 3 Hours.

Individual instruction in contemporary musical practice. Students submit scores of their compositions to the composition faculty in order to obtain consent to register; consent is granted on the basis of the quality of the music the student has composed and the level of skill demonstrated in the work submitted. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: For undergraduates, MUS 206 and consent of composition faculty; for graduate students, consent of composition faculty.

MUS 407 Elect Music Techniques I credit: 3 Hours.

Introduces electroacoustic music, including historical background, music literature, techniques of notation and realization, sound synthesis, analog and digital recording, mixing and processing, and compositional application in the areas of musique concrete, electronic music, and Musical Instrument Digital Interface (MIDI) technology as applied to electroacoustic concert art music. Weekly lab times assigned. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing in music, or consent of instructor.

MUS 408 Analysis of Musical Form credit: 3 Hours.

Extensive study of the formal structure of representative musical compositions from various historical periods: (a) Renaissance and Baroque; (b) Viennese classical; (c) nineteenth century; (d) first half of twentieth century; and (e) since World War II. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: MUS 202 and MUS 208.

MUS 409 Elec Music Techniques II credit: 2 Hours.

Intermediate level study of Musical Instrument Digital Interface (MIDI) technology, sound design, digital audio engineering techniques, multi-track digital editing and audio processing in music composition, and the study of compositional, technical, and performance considerations as applied to electroacoustic concert art music. Weekly lab times are assigned. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 407 or placement by examination.

MUS 410 Period Studies in Musicology credit: 3 Hours.

Intensive study of the music of a specific historical period. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: MUS 313 and MUS 314, junior standing in music or consent of instructor.

MUS 411 Genre Studies in Musicology credit: 3 Hours.

Examination of one or more aspects of musical genre defined by composer(s), historical era, region, performance issues, philosophy, etc. Can include the study of the relationship between genre and performance, genre and pedagogy, genre and the creative process, genre and reception, etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314; junior standing; or consent of instructor.

MUS 412 Composer Studies in Musicology credit: 3 Hours.

Intensive study of the music of a specific composer. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topic varies. Prerequisite: MUS 313 and MUS 314, junior standing in music or consent of instructor.

MUS 413 Music and Performance credit: 3 Hours.

Examination of one or more aspects of musical performance defined by historical era, region, genre, philosophy, etc. Can include the study of the relationship between performance, improvisation and creative process; performance and publication; performance practices of a specific genre, period, or community; etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314, junior standing; or consent of instructor.

MUS 414 Music and Society credit: 3 Hours.

Examination of the social context, function and meaning of music/music-making in one or more communities, from one or more areas of the world, in one or more time periods. May address music in relation to such social issues as gender, ethnicity, politics, etc. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours if topic varies. Prerequisite: MUS 313 and MUS 314, and junior standing in music; or consent of instructor.

MUS 415 Music and Media credit: 3 Hours.

Intensive study of the impact of various media such as recordings, radio, film, television and/or computer technology on the creation, performance, dissemination and/or patronage of a given repertoire. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 12 hours if topic varies. Prerequisite: MUS 313 and MUS 314; junior standing; or consent of instructor.

MUS 416 Anthropology of Music credit: 3 Hours.

Introduction to the anthropological study of music, including the role of music in the world's societies and non-Western musical systems and cultures. Same as ANTH 416. 3 undergraduate hours. 3 graduate hours. Prerequisite: ANTH 103 or consent of instructor.

MUS 418 Regional Studies in Musicology credit: 3 or 4 Hours.

Seminar devoted to intensive study in the music of specific peoples, states, or geographic regions from around the world. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 12 undergraduate hours or 16 graduate hours. Prerequisite: MUS 313 and MUS 314; junior standing; MUS 528A (for DMA or MM performance or composition students); or consent of instructor.

MUS 419 Sr Seminar in Musicology credit: 3 Hours.

Intensive capstone seminar for musicology majors directed at graduate school preparation, senior thesis or project development, professional portfolio design, and the cultivation of scholarly writing skills. Introduces advanced research methods and analytical paradigms. Addresses special topics or issues tailored to student interests and faculty expertise, as well as contemporary developments in the discipline or current musical events, from diverse perspectives. 3 undergraduate hours. No graduate credit. Prerequisite: For senior musicology majors (BA or BM) with senior standing, or consent of instructor.

MUS 420 The History of Opera credit: 3 Hours.

Surveys opera and related forms from the end of the 16th century to the present; studies representative works in some detail. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 314 or consent of instructor.

MUS 421 The Music of America credit: 3 Hours.

Study of chamber, choral, and orchestral music written by American composers from about 1850 to the present; jazz and its offshoots; folk and popular music; and experimental music in America. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing in music or consent of instructor.

MUS 422 Musical Theatre Repertoire credit: 2 Hours.

Musical Theatre Repertoire is a high-contact class, conducted in a studio setting. Methods of instruction include vocal exercises, studying and singing Musical Theatre repertoire, song memorization, studying and evaluating performances, and utilizing both class and individual evaluations. Vocal health and wellness are stressed as students become familiar with styles of singing in both classical and contemporary Musical Theatre. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 8 undergraduate hours or 4 graduate hours. Prerequisite: Students must have two years of applied voice lessons (MUS 181) in order to register for this course. For Music majors, or by consent of instructor.

MUS 423 Intro to Piano Technology credit: 2 Hours.

Introduction to the mechanism and operation of the modern piano, including the historical development of keyboard instruments. Introduction to tuning and regulation, theory, and practice. No previous experience tuning or regulating pianos is necessary. 2 undergraduate hours. 2 graduate hours.

MUS 424 Musical Informatics credit: 3 Hours.

A 21st century approach to music theory: fundamental elements of music illustrated through logical and mathematical concepts, unencumbered by stylistic considerations. Defines the internal structure of sounds and presents a few general methods of organizing them into complex compositions. Intended for musicians having limited familiarity with mathematics, as well as scientifically inclined students with little musical background. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

MUS 426 Orchestration credit: 3 Hours.

A thorough study of writing for all of the orchestral instruments in combinations ranging from solo to varying sizes of chamber ensembles and full orchestra. Includes analysis of musical examples and composing short works for various instrumental ensembles. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 202 and MUS 208.

MUS 430 Applied Music Pedagogy credit: 2 Hours.

Survey of techniques, practices, and materials; presentation of group and individual instruction; an approach to teaching problems, tone production, musical styles, and interpretation for various age levels; actual teaching experience under faculty supervision. Required of performance majors in voice. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing in music or consent of instructor.

MUS 431 Piano Pedagogy I credit: 2 Hours.

Objectives, techniques, literature, and materials for teaching piano to children from about ages five through ten (elementary level); observation of lessons and supervised student teaching experience. 2 undergraduate hours. 2 graduate hours. Required of piano performance majors. Prerequisite: Senior standing in music or music education, or consent of instructor.

MUS 432 Piano Pedagogy II credit: 2 Hours.

Objectives, techniques, literature, and materials for teaching the young pianist from about ages 11 through 18 (middle school to pre-college level); teaching the adult beginner; observation of lessons and supervised student teaching experience. 2 undergraduate hours. 2 graduate hours. Required of piano performance majors. Prerequisite: Senior standing in music or music education, or consent of instructor.

MUS 433 Music Interdisciplinary Curriculum credit: 2 or 4 Hours.

This course focuses on the principles and processes of an interdisciplinary curriculum, with primary emphasis on music's relationship to other areas of study. The organizing framework for the course is grounded on the premise that music influences, and in turn is influenced by, complementary realms of human experience. The purpose is to enable music educators and other interested persons to create sound educative experiences in music built upon strong relationships among persons, ideas, artistic practices, and disciplines. 2 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Undergraduate music students with junior or senior standing. Graduate music students, or consent of instructor.

MUS 434 Assessment/Eval in Music Ed credit: 3 or 4 Hours.

Overview of assessment and evaluation techniques in music education, emphasizing the design of performance assessments, how to collect quality data in the music classroom, and how to use data to alter instruction. Five weeks devoted to context exploring basic statistical techniques, including how to interpret data. 3 undergraduate hours. 4 graduate hours. Prerequisite: Completion of Quantitative Reasoning I requirement. For Music Ed majors with Junior or Senior standing, graduate Music Ed students, or consent of instructor.

MUS 435 Jazz Aural Skills I credit: 2 Hours.

Jazz Aural Skills I is the first of two courses designed to equip students for the rigorous demands of a professional jazz musician. The course is designed to strengthen the student's ability to recognize chord progressions, scales, chord alterations, and common forms in order to react and integrate them into solo improvisation and group playing. Students learn how to strengthen their own relative pitch recognition through singing/and or playing their instrument(s), including piano. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 107, 108, 172 and 173, or by consent of instructor. This course is open to jazz majors, music majors, and interested students.

MUS 436 Jazz Aural Skills II credit: 2 Hours.

Jazz Aural Skills II is a continuation of ear training for the jazz musician and composer. The ability to hear all parts of a tune - chord changes, rhythmic patterns, and the harmonic implications of the chord extensions is considered a fundamental essential skill of the professional jazz and commercial musician. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 107, 108, 17, 173 and 435, or by consent of instructor.

MUS 437 Popular Music Pedagogy credit: 2 or 4 Hours.

Explores various vernacular, popular, and folk musical traditions. Experiences will focus on oral/aural creation and performance as well as responding to and connecting with relevant sociocultural issues and contexts. Special emphasis will include the potential application and inclusion of these musical traditions within school music settings. 2 undergraduate hours. 2 or 4 graduate hours. Prerequisite: MUS 342 or 343, or graduate standing in music education.

MUS 438 Designing Musical Experiences credit: 2 Hours.

Students develop their musicianship through reflective engagement with a variety of approaches to non-performance oriented music learning. Equal emphasis is placed on various kinds of music (literature and repertoire) and the ways in which teachers can structure experiences for students. Students will plan and lead experiences, sing and perform on a variety of instruments, and review recent research and scholarship in the field. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 240 and MUS 342.

MUS 439 Differentiating Music Instruction credit: 3 Hours.

Strategies for adapting and modifying music instruction for students with disabilities in general, choral, and instrumental music classes. 3 undergraduate hours. 3 graduate hours. Prerequisite: MUS 342.

MUS 440 Marching Band Procedures credit: 2 Hours.

Detailed consideration of principles and procedures for preparing a marching band to participate in parades, ceremonies, and shows for sports events. 2 undergraduate hours. 2 graduate hours. Prerequisite: Junior standing in instrumental music education.

MUS 441 Contemp Issues in Inst Mus Ed credit: 2 Hours.

Research-based investigation of concepts and principles of school band programs including repertoire and curriculum, score study and teaching strategies, and leadership and advocacy. 2 undergraduate hours. 2 graduate hours. Prerequisite: Completion of student teaching, graduate standing in music education, or consent of instructor.

MUS 442 Band Arranging credit: 2 Hours.

Development of basic scoring and arranging skills for various small instrumental ensembles and marching band. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 202 and MUS 208 or equivalent.

MUS 443 Orchestral Repertory credit: 1 Hour.

Laboratory class designed for brass, woodwind, and percussion performance majors who wish to become more familiar with orchestral literature and a variety of interpretational orchestral techniques. Emphasis on individual and sectional parts of orchestral masterworks. 1 undergraduate hour. 1 graduate hour. May be repeated to a maximum of 4 undergraduate hours and 4 graduate hours. A maximum of 6 hours of credit is cumulative within either the BM or MM degree, or a combination of the two. Prerequisite: Consent of instructor in consultation with the appropriate studio teacher.

MUS 444 Healthy Music Practices credit: 2 Hours.

This course is intended for the promotion of healthy musical and lifestyle habits and choices, as well as enhancement as a performer and teacher through knowledge of all aspects of their musical selves - physical, psychological, and spiritual. The course will focus on general self-care but will also cover the four target areas identified by the Health Promotion in Schools of Music Conference as crucial for musicians: musculoskeletal issues, hearing conservation, voice care, and psychological issues. 2 undergraduate hours. 2 graduate hours. Prerequisite: Music students, or instructor approval.

MUS 446 Songwriting credit: 2 Hours.

Develops and refines music composition techniques and self-expression in popular, vernacular, and folk music genres. Students will write, record, and perform original songs for class, provide constructive feedback for their peers, reflect personally on their experiences through journaling, and will engage with readings and recordings relevant to class activities. Students should be comfortable singing and creating/performing on an accompanying instrument (e.g. guitar, piano, self-composed digital backing tracks). 2 undergraduate hours. 2 graduate hours.

MUS 447 Advanced Music Ed Technology credit: 2 or 4 Hours.

A deepening of ideas and skills presented in MUS 243. Provides advanced exploration and construction of digital learning environments, as well as exploring the computer as a musical instrument. Students will work alone and in teams to create curricular materials grounded by historical, philosophical, and research in technology and education. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: MUS 243, graduate standing, or consent of instructor.

MUS 448 Computer Music credit: 3 Hours.

Introduction to the multiple ways computers are used in music, with an emphasis on digital sounds synthesis and composition. Elements of acoustics, psychoacoustics, and programming are introduced in order to allow students to use and modify the existing software DISSCO/Sound Maker developed at UIUC. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

MUS 449 Music in Early Childhood credit: 2 Hours.

Provides pre-service music educators with a framework for designing and implementing developmentally appropriate music learning experiences for young children. Includes a survey of recent developments in the fields of early childhood and music education research and pedagogy that emphasize: assessing musical growth, integrating music into the curriculum, and accommodating individual differences in diverse learning settings. Early field experiences at the UIUC Child Development Laboratory are included in the course work. 2 undergraduate hours. 2 graduate hours. Prerequisite: Senior or graduate standing in music, or consent of instructor.

MUS 450 Advanced Ensemble Music credit: 1 Hour.

Selected projects in the study and performance of ensemble literature, including the areas of operatic, instrumental, vocal-choral, and accompanying. 1 undergraduate hour. 1 graduate hour. May be repeated. Prerequisite: Consent of instructor.

MUS 451 Basso Continuo credit: 2 Hours.

Introduction to figured bass realization. Techniques of accompanying singers and instrumentalists from a figured bass. 2 undergraduate hours. 2 graduate hours. May be repeated. Prerequisite: Advanced standing in music as a piano, organ, harpsichord, or accompanying major, or consent of instructor.

MUS 452 Special Topics in Harpsichord credit: 2 Hours.

Practical and theoretical studies in historical tuning and temperament; early fingerings, harpsichord tutors (treatises), styles of figured bass improvisation, harpsichord literature, and other topics related to harpsichord performance. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MUS 453 Special Topics in Organ credit: 2 Hours.

Development of practical keyboard skills related primarily to the work of the church organist: transposition, score-reading, harmonization, modulation, hymn-playing, and solo and anthem accompaniment. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

MUS 454 Advanced Keyboard Skills I credit: 2 Hours.

Comprehensive keyboard musicianship course for advanced pianists emphasizing the development of the following skills: sight reading, harmonization, transposition, improvisation, playing by ear, and vocal and instrumental score reading. Ensemble piano music is performed. This course addresses the keyboard competency policy for undergraduate piano performance majors. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 180 (12 hours completed) or MUS 175; and MUS 202 and MUS 208 or equivalent; and consent of instructor.

MUS 455 Advanced Keyboard Skills II credit: 2 Hours.

Continuation of the topics introduced in MUS 454. 2 undergraduate hours. 2 graduate hours. Prerequisite: MUS 180 (12 hours completed) or MUS 175; MUS 202 and MUS 208 or equivalent; MUS 454 or equivalent; and consent of instructor.

MUS 456 Adv Jazz Piano Improvisation credit: 2 Hours.

Study of solo jazz piano improvisation on an advanced level. Includes practical experience in traditional, modern, and abstract solo performance, as well as theoretical, stylistic, and historical background. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: MUS 161 or equivalent.

MUS 457 Organ History and Design credit: 2 Hours.

Survey of the important national and historical styles of organ building and their relation to musical composition, performance practice, and modern organ design. Includes visits to regional organ installations chosen for their pertinent design features. 2 undergraduate hours. 2 graduate hours. Prerequisite: Consent of instructor.

MUS 459 Professional Internship credit: 0 to 12 Hours.

Professional work with an approved musical organization that is external to the School of Music, in an area related to the student's academic program; exposure to and participation in professional music-related activities. Full documentation and approval of internship activities required. The default credit will always be 0 credits unless a student, with the faculty advisor's support, petitions the appropriate academic committee (UG or Grad) with a detailed proposal outlining the academic nature, content, and scope of the internship. 0 to 12 undergraduate hours. 0 to 12 graduate hours. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours if topics vary.

MUS 462 Jazz Listening Seminar I credit: 2 Hours.

Examines the fundamental aural elements of improvisation in a jazz idiom. A chronological survey of jazz artists presented via recordings. Topics will vary with the introduction of each new artist or group. 2 undergraduate hours. 2 graduate hours. Prerequisite: Jazz majors or consent of instructor.

MUS 463 Jazz Listening Seminar II credit: 2 Hours.

A continuation in greater depth of material presented in MUS 462. Further examines the aural elements of improvisation in a jazz idiom. A chronological survey of jazz artists presented via recordings. Topics will vary with the introduction of each new artist or group. 2 undergraduate hours. 2 graduate hours. Prerequisite: Jazz majors or consent of instructor.

MUS 464 Jazz History I credit: 3 or 4 Hours.

Presents jazz music history chronologically while providing historical background information drawn from other disciplines to illuminate the many ways that jazz has influenced, and been influenced by, American and global societies. Explores the many ways that jazz has encountered other art forms. Unpacks the many issues deeply associated with jazz music's history – issues of race, class, mass media, gender, critical reception, etc. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior musical knowledge and training preferred but not required. Consent of instructor.

MUS 465 Jazz History II credit: 3 or 4 Hours.

A continuation of the materials presented in MUS 464. Allows the students to look both forward and backward to explore jazz music's unfolding in the twentieth century, beginning roughly in 1945 and continuing to the present. Looks at music and its creators using recorded music, film transcription, theory, and various other analytical and media techniques. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior musical knowledge and training preferred but not required. Consent of instructor.

MUS 466 Applied Jazz Instruction credit: 2 to 4 Hours.

Instruction at the advanced undergraduate or graduate level in voice in instruments normally associated with the jazz idiom. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 undergraduate hours or 20 graduate hours. Prerequisite: Successful performance audition for the jazz faculty.

MUS 467 Lyric Theatre Voice credit: 2 Hours.

This is an individualized voice class setting where the student and teacher work exclusively with the technical, musical, and communicative aspects of Lyric Theatre repertoire in a one-on-one setting. Students receive a great deal of feedback from the instructor during each weekly lesson. 2 undergraduate hours. 2 graduate hours. Prerequisite: Passing of a performance audition is required prior to the initial registration in any applied music course. For Music majors only, or by consent of instructor.

MUS 468 Lyric Studio credit: 2 Hours.

Acquaints the student with a variety of opera, operetta, and musical theatre literature in contrasting styles and historical periods, culminating in a public performance of sung theatre (opera, operetta, musical theatre) productions and scenes each semester. Develops skills as both a solo and ensemble performer. Introduces skills related to the field of sung theatre performance, including, but not limited to, stage movement, mind-body awareness, diction, acting, and improvisational techniques. Forms and integrates a performing ensemble to serve as an outreach group that may perform in select venues off campus. Intended for voice majors (BM-Performance and BMA) and vocal accompanying/coaching majors; others by consent of instructor. Audition required. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 12 undergraduate hours or 8 graduate hours. Prerequisite: Consent of instructor.

MUS 469 Opera Production I credit: 2 or 3 Hours.

Studies the problems of the lyric stage. Investigation of and practice with casting methods, program selection, production procedures, stage direction, coaching methods, and opera dramatics. 3 undergraduate hours. 2 graduate hours. May be repeated up to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: MUS 265 and MUS 481; consent of instructor.

MUS 470 Opera Production II credit: 2 or 3 Hours.

Continuation of topics introduced in MUS 469. 3 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 4 graduate hours. Prerequisite: MUS 469.

MUS 471 Composer-Chor Workshop credit: 2 Hours.

Same as DANC 464. See DANC 464.

MUS 472 Senior Project Showcase credit: 1 Hour.

Senior Project Showcase will be a sequenced, two semester course, culminating in a final performance(s) in the spring semester. Students will use class time for individual and team writing during the fall semester, presenting their work for faculty approval at the end of the first semester. Students will meet weekly in large and small groups, as well as frequent individual sessions with their advisors, receiving and providing feedback, working on staging, choreography and arrangements, and, later, assisting in the production design as well. Improvisation will play a central role in the development of concept and specific songs from character driven work. 1 undergraduate hour. No graduate credit. May be repeated to a maximum of 2 hours in separate terms. Prerequisite: Musical Theatre Repertoire (MUS 422). For BMA in Lyric Theatre majors only.

MUS 474 Vocal Repertoire I credit: 1 Hour.

Study of the standard solo literature including solo excerpts from larger works, i.e., cantata, oratorio, and opera. Supplements the student's knowledge of the literature in his/her major field. 1 undergraduate hour. 1 graduate hour. Prerequisite: Junior standing in voice, or consent of instructor and concurrent registration in MUS 481.

MUS 475 Vocal Repertoire II credit: 1 Hour.

Continuation of the study of the standard solo literature including solo excerpts from larger works, i.e., cantata, oratorio, and opera. Supplements the student's knowledge of the literature in his/her major field. 1 undergraduate hour. 1 graduate hour. Prerequisite: Junior standing in voice, or consent of instructor and concurrent registration in MUS 481.

MUS 477 Principles of Accompanying credit: 2 or 4 Hours.

Principles of accompanying singers and instrumentalists. Practical experience in accompanying and facility in sight reading for keyboard performers. 2 or 4 undergraduate hours. 2 or 4 graduate hours. May be repeated. (Summer session, 2 undergraduate or graduate hours). Prerequisite: Advanced undergraduate or graduate standing in music or music education, and consent of instructor.

MUS 478 Guitar credit: 2 to 4 Hours.

Instruction in guitar at the advanced undergraduate and graduate levels, predominantly classical. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing or above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 479 Harpsichord credit: 2 to 4 Hours.

Instruction in harpsichord at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors, junior standing or above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 480 Piano credit: 2 to 4 Hours.

Instruction in piano at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: For students in the Bachelor of Music program. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 481 Voice credit: 2 to 4 Hours.

Instruction in voice at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Primarily for music majors, junior standing and above. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 482 Organ credit: 2 to 4 Hours.

Instruction in organ at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 483 Violin credit: 2 to 4 Hours.

Instruction in violin at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 or 3 undergraduate hours. 2 or 4 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Music majors must register concurrently in MUS 250. Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 498 Percussion credit: 2 to 4 Hours.

Instruction in percussion at the advanced undergraduate and graduate level. Additional fees may apply. See Class Schedule. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 16 hours. Prerequisite: Primarily for music majors; junior standing. Passing of an audition is required prior to initial registration in any applied music course as approved by the faculty of the appropriate applied music division.

MUS 499 Proseminar in Music credit: .5 to 4 Hours.

Special preparation in specialized fields of musicology, composition-theory, performance, and music education. 0.5 to 4 undergraduate hours. 0.5 to 4 graduate hours. May be repeated to a maximum of 8 hours; undergraduate students in open studies may repeat the course unlimited times with approval of the open studies advisor. Prerequisite: Senior or graduate standing in music or music education; consent of instructor.

MUS 500 Artist Diploma Recital credit: 1 Hour.

Recital presented in partial fulfillment of requirements for the Artist Diploma. Approved for S/U grading only. May be repeated in the same term to a maximum of 2 hours. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Admission to the Artist Diploma program on the basis of an audition.

MUS 501 Grad Music History Review credit: 4 Hours.

Review of Western music history both before 1750 (MUS 501 section A) and after 1750 (MUS 501 section B). Refreshes knowledge and understanding of representative examples of repertoire as well as the historical context in which music was written. May be repeated up to 8 hours in separate terms.

MUS 502 Graduate Theory Review credit: 3 Hours.

Review of concepts from undergraduate music theory, including materials from the common practice period (50xA) and the twentieth century (50xB). Concepts studied include compositional materials and basic form and analysis. May be repeated up to 6 hours in separate terms if topics vary. Credit is not given towards graduate degrees.

MUS 504 Grad. Jazz Improv. I credit: 4 Hours.

Practical application of mid- to upper level melodic, harmonic, and rhythmic principles used in jazz improvisation. Practice in the use of jazz chord qualities, upper extensions, and upper altered extensions used in jazz. Descriptions of mid-level improvisational sequences, modal improvising, symmetric/synthetic scale usage, symmetric chord usage, and approach-note/enclosure techniques. 4 graduate hours. No professional credit. Prerequisite: Graduate standing in Jazz Performance or consent of instructor. For Graduate Jazz Performance majors only.

MUS 505 Individ Topics in Music Theory credit: 2 to 4 Hours.

Studies in specialized areas of analysis, theoretical systems, and aesthetics for composition and theory majors and cognates. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in music and consent of instructor.

MUS 506 Graduate Level Composition credit: 2 to 6 Hours.

Advanced instruction in contemporary compositional practice. May be repeated to a maximum of 16 hours.

MUS 507 Sem in Music Comp and Theory credit: 2 or 4 Hours.

Intensive study of selected topics in the fields of music composition and theory. May be repeated. Prerequisite: Graduate standing in music composition-theory, or consent of instructor.

MUS 508 Grad. Jazz Improv. II credit: 4 Hours.

The advanced application and examination of improvisational methods, device, and techniques. Study of advanced chord/scale relationships, modal harmonic concepts, harmonic analysis, patterns, linear/vertical approaches to improvising, and various jazz song forms including: advanced blues forms, asymmetrical standards, free improvisational forms, and advanced modal forms. 4 graduate hours. No professional credit. Prerequisite: MUS 504 or consent of instructor. Graduate Jazz Performance majors only.

MUS 509 Graduate Seminar in Band Conducting, History, and Literature credit: 2 Hours.

This seminar will explore current topics facing the contemporary wind band conductor. Subject matter will include but not be limited to the exploration of new literature, works for chamber winds, and an historical survey of cornerstone repertoire. There will also be a conducting component, using a chamber ensemble. 2 graduate hours. No professional credit. May be repeated to a maximum of 8 hours in separate terms, if topics vary. Prerequisite: Graduate Band Conducting Majors and Admitted Cognate Program Members Only, or with Instructor permission.

MUS 510 History of Music Theory credit: 4 Hours.

The development of theoretical concepts from antiquity through the Renaissance; a study of selected theoretical treatises written before 1550. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in musicology or composition-theory, or consent of instructor.

MUS 511 Fdns/Methods of Musicology I credit: 4 Hours.

Introduction to the field for graduate students in musicology. Includes a study of bibliographic resources and techniques; on-line and CD ROM resources; database creation and management; basic historical method; evidence and argumentation in historical research; critical reading and logical analysis; and the nature and taxonomy of musical sources. Students begin a project on the state of research on a particular subject of their choice, which is to be completed in MUS 512. Prerequisite: Graduate standing in musicology or consent of instructor.

MUS 512 Fdns/Methods of Musicology II credit: 4 Hours.

Continues materials introduced in MUS 511. Focuses on the major resources, intellectual history, theories and methodologies of ethnomusicology. Students pursue a state-of-research project on a topic relevant to their interests, selected in consultation with the instructor. 4 graduate hours. No professional credit. Prerequisite: MUS 511 or consent of instructor.

MUS 514 Musicology and Pedagogy credit: 4 Hours.

Seminar-style practicum in the teaching of undergraduate courses in Western and non-western music for musicology and non-musicology majors. Intensive review and discussion of pedagogical materials. Instruction in syllabus and lecture design, presentational and discussion styles, and use of multimedia and educational technology. Prerequisite: Graduate musicology majors or consent of instructor.

MUS 515 Topics in Vocal Music credit: 4 Hours.

Intensive or comparative study of specific repertoires of vocal music, of particular genres or styles of vocal composition or performance practice, and/or of particular vocal artists. 4 graduate hours. No professional credit. May be repeated to a maximum of 8 hours. Prerequisite: MUS 528A, graduate standing in musicology, or consent of instructor. For graduate students in Music.

MUS 516 Fieldwork and Ethnography credit: 4 Hours.

Prepares students for the various phases of preparing for and doing ethnomusicological fieldwork and ethnographic analysis and writing. Beginning with the project design and grand-writing stages, participants study and practice fieldwork techniques such as participant observations, interviewing, writing and analyzing field notes, and audio and video recording. The politics and ethics of fieldwork and ethnographic writing are considered through readings and discussion. Finally, a variety of approaches to ethnographic writing are considered through the study of finished musical ethnographies. Prerequisite: MUS 512 or consent of instructor.

MUS 517 Topics in Instrumental Music credit: 4 Hours.

Intensive or comparative study of specific repertoires of instrumental music, or of particular genres or styles of instrumental composition and performance practice, and/or of particular instrumentalists. Includes broad reading in the social and intellectual climate of the musical practices at issue; pertinent analytical approaches or paradigms; and work with relevant source materials. 4 graduate hours. No professional credit. May be repeated to a maximum of 8 hours. Prerequisite: MUS 528A (consult Class Schedule for specific section information), or graduate standing in musicology, or consent of instructor.

MUS 518 Topics in Opera History credit: 4 Hours.

Intensive study of a period or school of opera composition or of a particular aspect of the history of opera. Wide reading in the social and intellectual climate of the period concerned; literary, dramatic, and musical analysis; and work with primary sources, whenever possible. May be repeated to a maximum of 8 hours. (Summer session, 2 graduate hours). Prerequisite: MUS 528A (consult Class Schedule for specific section information), graduate standing in musicology, or consent of instructor.

MUS 519 Analytical Methods: Musicology credit: 4 Hours.

Practical, hands-on experience with and exposure to the transcription, analysis, theoretical constructs, and/or notation of music from any of the world's repertoires examined within a musicological framework and from both a synchronic and diachronic perspective. A series of case studies posing an array of technical problems encourage students to think critically about the place of theory and analysis in the history of musicology and their own work. May be repeated, as topics vary, in the same term to a maximum of 8 hours and in separate terms to a maximum of 12 hours. Students repeating should consult with the instructor before enrolling. Prerequisite: MUS 511 and MUS 512; or consent of instructor. Graduate students in music will be considered if they passed MUS 528A (consult Class Schedule for specific section information).

MUS 520 Soc Theory in Ethnomusicology credit: 4 Hours.

History of theoretical ideas and paradigms that have influenced ethnomusicology from the late 19th century through the early 21st century. Helps students to sharpen their own theoretical tools for conducting ethnomusicological research, teaching, and analysis of existing literature. Participants will study theoretical approaches from anthropology, folkloristics, sociology, semiotics, linguistics, communications, and ethnomusicology that have been influential in ethnomusicology. Participants will write a series of short papers to develop their theoretical thinking, writing, and argumentation. Prerequisite: MUS 512, or consent of instructor. Graduate students in music will be considered if they passed MUS 528A (consult Class Schedule for specific section information).

MUS 521 Hist Studies in 20thC Music credit: 2 or 4 Hours.

Seminar in contemporary music, with emphasis on the historical foundations of current trends in musical composition. May be repeated to a maximum of 8 hours. Prerequisite: MUS 528A (consult Class Schedule for specific section information), or graduate standing in musicology, or consent of instructor.

MUS 522 Special Topics Seminar credit: 4 Hours.

Intensive study of special topics in musicology, whether historical, ethnomusicological, or interdisciplinary in approach; seminar format. 4 graduate hours. No professional credit. May be repeated to a maximum of 8 hours. Prerequisite: MUS 528A or consent of instructor. For graduate students in Music; this course is intended for performance and composition majors, especially DMA students seeking advanced musicology credit.

MUS 523 Seminar in Musicology credit: 4 Hours.

Problems in historical and systematic musicology or ethnomusicology; discussions of special problems and reports on individual research. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in musicology or consent of instructor. Graduate students in music will be considered if they passed MUS 528A (consult Class Schedule for specific section information).

MUS 524 Sem in Wrks of Select Composer credit: 2 or 4 Hours.

Intensive historical and analytical study of the works of important composers; each term devoted to one composer. May be repeated to a maximum of 16. (Summer session, 2 or 4 graduate hours). Prerequisite: Graduate standing in musicology or consent of instructor. Graduate students in music will be considered if they passed MUS 528A (consult Class Schedule for specific section information).

MUS 525 Rdgs in Musicol and Mus Theory credit: 2 or 4 Hours.

Individual guidance in intensive readings in the literature of musicology or music theory, selected in consultation with the instructor and in accordance with the needs and interests of the student. May be repeated. (Summer session, 2 graduate hours). Prerequisite: Graduate standing in musicology or music theory.

MUS 526 Baroque Performance Practice credit: 4 Hours.

Study of musical performance from ca. 1600-1750; discussion of musical instruments, ornamentation, basso continuo, etc., supplemented by demonstration performances using the University's collection of instruments. Prerequisite: Graduate standing in music; for undergraduates, consent of instructor.

MUS 527 Classical Performance Practice credit: 4 Hours.

Study of musical performance of the classical period, with an emphasis on the music of Haydn, Mozart, and early Beethoven; discussion of musical instruments, ornamentation, tempo, vibrato, etc., supplemented by demonstration performances using the University's collection of instruments. Prerequisite: Graduate standing in music; for undergraduates, consent of instructor.

MUS 528 Res & Bibliography in Music credit: 2 or 4 Hours.

Introduction to basic research skills appropriate to graduate study in music. Topics include accessing library resources and online databases; citation formats and plagiarism issues; critical reading and writing; and critical editions of music. For DMA students additional topics include skills for planning and writing a large research paper; study strategies and resources; and professional skills. All DMA students will complete a draft of their proposal for a final DMA project by the conclusion of this class. Required of all incoming graduate students in the MM (2 hours of credit), except those majoring in musicology, and in the DMA (4 hours of credit). Prerequisite: If required, all remedial coursework in ESL and/or music history must be satisfied prior to enrollment.

MUS 529 Transformative Music Education credit: 2 or 4 Hours.
Music educators in all settings operate in a crosscurrent of social, musical, educational, and person values. In order to improve our professional practice and transform the profession, we need to examine society's expectations of schools, education, music and the arts as well as our own. In this course, students will learn how sociology can be used to identify and clarify these connections.

MUS 530 Critical Readings in Mus Ed credit: 1 to 4 Hours.
Independent critical readings and reflections of topics not treated in regularly scheduled courses. Includes program of approved research that culminates in a written report and/or formal presentations. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music education.

MUS 531 Psychology of Music credit: 4 Hours.
The practice of making, creating, and experiencing music studied from a psychological perspective. Covers a range of psychological issues of interest to musicians and music educator, with the aim of challenging students to consider new ways of thinking about and participating in music as a result of having developed informed approaches to their own musical development and that of others. Prerequisite: Graduate standing in music education.

MUS 532 Global Perspectives on Mus Ed credit: 4 Hours.
Examines current issues and trends within music education from both a local and global perspective. Focuses on the status and role of the music curriculum in contemporary schools and includes a critical examination of a range of evidence-based principles and approaches that govern music teaching and learning in formal and informal settings. Prerequisite: Graduate standing in music education or consent of instructor.

MUS 533 Research in Music Education credit: 2 or 4 Hours.
Examines the sources of research literature in music education, provides an overview of traditional research methodologies, and introduces terminology and procedures utilized in qualitative and quantitative research. The purpose of the course is to enable graduate students to become intelligent consumers and interpreters of the music education research literature. Prerequisite: Advanced undergraduate or graduate standing in music or music education, or consent of instructor.

MUS 534 Doctoral Research in Mus Ed credit: 4 Hours.
Considers music education research within a wider political and social context and addresses some of the dilemma and choices faced when designing and conducting research. Explores different approaches and considers theoretical and methodological issues relevant to the design and conduct of music education research. Students are expected to design a research project that will make a distinct contribution to knowledge and afford evidence of originality, either by the discovery of new evidence, or by the exercise of independent critical judgments. Prerequisite: MUS 533 or equivalent, or consent of instructor.

MUS 535 Philosophic Inquiry in Mus Ed credit: 4 Hours.
Consideration of the philosophical assumptions that have guided decisions regarding why, what, and how music is taught in schools. Assists students in placing their present values and beliefs about music learning in the context of scholarly ideas on this subject. Addresses questions such as: What is music? Why do people listen to, create, and perform music? What is music's value for individuals and society? Why teach music in school? How does music fit the large goals of schooling? How have answers to the foregoing changed over the past century? Prerequisite: Graduate standing in music or music education, or consent of instructor.

MUS 536 Soc-Cultur Inquiry Music Learn credit: 4 Hours.
Consideration of the implications of developmental and socio-contextual inquiry for enhancing music education practice, with an examination of the implications of contemporary theory for the development of more effective teaching and learning processes. Prerequisite: Graduate standing in music or music education, or consent of instructor.

MUS 538 The General Music Program credit: 2 or 4 Hours.
Concentration on contemporary practices and general music education. Overview of methodologies, historical approaches, and new trends. Additionally, students will explore and develop their own pedagogic content knowledge and general musicianship abilities (improvisation, composition, etc.) within the class setting. Prerequisite: Graduate standing in music education, or consent of instructor.

MUS 539 Music in Higher Education credit: 2 or 4 Hours.
Provides an orientation to the organization, teaching and administration of music in the college or university. Includes topics such as preparing for and securing a college/university faculty position, promotion and tenure, faculty ethics and evaluation, and personnel/personal relations. Prerequisite: Graduate standing in music or music education.

MUS 540 Graduate Wind Band Conducting credit: 4 Hours.
Examination of techniques of rehearsal, conducting, and preparation of wind band and chamber wind ensembles for concert performance. Emphasizes discussion, analysis, and preparation of selected scores for private and group lessons; as well as coaching/experience with live ensembles and select performance opportunities. May be repeated to a maximum of 16 hours. Prerequisite: MM wind band conducting students and/or consent of instructor.

MUS 541 Chor Prog in Secondary Schools credit: 2 or 4 Hours.
In-depth study of the methods, materials and literature for teaching choral music in the secondary schools. Emphasis on curriculum development, musical literacy, and advanced rehearsal techniques. Prerequisite: Graduate standing in music or music education.

MUS 542 Technology in Music Education credit: 2 or 4 Hours.
Critical exploration of technology in all aspects of music learning. Theoretical approaches, trends in software and hardware, and consideration of technologies as prosthetics of the mind are explored in a seminar format. Limited instruction in hardware and software are also included as needed. The higher amount of credit will require a major project outside of class in consultation with the instructor. Prerequisite: MUS 447; graduate standing, or consent of instructor.

MUS 543 Music Teacher Education credit: 4 Hours.
This course focuses on the issues, concepts, and processes for the development of preservice music teachers. Intended for prospective university teachers of undergraduate music education majors. Covers educational philosophy, curriculum design, methods of teaching and evaluation, and student teaching and observational experiences as they relate to undergraduate music teacher programs. 4 graduate hours. No professional hours. Prerequisite: PhD Students in Music Education, or as approved by instructor.

MUS 544 Doctoral Seminar in Music Education credit: 0 or 2 Hours.
Weekly seminar involving special topic discussions on critical issues within the profession. Required each semester for all resident doctoral students in music education during their residency. 0 or 2 graduate hours. No professional credit. Prerequisite: Graduate standing in music education.

MUS 545 Topics in Music Education credit: 1 to 4 Hours.
In-depth study of a topic or issue within music education. May be repeated. Prerequisite: Graduate standing in music education.

MUS 546 Orchestral Literature I credit: 2 or 4 Hours.

Study of orchestral and symphonic literature from about 1700 to 1850. May be repeated up to 6 hours. Prerequisite: Graduate orchestral conducting majors only; consent of instructor.

MUS 547 Orchestral Literature II credit: 2 or 4 Hours.

Study of orchestral and symphonic literature from about 1850 to the present. May be repeated up to 6 hours. Prerequisite: Graduate orchestral conducting majors only; consent of instructor.

MUS 548 Advanced Jazz Harmony I credit: 4 Hours.

A survey of advanced improvisational theory and its conception, use, and historical lineage. Examines synthetic, symmetric, and asymmetric scales and modes generated from each. Discussion and analysis of chord symbols and their functions in asymmetric song forms. In-class demonstration by students of linear and vertical approaches to improvising on uncommon chord functions. Prerequisite: MUS 361, or placement by exam with consent of instructor.

MUS 549 Advanced Jazz Harmony II credit: 4 Hours.

Continuation of materials introduced in MUS 548. Surveys advanced improvisational theory and its conception, use, and historical lineage. Examines use of polychords, pentatonic scales, diminished scales, and the modes generated from each. Discussion and analysis of chord functions in all song forms. Students demonstrate in class a variety of linear and vertical approaches to improvising using harmonic major scales. Prerequisite: MUS 548, or placement by exam with consent of instructor.

MUS 551 Choral Literature II credit: 2 Hours.

Survey of choral repertoire about 1750 to the present. Prerequisite: Graduate standing in music; consent of instructor.

MUS 553 Graduate Orchestral Conducting credit: 2 or 4 Hours.

Study of conducting techniques and problems related to standard orchestral literature. May be repeated to a maximum of 12 hours. Prerequisite: MUS 333 or equivalent, and consent of instructor.

MUS 556 Advanced Choral Techniques II credit: 2 or 4 Hours.

Intensive survey of choral literature with laboratory organization for reading, conducting, and interpreting choral music of all periods, styles, and voice arrangements. Prerequisite: Graduate standing in choral music or consent of instructor.

MUS 557 Piano Literature credit: 4 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 558 Vocal Literature credit: 4 Hours.

Study of solo song in larger works and solo art song. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 559 Organ Literature credit: 4 Hours.

Intensive study of organ literature from Bach to the present; includes the music itself, recordings, and collateral readings. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 560 String Instrument Literature credit: 4 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 561 Wind Instrument Literature credit: 4 Hours.

Survey of solo and ensemble wind literature; includes analysis and performance (when possible) of the music itself, recordings, and collateral readings. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 562 Percussion Instruments Lit credit: 4 Hours.

Survey and analysis of the field of solo and ensemble percussion literature; includes analysis and performance (when possible) of the music itself, recordings, and collateral readings. May be repeated to a maximum of 8 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 563 Hist of Voc Ens and Chor Music credit: 2 Hours.

Critical and analytical study of vocal ensemble and choral music from the Middle Ages to the present. May be repeated to a maximum of 8 hours. Prerequisite: MUS 551 or equivalent, or consent of instructor.

MUS 564 Choral Conducting Project credit: 2 Hours.

Participation in a graduate choral conducting laboratory and preparation of a choral ensemble for public performance. Required during the final term in residence for candidates in the Master of Music in choral music curriculum. Prerequisite: Consent of instructor.

MUS 565 Adv Choral Perform Techniques credit: 2 Hours.

Study of performance problems and musical analysis of choral music with techniques of preparation and rehearsal from the various style periods: Renaissance, Baroque, Classic-Romantic, and Contemporary. May be repeated to a maximum of 8 hours. Prerequisite: Admission into the Doctor of Musical Arts choral music program, or the equivalent background in other doctoral programs.

MUS 566 Graduate Applied Jazz Instruc credit: 2 to 4 Hours.

Instruction at the graduate level in voice or in instruments normally associated with the jazz idiom. May be repeated to a maximum of 20 hours. Prerequisite: Successful performance audition for the jazz faculty.

MUS 567 Adv Instrument: Chamber/Symph credit: 2 or 4 Hours.

Orchestration for chamber and symphony orchestras; works of Classical, Romantic, and Contemporary composers. Prerequisite: Undergraduate course in instrumentation.

MUS 569 Music Education Thesis credit: 2 Hours.

Completion of Master of Music Education thesis in approved area of study. 2 graduate hours. No professional credit. Prerequisite: MUS 533.

MUS 570 Prac Pno Tchg Child and Teens credit: 4 Hours.

Student teaching of group piano and musicianship classes for elementary, middle school, and high school students; weekly seminar devoted to evaluation and improvement of teaching techniques. Prerequisite: Graduate standing in music or consent of instructor.

MUS 571 Practicum in Piano Tchg Adults credit: 4 Hours.

Student teaching of group piano for adults in the private studio, community college, and university; weekly seminar devoted to evaluation and improvement of teaching techniques. Prerequisite: Graduate standing in music or consent of instructor.

MUS 572 Doctoral Orchestral Conducting credit: 4 Hours.

Advanced study in orchestral conducting performance, pedagogy, score study/analysis, and rehearsal techniques. May be repeated to a maximum of 16 hours. Prerequisite: Admission into the doctoral concentration in orchestral conducting; consent of instructor.

MUS 573 Doctoral Wind Band Conducting credit: 4 Hours.

Advanced study in wind band conducting performance, pedagogy, score study/analysis, and rehearsal techniques. May be repeated to a maximum of 16 hours. Prerequisite: Admission into the doctoral concentration in wind band conducting; for doctoral cognate students, consent of instructor.

MUS 574 Jazz Arranging III credit: 4 Hours.

Advanced arranging styles and orchestration techniques, with emphasis on brass section arranging, saxophone section arranging, and big band arranging. Orchestration techniques with emphasis on band planing (parallelism), 5-part spread, cluster voicings, and line-writing. Study of jazz related re-harmonization techniques with emphasis on tonicization, secondary dominants, and passing chord re-harmonization. Prerequisite: MUS 363, or placement by exam/portfolio with consent of instructor.

MUS 575 Jazz Arranging IV credit: 4 Hours.

Continued practice and examination of arranging applications for advanced re-harmonization techniques, including tonicization, secondary dominant re-harmonizations, and passing chord re-harmonizations. Score study of advanced voicing techniques, including 5-part spread, whole and half-step planing (parallelism), and modal line-writing. Advanced notation software is introduced and applied in the classroom. Includes discussion of practical application of jazz arranging in a modern music business context. Prerequisite: MUS 574, or placement by exam/portfolio with consent of instructor.

MUS 576 Doctoral Projects credit: 0 to 16 Hours.

Special projects for candidates for the Doctor of Musical Arts degree. Open only to students in the Doctor of Musical Arts program. Approved for S/U grading only. May be repeated. (Summer session, 0 to 8 graduate hours). Prerequisite: Consent of instructor.

MUS 577 Advanced Accompanying credit: 4 Hours.

Principles of accompanying singers and instrumentalists, practical experience in accompanying, and facility in sight reading for keyboard performers. May be repeated to a maximum of 12 hours. Prerequisite: Graduate standing in music or consent of instructor.

MUS 579 Graduate Level Harpsichord credit: 2 to 5 Hours.

Selected studies from the masterworks of harpsichord literature. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for appropriate faculty members of the Organ/Harpsichord Division.

MUS 580 Graduate Level Piano credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the piano faculty.

MUS 581 Graduate Level Voice credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the voice faculty.

MUS 582 Graduate Level Organ credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Selected studies from the masterworks of organ literature. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for appropriate faculty members of the Organ/Harpsichord Division.

MUS 583 Graduate Level Violin credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the string faculty; concurrent registration in MUS 450 section K for students in the Master of Music curriculum in strings.

MUS 584 Graduate Level Viola credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the string faculty; concurrent registration in MUS 450, section K, for students in the Master of Music curriculum in strings.

MUS 585 Graduate Level Cello credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the string faculty; concurrent registration in MUS 450 section K for students in the Master of Music curriculum in strings.

MUS 586 Graduate Level Double Bass credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the string faculty; concurrent registration in MUS 450, section K, for students in the Master of Music curriculum in strings.

MUS 587 Graduate Level Harp credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the string faculty.

MUS 588 Graduate Level Flute credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 589 Graduate Level Clarinet credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 590 Graduate Level Oboe credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 591 Graduate Level Bassoon credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 592 Graduate Level Saxophone credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 593 Graduate Level Trumpet credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 594 Graduate Level Horn credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 595 Graduate Level Trombone credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 596 Graduate Level Euphonium credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 597 Graduate Level Tuba credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the appropriate applied music faculty.

MUS 598 Graduate Level Percussion credit: 2 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated to a maximum of 20 hours. Prerequisite: Graduate standing in music, or successful completion of a qualifying audition for the percussion faculty.

MUS 599 Thesis Research credit: 0 to 16 Hours.

Research in special projects. Approved for S/U grading only. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

Natural Resources & Environ Sc (NRES)

NRES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NRES>)

Courses

NRES 100 Fundamentals of Env Sci credit: 3 Hours.

Introduction to environmental sciences and current environment issues. Topics include population growth, world food supplies, agriculture and the environment, biodiversity, fossil fuels and "green" energy issues, endangered and threatened species, water use, conservation and pollution, global warming, acid rain, ozone depletion, waste management and reduction, recycling, toxins and health, mineral resources, and environmental policies and regulations. Course addresses the complex relationships between the human race and the natural systems that contain our air, water, energy, and biotic and food resources. Credit is not given for both NRES 100 and NRES 102.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences

NRES 101 Wildlife Conserv 21st Century credit: 3 Hours.

This course is an introduction to the conservation, diversity and ecology of animals. The diversity of fish, reptiles, amphibians, mammals, and birds both around the world and in Illinois will be explored. The course will have a strong conservation component where students are introduced to a variety of threats facing animals. The students will be introduced to how to manage sustainable wildlife populations. The students will be exposed to current issues in Illinois to illustrate how people and animals can co-occur and a broad overview of the management, restoration, and conservation techniques.

NRES 102 Introduction to NRES credit: 3 Hours.

Introduction to natural resources (forests, fisheries, soils, aquatic systems) and environmental science. Emphasizes renewable natural resources, ecological concepts, energy use, biodiversity of species, biogeochemical cycles, and air, water, and soil pollution. Provides natural science basis for understanding contemporary environmental issues and natural resource management. Credit is not given for both NRES 100 and NRES 102.

NRES 103 The Great Lakes - Freshwater Wonder at Risk credit: 3 Hours.

Introduction to the ecology of freshwater systems, viewed through the lens of the Great Lakes and associated tributaries. The Great Lakes hold 20% of the world's freshwater and 95% of the freshwater in North America. They have sustained human and wildlife populations for at least 10,000 years. Now, the integrity of this unique and priceless resource is threatened as never before. This eight-week online course will enhance student understanding of the ecology of this imperiled system, as well as the historical events and policies that have led to the present crisis, and the men and women who have played key roles in this unfolding story.

NRES 108 Env Sc & Nat Resource Careers credit: 1 Hour.

Explores career options in the fields of Natural Resource Management and Environmental Sciences. Students will improve understanding of their career goals, expand their knowledge of careers available in these fields, improve their job searching skills, and develop a plan for pursuing a career. Approved for S/U grading only.

NRES 109 Global Environmental Issues credit: 3 Hours.

Discussion course that focuses on analyzing opposing points of view on contemporary environmental issues. Students engage in role-playing activities, debates, and other participatory activities to explore the ecological and social dimensions of the issues.

NRES 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in natural resources and environmental sciences. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

NRES 201 Introductory Soils credit: 4 Hours.

The nature and properties of soil including origin, formation, and biological, chemical, and physical aspects. Prerequisite: Successful completion of MATH 234, or equivalent and CHEM 102 is required. CHEM 104 is recommended.

NRES 202 American Environmental History credit: 3 Hours.

Same as ESE 202 and HIST 202. See HIST 202.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

NRES 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ECON 210, ENVS 210, and UP 210. See ACE 210.
This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

NRES 219 Principles of Ecosystem Mgmt credit: 3 Hours.

The principles of ecosystem management are based in ecology, which is the branch of science that explores how organisms interact with their environment. In this course, students will learn about ecological principles that are the foundation for understanding biological systems on many different levels of organization. Topics include abiotic influences on organisms, energy acquisition, population ecology, species interactions, biological communities, and ecosystem ecology. Particular attention is given to integrating these basic principles into a better understanding of ecology in a world that is increasingly dominated by human activities. Completion of a prior course in biology, zoology, or botany is recommended.

NRES 220 Communicating Agriculture credit: 3 Hours.

Same as AGCM 220 and ENVS 220. See AGCM 220.

This course satisfies the General Education Criteria for:
Advanced Composition

NRES 223 Watching the Environment credit: 3 Hours.

Same as MDIA 223. See MDIA 223.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

NRES 242 Nature and American Culture credit: 3 Hours.

Same as HIST 282, LA 242, and RST 242. See RST 242.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

NRES 270 Applied Entomology credit: 3 Hours.

Same as CPSC 270 and IB 220. See CPSC 270.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

NRES 276 Introduction to Field Pedology credit: 2 Hours.

Laboratory and field course involving description, interpretation, and classification of soil profiles. Several day, overnight field trip required; fee required. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 4 hours. Prerequisite: NRES 201.

NRES 285 Field Experience credit: 1 or 2 Hours.

Field based course that exposes students to procedures and methods used in various resource settings in a hands-on manner. Includes weekly field trips to visit representative natural resource and environmental science settings with supporting laboratory exercises. Content of offerings vary by section, but all focus on resource management, environmental quality and assessment, and effects of consumption and use on the environment. Field trips required. Additional fees may apply. See Class Schedule. May be repeated in the same or subsequent semesters to a maximum of 6 hours. Prerequisite: NRES 201 and NRES 219.

NRES 287 Environment and Society credit: 3 Hours.

Examination of the relationship between environment and society and implications for ecological and human well-being. Social science perspective covered on topics such as environmental change, environmental decision-making, natural resource management, agricultural systems, and environmental risks, hazards, and disasters. Students will build critical thinking skills focused on contemporary problems in the interface between people and the physical environment. Same as ESE 287, GEOG 287, and PS 273. Prerequisite: NRES 102 and sophomore or higher standing. Introductory social science course recommended.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

NRES 293 Professional Internship credit: 1 to 4 Hours.

Off-campus experience in a field directly pertaining to a subject matter in natural resources and environmental sciences. Approved for Letter and S/U grading. May be repeated in separate terms up to 4 hours. Prerequisite: Consent of academic advisor or Department Internship Coordinator.

NRES 294 Resident Internship credit: 1 to 4 Hours.

Supervised, on-campus, learning experience with faculty engaged in research. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of academic advisor or Department Internship Coordinator.

NRES 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

NRES 298 Undergraduate Seminar credit: 1 to 3 Hours.

Group discussion on a special topic in a field of study directly pertaining to subject matter in natural resources and environment sciences. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing.

NRES 302 Dendrology credit: 4 Hours.

Emphasizes nomenclature, classification, and the distinguishing morphological characteristics of the native and naturalized tree species of North America. Introduces disciplines related to the systematics of tree species, including: morphology, physiology, phenology, ecology, soil-site relationships, silviculture, geographic range and natural distribution, wood characteristics, economic uses, and natural history (including major diseases and insect pests). Incorporates tree and forest habitats that provide cover, breeding sites, and food for a variety of wildlife species. Serves as a basis for studies in natural resources management, environmental science, and for advanced studies of botany, genetics, and tree physiology. Field trips required. Additional fees may apply. See Class Schedule. Prerequisite: IB 103.

NRES 310 Natural Resource Economics credit: 3 Hours.

Same as ACE 310 and ENVS 310. See ACE 310.

NRES 325 Natural Resource Policy Mgmt credit: 3 Hours.

Explores policy processes and institutions relating to allocation, utilization, and preservation of natural resources. Considers conceptual models of policy processes, and examines both historical examples and current issues. Prerequisite: ECON 102 or ACE 100.

NRES 330 Environmental Communications credit: 3 Hours.

Same as AGCM 330 and ENVS 330. See AGCM 330.

NRES 340 Environ Social Sci Res Meth credit: 3 Hours.

Introduction to social science research methods for addressing environmental issues. It provides basic information about social science concepts and methods (especially observation, surveys, focus groups, and interviews), helps students become informed users of social science research, and guides selection of appropriate social science tools to meet environmental challenges. A group focus on a local environmental issue offers a practical experience in which course content is applied within a specific community context. Field trips within the local community may be required. Additional fees may apply. See Class Schedule. Prerequisite: STAT 100 or equivalent.

NRES 348 Fish and Wildlife Ecology credit: 3 Hours.

Application of ecological principles and modeling to management of fish and wildlife populations; significance of abiotic and biotic factors, including life-history parameters in population growth and management; and techniques and procedures for the development of management strategies for animal populations, emphasizing vertebrates. A course in statistics is highly recommended. Same as IB 348. Prerequisite: IB 203 or NRES 219.

NRES 351 Introduction to Environmental Chemistry credit: 3 Hours.

Introduces major inorganic and organic chemical pollutants, their sources and their fates in the atmosphere, hydrosphere and pedosphere. In particular, the course covers 1) translocation/distribution of chemicals in the environment, and 2) abiotic and biotic transformation of chemicals (e.g., photochemical reactions, hydrolysis, redox, adsorption and volatilization). Geared towards students in agricultural, natural, environmental and life science majors. Prerequisite: Successful completion of MATH 234 (or equivalent) and CHEM 104 is required. One semester of organic chemistry (CHEM 232 or CHEM 236) is recommended.

NRES 352 Plant Genetics credit: 4 Hours.

Same as CPSC 352. See CPSC 352.

NRES 362 Ecology of Invasive Species credit: 3 Hours.

Focused on the ecology and management of biological invasions, with an emphasis on understanding the introduction, establishment, spread and impact stages of the invasion process. Students will identify the causes and impacts of biological invasions, as well as management strategies for preventing new invasions and mitigating impacts of established invaders in freshwater, marine, and terrestrial ecosystems. No special equipment will be required, and any optional, weekend field trips will occur on campus. Prerequisite: NRES 219 or similar introductory course in ecology.

NRES 368 Vertebrate Natural History credit: 4 Hours.

Same as IB 368. See IB 368.

NRES 370 Environmental Sustainability credit: 3 Hours.

Same as ENSU 300 and LA 370. See LA 370.

NRES 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated in the same or subsequent terms. No more than 12 hours of special problems, research, thesis and/or individual studies may be counted toward degree. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

NRES 401 Watershed Hydrology credit: 3 Hours.

Precipitation, evapotranspiration, stream flow, and other aspects of the hydrologic cycle are studied in a watershed context. Measurement techniques, statistical analyses of hydrologic data, and simulation modeling are discussed. Case studies that quantify water movement in specific watersheds are used to integrate course topics. Same as GEOG 401. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102, completion of the Quantitative Reasoning I requirement, and completion of the statistics requirement.

NRES 403 Watersheds and Water Quality credit: 3 Hours.

Examines water quality in streams, rivers, lakes, and wetlands. The responses of watershed systems to pollution and other human impacts will be described in terms of their biological, geochemical, and physical processes. The technical analyses necessary to establish policies aimed at preserving or restoring these natural resources will be emphasized. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of CEE 330, CHEM 232, NRES 351; one of MATH 220, MATH 221, MATH 234.

NRES 406 Fluvial Geomorphology credit: 4 Hours.

Same as GEOG 406 and GEOL 406. See GEOG 406.

NRES 407 Wildlife Population Ecology credit: 4 Hours.

This course includes the application of principles of population biology to the analysis, management, and conservation of wildlife populations, models of population growth, spatio-temporal variation in abundances, estimation of demographic parameters and methods of decision-making. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 348. One semester of calculus or statistics is recommended.

NRES 409 Fishery Ecol and Conservation credit: 4 Hours.

Ecological and conservation concepts are applied to fisheries management practices. Will discuss current literature related to the interface between basic and applied aspects of fish populations, focusing on life history, conservation biology and genetics, growth and recruitment, competition, predation, trophic and community ecology, ecosystem management, and human dimensions. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 348.

NRES 415 Native Plant ID and Floristics credit: 4 Hours.

Focuses on gaining skills in identification of native vascular plants in the field and classroom. Methods of plot-based and plotless vegetation sampling methods will be introduced. Procedures and applications for botanical inventory and assessment will be covered. Field trips are required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Credit is not given for NRES 415 if credit for CPSC 416 has been earned.

NRES 416 Forest Biology credit: 3 Hours.

Interactions of biotic and abiotic components of forests as they relate to the health, structure and function of these ecosystems. The course is ecophysiological and organismic in approach, but includes biochemical concepts central to the understanding of forest biology. Lecture-discussion combined with assigned readings, field projects, and a paper. One Saturday field trip required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 419 and NRES 302 or HORT 301.

NRES 418 Wetland Ecology & Management credit: 3 Hours.

Wetlands are important ecosystems that support high biodiversity and provide numerous benefits to society. This course provides a comprehensive examination of wetland science, management, and governance. Lectures, readings and class discussions will focus on the structure and processes of wetland ecosystems, wetland biota, wetland conservation and management, and U.S. and international wetland policies. Special emphasis will be placed on the application of wetland science to policy and restoration. Offered in alternate years. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and NRES 219, or consent of instructor.

NRES 419 Env and Plant Ecosystems credit: 3 Hours.

Relationships among environmental factors and plant processes and functions; impact of human activities on the environment and the structure and function of plant ecosystems. Examples will be drawn from a variety of managed and unmanaged plant ecosystems. Field trip required. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or LA 450 or IB 103 and CHEM 104 or NRES 201.

This course satisfies the General Education Criteria for:
Advanced Composition

NRES 420 Restoration Ecology credit: 4 Hours.

Historical development of ecological restoration, its philosophical foundation, multi-disciplinary borrowings from the natural, applied, and social sciences, and varied practical applications, with emphasis on the application of ecological principles. Case studies, field trips, and laboratory activities on restoration planning. Field trip required. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 219 or LA 450.

NRES 421 Quantitative Methods in NRES credit: 3 Hours.

Explores the fundamental principles, procedures, and practices that underlie the most common statistical and sampling methods used in natural resources and environmental sciences. This course covers hypothesis testing, regression, and analysis of variance. There is also a strong focus on sampling theory and experimental design. Computer labs utilize the open source R statistical computing environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of MATH 220, MATH 221, MATH 234; completion of the statistics requirement.

NRES 422 Earth Systems Modeling credit: 4 Hours.

Same as ATMS 421, ESE 421, GEOG 421 and GEOL 481. See ATMS 421.

NRES 423 Politics of International Conservation and Development credit: 3 Hours.

Conserving the earth's rich biological heritage while enhancing the well-being of the poor stands as a critical global challenge. This course examines this complex issue using the lens of political science and allied fields. Readings, discussion, and written work will demonstrate how insights and approaches from these areas of scholarship can help understand and address the twin problems of biodiversity loss and human poverty in developing countries. Examples focus on forest and wildlife conservation and management. Same as GEOG 423. 3 undergraduate hours. 3 graduate hours. Prerequisite: One 200 or 300 level social science course or consent of instructor. Junior standing required.

NRES 424 US Environ, Justice & Policy credit: 4 Hours.

In the course students will: (a) write about the roles that race, class, and other social differences play in shaping human-environment relationships, (b) understand the role of the Environmental Protection Agency in considering environmental justice in policy, and (3) identify ways that policies for ecological sustainability can be configured to improve the equity of environmental and natural resource decision-making. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior class standing.

NRES 425 Natural Resources Law & Policy credit: 3 Hours.

Using the case study method and discussion problems, students in this course will study how laws in the U.S. regulate the use of natural resources, including public ownership and preservation of natural resources through other federal and state public lands. Also examines major federal environmental statutes designed to protect natural resources, including the Clean Water Act, the Endangered Species Act, the National Environmental Policy Act, and federal acts related to forest, national parks, and wilderness protection. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

NRES 426 Renewable Energy Policy credit: 3 Hours.

Considers how policies can be designed to optimize economic, environmental, and social solutions to transforming the world's unsustainable energy production, distribution, and consumption paradigm. Provides an up-front primer on climate change policy in the U.S., Europe, and internationally, which have become the primary driver of sustainability initiatives in the energy sector. Examines policies that define "renewability" within various energy sectors including fossil fuels (e.g., coal, natural gas, petroleum), biofuels, nuclear power, hydropower, wind, solar, geothermal, and wave energy. 3 undergraduate hours. 3 graduate hours. Prerequisite: Junior standing.

NRES 427 Modeling Natural Resources credit: 4 Hours.

Examines basic modeling concepts and methods. Modeling skills, model development, and natural resource issues and problems will be emphasized. Content areas include fisheries, forests, wildlife, economics, human dimensions, groundwater and surface water. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of MATH 220, MATH 221, MATH 234.

NRES 429 Aquatic Ecosystem Conservation credit: 3 Hours.

Application of the principles of aquatic ecology to a broad range of conservation issues. The structure and function of aquatic systems are discussed from an ecosystem perspective, including the major threats and disturbances to aquatic ecosystems. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102 and PHYS 101 or PHYS 140, and MATH 220 or MATH 221 or MATH 234, and IB 203 or NRES 219.

NRES 430 Comm in Env Social Movements credit: 3 Hours.

Same as AGCM 430, ENVS 430, and SOC 464. See AGCM 430.

NRES 431 Plants and Global Change credit: 3 Hours.

Same as CPSC 431 and IB 440. See CPSC 431.

NRES 438 Soil Nutrient Cycling credit: 3 Hours.

The ecology of decomposition and plant nutrient acquisition in terrestrial soils will be addressed using applied ecology concepts. Discussion will focus on the scientific literature addressing biological, physical, and chemical controls over nutrient availability in soils. Writing assignments will teach students to summarize scientific literature. Students will learn about analytical and quantitative methods used in this field of study and gain the interpretive and communication skills needed to assess and/or carry out applied research in plant and soil science arenas. Same as CPSC 438. 3 undergraduate hours. 3 graduate hours. Offered in alternate years. Prerequisite: IB 203 or NRES 219, and NRES 201.

NRES 439 Env and Sustainable Dev credit: 3 Hours.

Comprehensive overview and synthesis of global environmental problems and their relationships to human activities, with a focus on ecological and natural resource elements. Concerns include unsound ethics and concepts of development and modernization, the lack of motivation or funding to implement available technical solutions, the promotion of alternative development ethics, and a review of opportunities to maintain or improve the well-being of people, other organisms, and the environment. Same as CPSC 439. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or ACE 210.

NRES 440 Applied Statistical Methods I credit: 4 Hours.

Same as ABE 440, ANSC 440, CPSC 440, and FSHN 440. See CPSC 440.

NRES 441 Biogeography credit: 3 Hours.

Same as ANTH 436, ESE 439, GEOG 436 and IB 439. See IB 439.

NRES 442 Mammalogy credit: 4 Hours.

Same as IB 462. See IB 462.

NRES 445 Statistical Methods credit: 4 Hours.

Same as ABE 445 and ANSC 445. See ANSC 445.

NRES 446 Sustainable Planning Seminar credit: 4 Hours.

Same as GEOG 446, LA 446, and UP 446. See LA 446.

NRES 452 Community Ecology credit: 3 Hours.

Same as IB 453. See IB 453.

NRES 454 GIS in Natural Resource Mgmt credit: 4 Hours.

Geographic Information Systems (GIS) and remote sensing for natural resource management. Personal computers and GIS software are used to demonstrate the utility of these techniques for data acquisition, image processing, and map modeling. Exercises include problems relevant to the management of natural resources such as land cover mapping, monitoring, suitability and productivity assessment, landscape pattern analysis, land use change analysis, spatial modeling, and decision making. 4 undergraduate hours. 4 graduate hours.

NRES 455 Adv GIS for Nat Res Planning credit: 2 Hours.

Examines the application of Geographic Information Systems (GIS) to natural resource planning and decision making. Integrates principles of decision making in various contexts: public and private, single and multiple criteria, and various forms of management constraints. Management alternatives are then incorporated into a GIS system for further review and analysis. Course combines GIS software with computer-based optimization and quantitative decision making models. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: GEOG 479 or NRES 454.

NRES 456 Integrative Ecosystem Mgmt credit: 3 Hours.

Examines ecological and human dimensions of ecosystem management through case studies in settings such as the Pacific Northwest, Southwest, Great Lakes, Gulf Coast, and Mississippi River Basin ecosystems. Capstone course for seniors in the NRES major. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: Senior standing; NRES 219 and NRES 287.

NRES 460 Aerial Photo Analysis credit: 3 or 4 Hours.

Same as GEOG 460. See GEOG 460.

NRES 461 Ornithology credit: 4 Hours.

Same as IB 461. See IB 461.

NRES 462 Ecosystem Ecology credit: 3 Hours.

Same as ESE 452 and IB 452. See IB 452.

NRES 463 Ichthyology credit: 4 Hours.

Same as IB 463. See IB 463.

NRES 464 Herpetology credit: 4 Hours.

Same as IB 464. See IB 464.

NRES 465 Landscape Ecology credit: 3 Hours.

Introduction to the theory, methods, and application of landscape ecology, with an emphasis on characterizing heterogeneity and examining its consequences for ecological processes across a variety of spatial and temporal scales. Special attention will be given to the role of natural and human disturbances in shaping spatial patterns. Laboratory exercises are computer-based and focus on concepts and tools in landscape ecology. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 219 or equivalent, NRES 454 or equivalent.

NRES 471 Pedology credit: 3 Hours.

The science of soil genesis, classification, and morphology. Includes factors of soil formation, properties and methods used in distinguishing soils, interpretation of soil profiles and soil stratigraphy, causes of soil variability, and the impact of soil properties upon soil management, land-use decisions, and the environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 472 Environmental Psychology credit: 4 Hours.

Theory and research in environmental psychology. Topics include environmental perception, cognition, experience, values and emotion, perceived environmental quality, environmental hazards and risk perception, and conservation attitudes and behavior. Same as PSYC 472. 4 undergraduate hours. 4 graduate hours. Prerequisite: Jr. standing: PSYC 100 or PSYC 103.

NRES 473 Soil Testing Practicum credit: 2 or 3 Hours.

Chemical procedures useful in assessing soil/plant relationships for field crops. Topics include agronomic principles, field sampling, performance of soil tests, interpretation of analytical results, and formulation of nutrient management programs. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Field trip required. Additional laboratory work and consent of instructor required for 3 hours. Prerequisite: NRES 201.

NRES 474 Soil and Water Conservation credit: 3 Hours.

Application of principles of soil conservation and management to the solution of land-use problems; influence of soil characteristics on erosion control, cropping intensity, water management, and land-use planning. Includes a field trip. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 475 Environmental Microbiology credit: 3 Hours.

Introduction to the diversity of microbial populations and their important role in environmental processes in air, water, soils, and sediments. Microbial community ecology and interactions with plants and animals will also be discussed. Students will learn how microbial activities sustain natural ecosystems and contribute to environmental quality, and also how these functions are harnessed to support managed and artificial systems. Molecular biology techniques for investigating microbial communities and their activities will also be discussed. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and CHEM 104.

NRES 477 Introduction to Remote Sensing credit: 3 Hours.

Same as GEOG 477. See GEOG 477.

NRES 478 Environmental Stable Isotopes credit: 3 Hours.

Same as ATMS 422, GEOL 488, and IB 488. See IB 488.

NRES 485 Stream Ecosystem Management credit: 4 Hours.

This course relates the structure and function of streams and rivers to challenges and opportunities in their conservation, management, and restoration using a combination of readings, discussions, and field trips to study sites. Students will develop an integrative understanding of stream and river ecosystem management from the site to watershed scale on issues spanning from nutrient pollution, to the natural flow regime, to the design and implementation of freshwater protected areas. No special equipment will be required. Three required field trips will occur on or near campus. Additional fees may apply. See Class Schedule. 4 undergraduate hours. 4 graduate hours. Prerequisite: NRES 219 or similar introductory course in ecology.

NRES 487 Soil Chemistry credit: 3 Hours.

Emphasizes inorganic reactions involved in soil development and plant nutrition in soils; topics include colloid systems, properties of water, ion exchange equilibria, plant nutrient forms, and methods of analyses. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201 and CHEM 104.

NRES 488 Soil Fertility and Fertilizers credit: 3 Hours.

Provides a broad-based understanding of the basic principles of soil fertility and their application. Coverage includes the occurrence, cycling, and plant availability of the essential mineral nutrients in soils; fertilizer sources, soil reactions, and efficiency; evaluating fertilizer and lime needs; methods of fertilizer application; and the economics of fertilization. Same as CPSC 488. 3 undergraduate hours. 3 graduate hours. Prerequisite: NRES 201.

NRES 489 Physics of Plant Environments credit: 4 Hours.

The physics of transport processes in the soil and aerial environment of plants; exchanges of energy and gases in crop canopies, and the retention and flow of water, gases, solutes, and heat in soils. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 101 or PHYS 140; one of MATH 220, MATH 221, MATH 234; NRES 201.

NRES 490 Surface Water System Chemistry credit: 4 Hours.

Examines the interaction of chemical and biological processes that govern the chemistry of streams, lakes, and wetlands, and the response of aquatic organisms to pollution. Chemical equilibrium and kinetic principles are used to analyze the behavior of surface water systems through the use of models. Topics include modeling of field studies in environmental inorganic chemistry and biogeochemistry. The laboratory section will be devoted to instruction in the use of computer models and to their practical application. 4 undergraduate hours. 4 graduate hours. Credit not given for both NRES 490 and CEE 443. Prerequisite: CHEM 104; one of MATH 220, MATH 221, MATH 234.

NRES 494 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, SOC 493, UP 493. See GEOG 493.

NRES 499 Special Topics credit: 1 to 4 Hours.

Experimental course on a special topic in natural resources and environmental sciences. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 12 hours as topics vary.

NRES 500 Graduate Seminar credit: 0 to 1 Hours.

Exposure to current research and specialized topics in natural resources and environmental sciences through attending/viewing and responding to the NRES seminar series. 0 to 1 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

NRES 501 Special Problems credit: 0 to 4 Hours.

Individual studies or investigations in selected branches of horticulture, natural resources, and environmental sciences. Approved for letter and S/U grading. May be repeated. No more than 8 hours may be counted toward an MS degree.

NRES 502 Research Methods in NRES credit: 4 Hours.

Theory and practice of research methods in natural resources, ecology, and environmental sciences. Provides an overview of experimental design and sampling techniques, and includes discussions of discipline-specific statistical methods. Prerequisite: One upper division course is recommended.

NRES 503 Capstone Research Project credit: 1 to 4 Hours.

A supervised individual investigative study in selected areas of natural resources and environmental sciences relevant to the student's career preparation. Open only to NRES graduate students. A summary report of the investigation is required. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 8 hours. Credit is not given for both NRES 503 and NRES 505 or NRES 507. Prerequisite: Consent of the Academic and Research Advisors.

NRES 504 Critical Issues Recreation Mgt credit: 4 Hours.

Same as RST 502. See RST 502.

NRES 505 Capstone Internship Experience credit: 1 to 4 Hours.

A formalized learning experience in an appropriate supervised internship related to the student's career preparation in natural resources and environmental sciences. Open only to NRES graduate students. A summary report of the internship is required. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 8 hours. Credit is not given for both NRES 505 and either NRES 503 or NRES 507. Prerequisite: Consent of Academic Advisor.

NRES 507 Capstone Group Res Project credit: 1 to 4 Hours.

A supervised collaborative learning experience in which students work together to design, conduct, and present professional interdisciplinary research related to the students' career preparation in natural resources and environmental sciences. Group project may involve collaboration with outside clients, which include industry, government, and non-governmental organizations. Only open to NRES graduate students pursuing a non-thesis M.S. A project report summarizing the learning experience is required. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 8 hours. Credit is not given for both NRES 507 and either NRES 503 or NRES 505. Prerequisite: Consent of the Academic and Research Advisors.

NRES 508 Community & Natural Resources credit: 4 Hours.

Advanced discussion and analysis of theoretical and empirical approaches to the intersection of social and ecological processes at the human community level emphasizing change, conflict, management, and decision-making. Each student will complete a project applying community-related theory to a particular natural resource or environmental problem. Prerequisite: Upper-level undergraduate course or graduate course in social science related to natural resources or environmental issues in NRES, Geography, Human and Community Development, Political Science, Psychology, Recreation Sport and Tourism, Sociology, or related field.

NRES 510 Adv Natural Resource Economics credit: 4 Hours.

Same as ACE 510, ECON 548, and ENVS 510. See ACE 510.

NRES 511 Principles of Applied Ecology credit: 4 Hours.

Provides a thorough foundation of fundamental ecological principles that govern the distribution and abundance of organisms with extra attention to applied ecology as it pertains to current-day ecological problems. The approach will include lectures, discussions, hands-on evaluation and interpretation of data and experimental design presented in case studies, and design and implementation of an independent research project. Prerequisite: At least one undergraduate or graduate course in biology or ecology.

NRES 512 Discussions in NRES credit: 1 to 2 Hours.

Discussion of recent developments and current literature in natural resources and environmental sciences, with a term-long emphasis on a particular aspect of the subject matter. Approved for Letter and S/U grading. May be repeated to a maximum of 4 hours.

NRES 516 Ecosystem Biogeochemistry credit: 4 Hours.

Biological, geological, and chemical processes of forest, agricultural, freshwater and marine ecosystems. The effects of pollutants and global change on each ecosystem are addressed along with the biogeochemical interactions among ecosystems. Each student completes a detailed biogeochemical study for a particular ecosystem. A 400-level course in two or more of the following areas are recommended: soil science, aquatic science, ecology, and hydrology. Same as IB 516.

NRES 565 Spatial Ecological Modeling credit: 2 Hours.

Computer-based, spatially explicit models are useful for simulating the long-term dynamics and stability of complex ecological systems and can provide a basis for the development of tools for management support and policy advice. This course will build on landscape ecology principles and GIS skills to develop and analyze spatial ecological models. Emphasis will be on building and applying individual- and agent-based models to understand and predict how systems respond to environmental change. 2 graduate hours. No professional credit. Prerequisite: NRES 454, NRES 465, or equivalent. Graduate students only.

NRES 572 Chemistry of Soil Fertility credit: 4 Hours.

The chemistry of essential plant nutrients in soils, and their quantitative relationships to plant growth. Offered in alternate years. Prerequisite: NRES 201 and CHEM 222.

NRES 580 Solute Transport in Soils credit: 4 Hours.

Theoretical and practical aspects of modeling the fate and transport of chemicals through unsaturated soil. Topics include spatial variability (scaling theories, geostatistics), fate and coupled transport processes (adsorption, degradation, preferential flow, dispersion, advection, diffusion, volatility), and associated modeling (parameter estimation; screening, regulatory, and research models, including CDE, stochastic-convective, stream-tube, particle tracking, kinematic wave, stochastic continuum) using analytical and numerical methods. Offered in alternate years. Prerequisite: NRES 489 and MATH 342 or MATH 345.

NRES 586 Soil Organic Matter credit: 4 Hours.

Explores soil organic matter as one of the most important and integrative characteristics of terrestrial ecosystems. Topics include the nature and origin of humic and non-humic substances in soils and sediments, their critical environmental functions (chemical reactivity and role in nutrient cycling), and the primary methods (elemental analysis, spectroscopy, isotopic methods, and C and N models) used to characterize organic matter and its dynamics. Offered in alternate years. Prerequisite: CHEM 232.

NRES 590 Professionalism and Ethics credit: 2 Hours.

Same as CPSC 590. See CPSC 590.

NRES 592 Sustainable Urban Systems credit: 4 Hours.

Same as CEE 592 and UP 576. See CEE 592.

NRES 593 Statistical Methods in Ecology credit: 4 Hours.

Focuses on statistical methods used to analyze ecological data. Includes application of general and generalized linear models including use of several probability distributions such as normal, binomial, Poisson, and negative binomial. Course also focuses on mixed models and approaches for imposing structure onto the variance-covariance matrix to account for non-independence or heterogeneous variance. Emphasis throughout is on evaluating and presenting results using both traditional (p-value) and information-theoretic (AIC) approaches. 4 graduate hours. No professional credit. Prerequisite: At least one course in ecology, including basic concepts of population and community ecology, and at least one course in statistics, including basic concepts of sampling, hypothesis testing, and techniques such as t-tests, linear regression, and ANOVA (e.g., CPSC/NRES 440 or equivalent). Graduate standing or permission of instructor required.

NRES 594 NRES Professional Orientation credit: 1 Hour.

The philosophy and components of graduate education with development of the principles useful in teaching, research, and extension in horticulture, natural resources and environmental sciences. Students will be required to develop and submit a proposal describing planned research for their M.S. or Ph.D. thesis. Approved for S/U grading only.

NRES 598 Experimental Graduate Courses credit: 1 to 4 Hours.

Experimental course on a special topic in natural resources and environmental sciences. May be repeated to a maximum of 12 hours.

NRES 599 Thesis Research credit: 0 to 12 Hours.

Research conducted in various phases of horticulture, natural resources, and environmental sciences leading to a thesis in natural resources and environmental sciences. Approved for S/U grading only. May be repeated.

Naval Science (NS)

NS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NS>)

Courses

NS 100 Leadership Laboratory credit: 0 Hours.

Noncredit course designed to give the Naval ROTC student, through practical application, a better grasp of the naval science subjects taught in the classroom and a working knowledge of close order drill. Approved for S/U grading only. May be repeated.

NS 101 Introduction to Naval Science credit: 2 Hours.

Naval organization and management practices examined within the context of the naval service, command and control, organization for logistics, service and support, functions and services of major components of the Navy and Marine Corps, and shipboard organization with emphasis on management and leadership functions. Prerequisite: Consent of instructor.

NS 102 Sea Power and Maritime Affairs credit: 2 Hours.

Investigates the characteristics of sea power and their impact on the affairs of our nation; discusses those characteristics with historical and modern applications to the United States and other world powers.

NS 120 Intro to US Armed Forces credit: 3 Hours.

Same as AFAS 120 and MILS 120. See MILS 120.

This course satisfies the General Education Criteria for: Humanities - Hist Phil

NS 203 Leadership and Management credit: 3 Hours.

Introduction to principles and problems of Naval management and leadership with emphasis upon their relation to the future Naval officer.

NS 204 Navigation/Naval Operations I credit: 3 Hours.

Provides the student with an understanding of the theory and techniques of the three types of marine (nautical) navigation: piloting, electronic, and celestial. Prerequisite: Consent of instructor.

NS 303 Leadership and Management credit: 3 Hours.

Introduction to principles and problems of Naval management and leadership with emphasis upon their relation to the future Naval officer.

NS 305 Intro to Naval Engineering credit: 3 Hours.

Studies ship compartmentation, propulsion systems, auxiliary power systems, interior communications, and ship control; types, structure, and purpose of naval ships; and examines elements of ship design and ship stability. Prerequisite: Consent of instructor.

NS 306 Naval Weapons Systems credit: 3 Hours.

Introduction to concepts of naval weapons systems, their capabilities and limitations, and their individual and complementary roles in a wide variety of offensive and defensive situations. Prerequisite: Consent of instructor.

NS 307 Navigation/Naval Operations II credit: 3 Hours.

Designed to give an understanding of the concepts and use of relative motion principles, international maritime law and the rules of the nautical road, and the fundamentals of U. S. fleet organization, communication, and operations. Prerequisite: NS 204 or consent of instructor.

NS 308 Leadership and Ethics credit: 2 Hours.

Provides the student with an understanding of how personal value systems and external ethical requirements affect their leadership styles. Examines Navy organization, personnel administration procedures, human resource management programs, and military justice in terms of current management theory. Prerequisite: NS 203.

NS 321 Evolution of Warfare credit: 3 Hours.

Survey of the evolution of warfare emphasizing the philosophies and trends which have been significant in land warfare.

NS 323 Maneuver Warfare Fundamentals credit: 3 Hours.

This course prepares future military officers and other leaders for service by studying modern tactical principles, current military developments, and other aspects of warfare and their interactions with and influences on maneuver warfare doctrine. There is a specific focus on the United States Marine Corps as the premier maneuver warfighting organization. Study also includes historical influences on tactical, operational, and strategic levels of maneuver warfare practices in the current and future operating environments. Prerequisite: Advanced undergraduate standing or consent of instructor.

Neuroscience (NEUR)

NEUR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NEUR>)

Courses

NEUR 302 Applied Neuroscience credit: 3 Hours.

Same as PSYC 302. See PSYC 302.

NEUR 314 Introduction to Neurobiology credit: 3 Hours.

Same as MCB 314. See MCB 314.

NEUR 403 Memory and Amnesia credit: 3 or 4 Hours.

Same as PSYC 403. See PSYC 403.

NEUR 405 Cognitive Neuroscience credit: 3 or 4 Hours.

Same as PSYC 404. See PSYC 404.

NEUR 413 Psychopharmacology credit: 3 or 4 Hours.

Same as PSYC 413. See PSYC 413.

NEUR 414 Brain, Learning, and Memory credit: 3 or 4 Hours.

Same as PSYC 414. See PSYC 414.

NEUR 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Same as FSHN 417 and PSYC 417. See PSYC 417.

NEUR 419 Brain, Behavior & Info Process credit: 3 Hours.

Same as BIOP 419 and MCB 419. See MCB 419.

NEUR 421 Principles of Psychophysiology credit: 3 or 4 Hours.

Same as PSYC 421. See PSYC 421.

NEUR 432 Genes and Behavior credit: 3 Hours.

Same as ANTH, IB 432, and PSYC 432. See IB 432.

NEUR 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Same as PHIL 433 and PSYC 433. See PSYC 433.

NEUR 445 Cognitive Neuroscience Lab credit: 4 Hours.

Same as PSYC 445. See PSYC 445.

NEUR 450 Cognitive Psychophysiology credit: 3 or 4 Hours.

Same as PSYC 450. See PSYC 450.

NEUR 451 Neurobio of Aging credit: 0 to 4 Hours.

Same as PSYC 451 and KIN 458. See PSYC 451.

NEUR 453 Cog Neuroscience of Vision credit: 3 or 4 Hours.

Same as PSYC 453. See PSYC 453.

NEUR 461 Cell & Molecular Neuroscience credit: 3 Hours.

Same as MCB 461. See MCB 461.

NEUR 462 Integrative Neuroscience credit: 3 Hours.

Same as MCB 462. See MCB 462.

NEUR 481 Developmental Neurobiology credit: 3 Hours.

Same as MCB 481. See MCB 481.

NEUR 500 Topics in Neuroscience credit: 1 Hour.

Critical reading and discussion of current papers from the neuroscience literature, and discussion of other relevant topics such as ethics and career and professional skills development. Grading based on attendance and participation. Approved for letter and S/U grading. May be repeated to a maximum of 2 hours. Prerequisite: Enrollment in Neuroscience Ph.D. program or consent of instructor.

NEUR 508 Intro to Systems Neuroscience credit: 4 Hours.

Same as MCB 508 and PSYC 508. See PSYC 508.

NEUR 510 Advances in Behavioral Neuroscience credit: 3 or 4 Hours.

Same as PSYC 510. See PSYC 510.

NEUR 513 Survey of Neurobiology credit: 1 Hour.

Same as MCB 513. See MCB 513.

NEUR 520 Advanced Topics in Neuroscience credit: 0 or 1 Hours.

Survey of current research in modern neuroscience. 0 or 1 graduate hours. No professional credit. Approved for S/U grading only. May be repeated.

NEUR 530 Special Topics in Neuroscience credit: 1 to 4 Hours.

Discussion of current topics of interest in neuroscience; seminar or lecture format. 1 to 4 graduate hours. No professional credit. May be repeated up to 12 hours as topics vary. Prerequisite: Consent of instructor.

NEUR 590 Indiv Topics Neuroscience credit: 1 to 16 Hours.
Individual topics of research supervised by Neuroscience faculty. Usually taken in one of the eight Neuroscience concentration areas: 1) neuroanatomy, 2) neurophysiology, 3) cognitive and behavioral neuroscience, 4) neurochemistry, neuropharmacology and neurotoxicology, 5) neuroendocrinology and neuroimmunology, 6) developmental genetic and molecular neuroscience, 7) clinical and biomedical neuroscience, 8) computational neuroscience. Typically taken by students before they choose their thesis topic. Approved for S/U grading only. May be repeated in the same or subsequent terms. Prerequisite: Consent of instructor.

NEUR 598 Proseminar in Psychology credit: 0 to 4 Hours.
Same as PSYC 598. See PSYC 598.

NEUR 599 Thesis Research credit: 0 to 16 Hours.
Research on the thesis topic and preparation of the thesis. Approved for S/U grading only. May be repeated in the same or subsequent terms. Prerequisite: Consent of instructor.

Nuclear, Plasma, Radiolg Engr (NPRE)

NPRE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NPRE>)

Courses

NPRE 100 Orientation to NPRE credit: 1 Hour.
Introduction to nuclear, plasma, and radiological engineering. Demonstrations and discussion of nuclear phenomena (reactor operation, plasma behavior, and others). Experiments on radioactive decay and radiation shielding with formal laboratory report and a student project.

NPRE 101 Introduction to Energy Sources credit: 3 Hours.
Explanation of energy technologies using an elementary approach presupposing no prior scientific or technical background. Coverage of all energy sources including fossil fueled, solar, hydro, and nuclear power. Integral demonstrations and a tour of the University's power plant. Discussion of energy related incidents with emphasis on environmental, economic, and social impact. Same as ENVS 101.
This course satisfies the General Education Criteria for:
Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

NPRE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated in separate terms to a maximum of 2 times.

NPRE 201 Energy Systems credit: 2 or 3 Hours.
Patterns of energy production and utilization and technical aspects of renewable energy resources, advanced fossil fuel systems, and advanced nuclear systems. Same as GBLB 201. Prerequisite: MATH 220 or MATH 221; one of PHYS 101, PHYS 211, CHEM 104, CHEM 204, ME 300.

NPRE 241 Intro to Radiation Protection credit: 2 Hours.
Elements of radiation protection and health physics, emphasizing practical applications. Prerequisite: MATH 220 or MATH 221; one of CHEM 102, IB 150, MCB 150, PHYS 211.

NPRE 247 Modeling Nuclear Energy System credit: 3 Hours.
Applications of elementary nuclear physics in nuclear engineering. Nuclear reactor materials and components. Steady-state and transient operation of nuclear reactors. Nuclear energy removal and conversion. Radiation shielding. Prerequisite: PHYS 212; credit or concurrent registration in MATH 285.

NPRE 397 Independent Study credit: 1 to 4 Hours.
Individual investigations or studies of any phase of nuclear engineering selected by the student and approved by the department. May be repeated. Prerequisite: Consent of instructor.

NPRE 398 Special Topics credit: 1 to 4 Hours.
Subject offerings of new and developing areas of knowledge in nuclear, plasma, and radiological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

NPRE 402 Nuclear Power Engineering credit: 3 or 4 Hours.
Principles of utilization of fission energy in nuclear power engineering; includes such topics as fission processes and controlled chain reactions; nuclear reactor types, design principles, and operational characteristics; power reactor design criteria; radiation hazards and radioactive waste treatment; economics; other applications such as propulsion and research reactors. 3 undergraduate hours. 4 graduate hours. Credit is not given for both NPRE 402 and NPRE 247.

NPRE 412 Nuclear Power Econ & Fuel Mgmt credit: 3 or 4 Hours.
Quantitative analysis of the impact of the nuclear power industry; nuclear fuel cycle and capital costs for thermal and fast reactors; optimization of the use of nuclear fuels to provide the lowest energy costs and highest system performance; comparison between fossil fuel systems, fission systems, and controlled thermonuclear fusion systems. 3 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 402 or NPRE 247. Junior standing is required.

NPRE 421 Plasma and Fusion Science credit: 3 Hours.
Physics of plasmas, including particle and fluid descriptions, waves, collisions, stability, and confinement, with applications to controlled thermonuclear fusion reactors, problems in fusion engineering, and astrophysics. 3 undergraduate hours. 3 graduate hours. Prerequisite: For engineering or physical science majors with junior standing.

NPRE 423 Plasma Laboratory credit: 2 Hours.
Experiments relating to plasma engineering and fusion energy. Topics in ultra-high vacuum technology rf and dc electric plasma probes, measurements of dc and pulsed magnetic fields, dynamics of a theta pinch, and laser interferometry to measure plasma density. 2 undergraduate hours. 2 graduate hours. Prerequisite: NPRE 421 and NPRE 451.

NPRE 429 Plasma Engineering credit: 3 Hours.
Basic principles and examples for adapting and applying the plasma state to solve a number of modern engineering problems. Plasma processing of materials for microelectronics and other uses, lighting, plasma displays, and other technologies. 3 undergraduate hours. 3 graduate hours. Prerequisite: ECE 329 or PHYS 435.

NPRE 431 Materials in Nuclear Engrg credit: 3 Hours.

Development of a materials engineering background in the context of nuclear systems and radiation applications; relation of structure of materials to their physical and mechanical properties; development of phase formation and reaction kinetics from basic thermodynamics principles; charged particle interactions with surfaces; transport concepts of neutral and charged particles in matter; materials performance in nuclear and radiation applications, including radiation damage and effects. 3 undergraduate hours. 3 graduate hours.

NPRE 432 Nuclear Engrg Materials Lab credit: 2 Hours.

Experiments relating to materials applications in nuclear engineering and energy systems. Examination of topics in room and elevated temperature mechanical properties of structural materials, corrosion, physical properties, radiation damage and effects, and materials selection in design. 2 undergraduate hours. 2 graduate hours. Prerequisite: Credit or concurrent registration in NPRE 431.

NPRE 435 Radiological Imaging credit: 3 Hours.

Physical, mathematical and experimental foundations of radiological imaging techniques, such as typical sources of ionizing radiation, the interactions of radiation with matter, image formation techniques, linear systems theory applied to radiological imaging, and the techniques for tomographic image reconstruction. Includes diagnostic radiological imaging modalities, such as X-ray computed tomography (CT), single photon computed emission tomography (SPECT), positron emission tomography (PET), as well as modern X-ray imaging techniques, such as phase contrast imaging and diffraction-enhanced X-ray imaging. Provides a solid foundation for understanding of modern radiological imaging techniques, and in-depth discussions on the strengths and limitations of various modalities in application to medical, physical, security and environmental imaging. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 441 Radiation Protection credit: 4 Hours.

Sources of nuclear radiation; ionization and energy deposition in matter with an emphasis on biological systems; principles of dosimetry; determination of exposure and limits for internal and external emitters; basic shielding calculations. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 446.

NPRE 442 Radioactive Waste Management credit: 3 Hours.

Radiation and radiological concepts and measurement, the fuel cycle and waste classification, Part 61, state and federal regulations and regulatory agencies, radiochemistry and the environmental fate of radionuclides, uranium-related wastes, low-level wastes, high-level wastes, used fuel reprocessing, private fuel storage, waste package stability, risk assessment, geologic repositories, transporting radioactive wastes, decommissioning wastes, transmutation, an international perspective on radioactive waste management, and the global nuclear energy partnership. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 231; PHYS 102 or PHYS 212.

NPRE 444 Nuclear Analytical Methods Lab credit: 2 or 3 Hours.

Experiments relating to nuclear analytical methods and techniques. Emphasis on neutron activation analysis, energy dispersive x-ray fluorescence and particle spectroscopy. Use of radiation for medical and materials imaging. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Credit of 2 hours is given if NPRE 451 or equivalent has been taken. Prerequisite: CHEM 102 and NPRE 446.

NPRE 446 Radiation Interact w/Matter I credit: 3 Hours.

Experimental and theoretical foundations of interaction of neutrons, photons, and charged particles with matter. Emphasis on topics that underlie the following applications: radiation detection, biological effects and radiation dosimetry, radiation damage and nuclear materials, neutron activation analysis, and fission and fusion energy systems. Classical theory of charged particle cross sections. Introductory quantum mechanics. Exact and numerical solutions of the Schrodinger equation. Quantum theory of cross sections. Photon interactions with atomic electrons and nuclei. Radioactive-series decay. Computer assignments illustrate fundamental concepts. 3 undergraduate hours. 3 graduate hours. Credit is not given to NPRE majors for graduate hours. Prerequisite: MATH 285 and ME 300.

NPRE 447 Radiation Interact w/Matter II credit: 3 Hours.

Continuation of NPRE 446. Quantum theory of ionization of matter by charged particles. Nuclear models and structure. Alpha decay, fission and fusion reactions. Beta and gamma decay. Nuclear reactions. Radiation damage effects. Special topics. Computer assignments to illustrate fundamental concepts. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 448 Nuclear Syst Engrg & Design credit: 4 Hours.

Engineering principles underling nuclear systems designed with emphasis on nuclear power reactors. Materials for nuclear systems. Energy generation and removal in single- and two-phase flows. Reactor and component control systems and nuclear fuel reloading patterns. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285, ME 300, and NPRE 455.

NPRE 451 NPRE Laboratory credit: 3 Hours.

Radiation detection and instrumentation; radiation dosimetry and shielding; basic measurements in nuclear engineering; engineering applications; micro computer data acquisition and experimental control. 3 undergraduate hours. 3 graduate hours. Prerequisite: NPRE 446.

NPRE 455 Neutron Diffusion & Transport credit: 4 Hours.

Neutron migration, neutron slowing down and thermalization; neutron continuity equation, multigroup diffusion theory, homogeneous and heterogeneous medium, thermal and fast assemblies; numerical methods for multigroup diffusion equations; reactor dynamics perturbation theory; reactivity coefficients; introductory transport theory. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 247.

NPRE 457 Safety Anlys Nucl Reactor Syst credit: 3 or 4 Hours.

Basic safety philosophy in nuclear reactor systems; brief review of nuclear reactor systems; regulatory processes; siting considerations; safety problems related to reactor dynamics; evaluation of postulated accidents; risks associated with nuclear fuel cycle; methods of systems safety analysis. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: NPRE 402 or NPRE 247.

NPRE 458 Design in NPRE credit: 4 Hours.

Design in nuclear, plasma, and radiological engineering systems; basic principles of definition, organization, constraints, modeling and optimization of system design; case studies; class design projects applying these basic principles. 4 undergraduate hours. 4 graduate hours. Prerequisite: NPRE 448.

NPRE 461 Probabilistic Risk Assessment credit: 3 or 4 Hours.

Multidisciplinary theories and techniques of risk, safety, and reliability of complex systems and state-of-the-art Probabilistic Risk Assessment (PRA), which provides input for risk-informed decision-making for design, operation, and regulatory oversight in diverse high-consequence industries such as nuclear power, aviation, space, chemical processes, oil and gas, and healthcare. Topics include: Systematic Risk Scenario Modeling, Consequence Analysis, Bayesian Updating, Bayesian Belief Network, Binary Decision Diagram, Uncertainty Propagation, Hardware Reliability, Human Error Modeling, Failure Causal Modeling, Maintenance and Repair Modeling, Risk Importance Ranking, and Data Analytics. PRA and Reliability Engineering software codes will be utilized for assignments. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior or Graduate Standing in any Engineering Department.

NPRE 470 Fuel Cells & Hydrogen Sources credit: 3 Hours.

The role of hydrogen as a global energy form, hydrogen production by nuclear, fossil and renewable energy sources; hydrogen handling, safety; transportation and storage methods including high-pressure, cryogenic, metal hydrides and chemical hydrides; basic science and technology of fuel cells, including electrochemical processes; fuel cell thermodynamics; low- and high-temperature fuel cells; applications including portable electronics, automotive vehicles, distributed and back-up power, and space power. 3 undergraduate hours. 3 graduate hours. Prerequisite: CHEM 102, MATH 285, and PHYS 212.

NPRE 475 Wind Power Systems credit: 3 or 4 Hours.

Overview of wind energy systems; historical development, safety aspect, environmental considerations, wind properties and measurement, site selection, and wind turbine design; transmission systems considerations; mechanical, electrical, control aerodynamic and environmental engineering of modern wind turbines; fatigue failure; annual power production; economics and environmental aspects and accident prevention and mitigation; computational fluid dynamics (CFD) analysis of wind flow and blade interactions; energy storage options; hydrogen production; electrical power transmission issues; licensing issues; alternative wind energy systems; design project involving a wind farm or the construction of a specific type of wind turbine based on a wind park site visit. 3 undergraduate hours. 4 graduate hours. Prerequisite: CS 101, MATH 241; one of CHBE 421, ECE 110, ECE 205, ME 310, TAM 335.

NPRE 480 Energy and Security credit: 3 Hours.

Security and supplies of energy, mineral resources, and water. Evolution of the importance of various fuels in conflicts (including coal, oil, uranium, and natural gas) starting with the Franco-Prussian Wars. Theories of international conflict and examination of the role of individual leaders versus institutional factors in the precipitation and outcome of pivotal wars. Econometric analyses relevant to past and projected future energy use. Same as GLBL 480 and PS 480. 3 undergraduate hours. 3 graduate hours. Prerequisite: Composition I and Quantitative Reasoning I.

NPRE 481 Writing on Technol & Security credit: 3 or 4 Hours.

Development of writing skills in standard computer, desktop publishing, and electronic publishing formats. On themes such as, global and regional security environments, arms control, nuclear energy, and climate change. For graduate credit, writing projects include documentation of computational work using software appropriate for typesetting of mathematical formulas. Same as GLBL 481. 3 undergraduate hours. 3 or 4 graduate hours. 4 graduate hours with consent of instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

NPRE 483 Seminar on Security credit: 1 Hour.

Preparation of reports on a set of introductory lectures and student choices from various on-campus seminar series relevant to technology of domestic and international security and the regional and international contexts that influence the nature of security problems. Same as GLBL 483. 1 undergraduate hour. 1 graduate hour. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Composition I.

NPRE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in nuclear, plasma, and radiological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

NPRE 501 Fundamentals of Nuclear Engrg credit: 4 Hours.

Background for advanced work in nuclear engineering; problems in materials, heat transfer, and fluid flow; special emphasis on basic ideas and the mathematical similarity of problems in heat transfer, fluid flow, and neutron diffusion. Lecture-problem format. Prerequisite: NPRE 247; credit or concurrent registration in NPRE 446.

NPRE 511 Nuclear Reactor Heat Transfer credit: 4 Hours.

Selected topics in nuclear reactor heat transfer: thermal analysis of fuel elements under steady and transient operation; convective energy transport from reactor cores; two-phase flow and boiling in reactor cores; liquid metal coolant systems. Prerequisite: NPRE 501.

NPRE 521 Interact of Radiation w/Matter credit: 4 Hours.

Topics in the interaction of radiation with matter of interest to the nuclear engineering field: the kinematics, kinetics, and cross sections involved in the interaction of charged particles, electromagnetic radiation, and neutrons. Prerequisite: NPRE 446.

NPRE 522 Controlled Fusion Systems credit: 4 Hours.

Development of plasma models for fusion analysis; treatment of plasma heating and confinement with applications to current experiments; energy balances; energy extraction. Prerequisite: NPRE 421.

NPRE 529 Interact of Rad w/Matter II credit: 4 Hours.

Continuation of NPRE 521. Multiple events and computational methods of the interaction of radiation (heavy and light charged particles, electromagnetic wave, photons, and neutral particles) with matter. Same as CSE 529. Prerequisite: NPRE 521 or MSE 500.

NPRE 531 Nuclear Materials credit: 4 Hours.

Metallurgical principles applied to materials problems in nuclear engineering; topics in production of uranium, corrosion, radiation damage, fuel element fabrication, and fuel reprocessing. Prerequisite: NPRE 431.

NPRE 554 Independent Lab Investigations credit: 1 to 8 Hours.

Individual experimental investigation in areas of nuclear, plasma, and radiological engineering. May be repeated. Prerequisite: Consent of instructor.

NPRE 555 Reactor Theory I credit: 4 Hours.

Advanced development of neutron transport theory; neutron slowing-down and resonance absorption; approximations to the transport equation; direct numerical methods and other techniques of approximation theory applied to the neutron transport equation; advanced topics. Prerequisite: NPRE 455 (waived for Physics majors).

NPRE 556 Reactor Theory II credit: 4 Hours.

Advanced treatment of the theory of slow-neutron scattering, neutron thermalization, Doppler broadening, fuel depletion and fuel loadings, properties of neutron migration operators, and mathematical neutron transport theory; interpretation of related experiments; advanced topics. Prerequisite: NPRE 521 and NPRE 555 (waived for Physics majors).

NPRE 558 Advanced Design in NPRE credit: 4 Hours.

Classroom exercise in the conceptual design of a nuclear engineering system involving a synthesis of previous learning in the field of nuclear engineering and related disciplines. The design includes all necessary ingredients for the system, such as core, thermal-hydraulics, shielding, material selection, and control. Prerequisite: NPRE 448 and NPRE 501.

NPRE 560 Reactor Kinetics and Dynamics credit: 4 Hours.

Diffusion and transport neutron balances with delayed neutrons; formal development of the point reactor kinetics equations; analytic and numerical solutions of the point reactor kinetics equations; space-dependent, multigroup reactor kinetics; reactivity measurements; reactor noise analysis; advanced topics. Prerequisite: NPRE 555.

NPRE 595 Student Research Seminar credit: 1 Hour.

Seminar on current research and development activities in NPRE related fields, presented by students. 1 graduate hour. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 2 hours.

NPRE 596 Seminar in Nuclear Sci & Engrg credit: 1 Hour.

Lectures and discussions on current work in research and development in nuclear engineering and related fields by staff, advanced students, and visiting lecturers. Approved for S/U grading only. May be repeated.

NPRE 597 Independent Study credit: 1 to 8 Hours.

Individual study in areas of nuclear engineering and closely related fields not covered by regular course offerings. The work is carried out under the supervision of a member of the faculty. May be repeated. Prerequisite: Consent of instructor.

NPRE 598 Special Topics credit: 2 to 4 Hours.

Subject offerings of new and developing areas of knowledge in nuclear, plasma, and radiological engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

NPRE 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Nutritional Sciences (NUTR)

NUTR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/NUTR>)

Courses

NUTR 420 Nutritional Aspects of Disease credit: 3 Hours.

Same as FSHN 420. See FSHN 420.

NUTR 426 Biochemical Nutrition I credit: 3 Hours.

Same as FSHN 426. See FSHN 426.

NUTR 427 Biochemical Nutrition II credit: 3 Hours.

Same as FSHN 427. See FSHN 427.

NUTR 428 Community Nutrition credit: 3 Hours.

Same as FSHN 428. See FSHN 428.

NUTR 500 Nutritional Sciences Seminar credit: 0 or 1 Hours.

Discussions of current problems in nutritional sciences. Approved for S/U grading only. May be repeated. Required of all graduate students in the nutritional sciences program.

NUTR 510 Topics in Nutrition Research credit: 1 Hour.

Series of one-third term intensive courses on current topics in nutritional sciences research. Same as ANSC 525 and FSHN 510. May be repeated in the same term to a maximum of 3 hours. Prerequisite: Advanced Biochemistry.

NUTR 511 Regulation of Metabolism credit: 4 Hours.

Biochemical and molecular regulatory mechanisms of macronutrient metabolism under various physiological conditions in mammalian species, including humans. Same as ANSC 521 and FSHN 511. 4 graduate hours. No professional credit. Prerequisite: MCB 450, MCB 244, MCB 246 and FSHN 426/ANSC 520 (or equivalent courses in biochemistry, physiology and nutrition). Second year graduate standing or above, or consent of instructor.

NUTR 520 Protein and Energy Nutrition credit: 3 Hours.

Same as ANSC 520. See ANSC 520.

NUTR 523 Techniques in Animal Nutrition credit: 3 Hours.

Same as ANSC 523. See ANSC 523.

NUTR 524 Nonruminant Nutrition Concepts credit: 2 Hours.

Same as ANSC 524. See ANSC 524.

NUTR 530 Childhood Obesity I credit: 3 Hours.

Introduction of scientific evidence underlying the multifactorial causes and consequences of childhood obesity in the U.S. and worldwide. Examination of existing theories from transdisciplinary perspectives will be stressed. Same as CHLH 530, FSHN 530, HDFS 551, KIN 530, SOCW 570. Approved for letter and S/U grading.

NUTR 531 Childhood Obesity II credit: 4 Hours.

The current public health recommendations for the prevention of childhood obesity will be presented and the evidence for efficacy of existing interventions will be thoroughly examined. At the end of the semester, students will work in teams to synthesize the best practices and propose how they can be integrated into an intervention within a transdisciplinary context. Same as CHLH 531, FSHN 531, HDFS 552, KIN 531, SOCW 571. Approved for both letter and S/U grading. Prerequisite: NUTR 530.

NUTR 550 Grantsmanship and Ethics credit: 3 Hours.

Design and implementation of experimental protocols in nutrition. Examines the scientific, regulatory, and ethical context for conducting research in nutrition. The focus of the course will be the writing and evaluation of a simulated peer-reviewed grant proposal. Same as FSHN 550. 3 graduate hours. No professional credit. Prerequisite: Advanced nutritional biochemistry and statistics.

NUTR 561 Advanced Clinical Nutrition credit: 2 Hours.

Basic pathophysiological changes associated with major organ system failure and appropriate nutritional support and treatment. Provides medical orientation needed for participating in medical nutritional rounds. Same as FSHN 520. 2 graduate hours. No professional credit. May be repeated in the same term up to 4 hours and separate terms up to 8 hours. Prerequisite: Upper division course in physiology and a course in clinical nutrition.

NUTR 590 Disciplinary Seminar credit: 0 or 1 Hours.

Discussions of current research and literature pertaining to disciplinary specializations within the Division of Nutritional Sciences. 0 or 1 graduate hours. No professional credit. Approved for S/U grading only. May be repeated in the same or different terms, to a maximum of 2 hours for Masters students and 4 hours for PhD students.

NUTR 593 Individual Topics in Nutrition credit: 1 or 2 Hours.

For students majoring in nutritional sciences who wish to undertake individual studies of a nonthesis nature in problems or topics not covered in other courses; may be taken under the direction of any member of the nutritional sciences faculty, with the exception of the student's own thesis adviser. 1 or 2 graduate hours. No professional credit. May be repeated within the same or different terms to a maximum of 2 hours per degree program. Prerequisite: Consent of instructor.

NUTR 599 Thesis Research credit: 0 to 12 Hours.

Approved for S/U grading only. May be repeated.

Pathobiology (PATH)

PATH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PATH>)

Courses

PATH 190 Discovery Seminar credit: 1 to 5 Hours.

May be repeated.

PATH 290 Undergraduate Research credit: 1 to 5 Hours.

Laboratory and/or field studies selected in consultation with a faculty mentor. May be repeated to a maximum of 10 hours. Prerequisite: Consent of instructor.

PATH 394 Pathobiology credit: 1 to 4 Hours.

To be used to designate a trial or experimental course for five or more students. It is designed to be an undergraduate course. A course can be taught under this designation two times within a two-year period and cannot be renewed as PATH 394 course. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

PATH 410 Comparative Immunobiology credit: 4 Hours.

Same as ANSC 450 and MCB 442. See ANSC 450.

PATH 433 Virology & Viral Pathogenesis credit: 3 Hours.

Emphasizes basic principles of virus structure and replication, virus-cell interactions and virus-host interactions that underlie the molecular biology, pathogenesis, and transmission of viral disease. Same as MCB 433. 3 undergraduate hours. 3 graduate hours. Prerequisite: MCB 300 or MCB 354, or consent of instructor.

PATH 439 Health Applications of GIS credit: 3 Hours.

Students use spatial technologies and data to address issues of health. Topics include disease outbreak surveillance and response, environmental factors such as climate and socio-economic context, and the medical and other data needed to spatial analysis of health information. Application-based learning and class lectures are complemented by readings, guest lectures and class discussions. Geographic information system and global positioning system use is covered with examples drawn from public and veterinary health. Same as GEOG 439 and CHLH 439. 3 undergraduate hours. 3 graduate hours. Approved for letter and S/U grading. Prerequisite: An introductory statistics course such as ACE 261, CHLH 244, ECON 202, GEOG 280 or equivalent.

PATH 460 Biology of Emerging Infect Dis credit: 3 Hours.

Discusses the biology of emerging and re-emerging infectious disease pathogens; examples of various bacterial, parasitic, and viral pathogens are presented to characterize the diverse mechanisms and factors that enable these agents to emerge; possible corrective and/or preventative approaches are explored. No undergraduate credit. 3 graduate hours. Prerequisite: VM 607 or PATH 433; or consent of instructor.].

PATH 474 Principles of Epidemiology credit: 4 Hours.

Same as CHLH 474 and ENVS 474. See CHLH 474.

PATH 494 Pathobiology credit: 1 to 4 Hours.

To be used to designate a trial or experimental course for five or more students. A course can be taught under this designation two times within a two-year period and cannot be renewed as a PATH 494 course. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

PATH 511 Seminar in Prod/Pop Medicine credit: 1 Hour.

Discussion of selected topics and journal articles related to production and population medicine, i.e. health and disease control/prevention decisions that are based on improving productivity, profitability, and maintaining populations of animals. Requires presentation of a formal seminar to receive a letter grade. Same as VCM 511. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. May be repeated to a maximum of 4 hours. Prerequisite: Graduate standing in CVM; VM 608 or equivalent epidemiology course (requires third year standing in the professional curriculum) and consent of instructors; for graduate students outside CVM, consent of instructors required.

PATH 513 Biomed Grant Proposal Writing credit: 2 Hours.

The objective of this course is to develop skills in grant seeking and proposal writing. Topics include identification of funding sources, writing style, setting a timeline for proposal preparation, the components of a grant application, research compliance, scientific integrity, the review process, and strategies for dealing with critiques and proposal resubmission. Due to the nature of this course, enrollment will be limited. Prerequisite: Consent of instructor.

PATH 514 Molec Mech Bact Pathogenesis credit: 2 Hours.

Introduction of current research literature on host-microbe interactions. The molecular basis for disease arising from these interactions will be stressed. 2 graduate hours. 2 professional hours. Prerequisite: One or more 400- or 500-level courses in microbiology, immunology, or biochemistry, and consent of instructor.

PATH 515 Mechanisms Microbial Infection credit: 3 or 4 Hours.

Newer concepts of host-microorganism relations; emphasis on the dynamics and pathogenic mechanisms of microorganisms, immune responses and defense factors of the host, and pathogenesis of specific infections. Lectures, discussions, laboratory, and special problems. Prerequisite: MCB 426 or VM 605, or equivalent; consent of instructor.

PATH 516 Epidemiology Infectious Dis credit: 3 Hours.

Ecology of infection and disease; spread of disease and modes of transmission; methods of control; socioeconomic consideration; selected diseases: malaria, Lyme disease, anaplasmosis, schistosomiasis, salmonellosis, pseudorabies, AIDS. Student presentations. Prerequisite: Epidemiology class (VM 608 or equivalent), or consent of instructor.

PATH 517 Principle/Method Epidemiology credit: 4 Hours.

Course covers principles of theoretical and applied epidemiology, with examples from veterinary and human medicine. The aim of the course is to integrate epidemiologic concepts and quantitative methodology in order to evaluate disease risk and treatment options at the individual and population levels. Topics include causal inference, epidemiologic study design, evaluation of bias, outbreak investigation, and special areas within epidemiology. Same as CHLH 517. Prerequisite: Graduate student standing or consent of instructor.

PATH 518 Concepts/Topics Immunology credit: 2 Hours.

Study of newer concepts and theories in the field of immunology, with major emphasis on critical review of the primary literature. Topics include: Innate immunity, MTTc, immune regulation, tolerance, autoimmunity, antibodies, and immunopathogenesis of infectious diseases. Lectures and discussion. Same as MCB 586. Prerequisite: Consent of instructor; MCB 408 recommended.

PATH 519 Mechanisms Viral Pathogenesis credit: 3 Hours.

Lecture-discussion on topics of molecular mechanisms of viral pathogenesis. Mechanisms of infection, virulence, viral spread, interaction with the immune system, persistence and other host-parasite interactions are covered using modern literature and in depth exploration of several animal virus systems. Same as MCB 561. Prerequisite: PATH 433 or VM 607 or consent of instructor.

PATH 520 Applied Epidemiology credit: 4 Hours.

Same as CHLH 578. See CHLH 578.

PATH 524 Biostatistics credit: 4 Hours.

Application of statistical methods to epidemiology, clinical and diagnostic medicine, and laboratory biomedical experiments. Topics include descriptive statistics and graphics, reliability, sample size estimation, contingency table analysis, analysis of group differences, survival analysis, correlation and linear regression. Emphasizes use of computerized statistical software in biomedical data analysis. 4 graduate hours. 4 professional hours. Credit is not given for both PATH 524 and either CPSC 440 or EPSY 480.

PATH 525 Statistics in Epidemiology credit: 4 Hours.

Same as CHLH 527 and ENVS 527. See CHLH 527.

PATH 527 Parasitology/Epidemiology Sem credit: 1 Hour.

Discussion of selected historic and current literature related to parasitology. May be repeated to a maximum of 2 hours. Prerequisite: Credit or concurrent registration in VM 607.

PATH 528 Multivariate Biostatistics credit: 4 Hours.

The application of multivariate data analysis to biology, agriculture, and medicine. Includes principal components and factor analysis, multivariate analysis of variance, discriminate analysis, cluster analysis, and multidimensional scaling. Specific applications include clinical diagnosis, nutritional and physiological profile analysis, ecological niche analysis, and patterns of genetic relatedness using molecular genotyping. Computer exercises using standard statistical software are used throughout. Students will also have individual projects and report their analysis in class presentations. Same as IB 508. Prerequisite: A course in multiple linear regression (PATH 591 or equivalent).

PATH 541 Diseases Hemato & Lymph Tissue credit: 4 Hours.

Course covers the benign reactive and neoplastic diseases of the bone marrow and lymphoid systems. A comparative approach will be taken with diseases considered from both human and animal aspects utilizing current information on causation, genetic, phenotypic, and morphologic characteristics. Prerequisite: Graduate student standing or consent of instructor. Preference for enrollment will be given to candidates with DVM degrees or medical scholars.

PATH 542 Ocular Pathology credit: 1 Hour.

This course is aimed at veterinary pathology and ophthalmology residents. The course would also be open to interested UIUC medical students. The course involves examination and discussion of microscopic lesions of clinical veterinary ophthalmology cases through examination of clinical images, glass slides, and digital microscopic images. Students meet weekly concurrently with pathologists and ophthalmologists and either present current diagnostic cases, mystery cases, or lead a topic discussion related to ocular pathology. Same as VCM 542. 1 graduate hour. No professional credit. May be repeated in separate terms up to 9 hours, if topics vary. Prerequisite: Veterinary anatomic pathology residents or veterinary ophthalmology residents and interested UIUC medical students.

PATH 543 Necropsy for Non Path Majors credit: 1 or 2 Hours.

Course is designed to provide advanced training in veterinary diagnostic pathology for graduate students with majors other than pathology. Teaching material is drawn from diagnostic cases submitted to the Diagnostic Laboratory. Course is adapted individually for each student's major (clinical residency, laboratory animal residency, or graduate research using animals and animal samples). May be repeated to a maximum of 4 hours. Prerequisite: Graduate Veterinarian or residency status; or consent of instructor. Course restricted to graduate students or residents not majoring in pathology.

PATH 544 Immunobiological Methods credit: 3 Hours.

A number of immunobiological methods and current immunological techniques are introduced in the context of various research designs with reference to their significance, their evolution and historical value. Detailed description of protocols includes optimization of parameters and modifications of conditions to satisfy different research situations and trouble shooting. Students are required to perform the techniques, collect data, analyze results and keep records. Lab reports including documented critical assessment of the attained conclusions are required for each technique. Same as ANSC 554. Approved for letter and S/U grading. Prerequisite: VM 605 or MCB 408 or ANSC 450 and consent of instructor.

PATH 545 Vet Diagnostic Path 1 credit: 0 to 6 Hours.

Instruction in diagnostic pathology for pathology majors. Instruction based on necropsy cases with emphasis on necropsy protocol; sample collection and submission; recognition, description, and interpretation of gross and microscopic lesions; and case diagnosis based on all test results. Approved for letter and S/U grading. May be repeated to a maximum of 10 hours. Prerequisite: Graduate veterinarian, graduate student with major in pathology, and consent of instructors.

PATH 546 Vet Diagnostic Path 2 credit: 0 to 6 Hours.

Instruction in diagnostic pathology for pathology majors. Instruction based on necropsy cases with emphasis on recognition, description, and interpretation of gross and microscopic lesions; evaluation of results of other diagnostic assays; disease pathogenesis; and final case diagnosis and comments. Approved for letter and S/U grading. May be repeated to a maximum of 10 hours. Prerequisite: PATH 545 and consent of instructors.

PATH 547 Pathology Seminar credit: 0 to 1 Hours.

Review and discussion of selected pathologic and clinico-pathologic material. Students are required to participate in weekly discussions and present at least one formal seminar per semester, on a topic approved by Pathology faculty. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Credit or concurrent registration in PATH 545, and consent of instructor.

PATH 548 Toxicologic Pathology credit: 4 Hours.

Examines the morphological and biochemical aspects of cellular reactions to injury in acute and chronic toxicities; effect of selected toxic agents on target organs in relation to functional and structural changes induced. Prerequisite: VM 605 or equivalent.

PATH 549 Gross Pathology credit: 1 Hour.

This course is aimed at veterinary students and anatomic pathology residents. This is an imaged-based course where interpretation of gross lesions will be taught for organ systems of a variety of different veterinary species. Veterinary students will receive weekly orientation to gross lesions by system with an image and discussion based format, and then will take mock ACVP boards-style gross exams followed by a group discussion of the exam. Pathology residents will take mock ACVP board-style gross exams. Veterinary students meet twice a week for an 8 week block and pathology residents meet once a week for the semester. 1 graduate hour. 1 professional hour. Approved for letter or S/U grading. May be repeated in separate terms for unlimited graduate or professional hours.

PATH 550 Concepts in Pathology credit: 4 Hours.

Lectures and related discussions of selected topics in experimental and theoretical aspects of general pathology. Emphasis on interdisciplinary approach to the mechanisms of disease. Prerequisite: DVM degree or MS in Biology; consent of instructor.

PATH 551 Interpretive Cytopathology credit: 1 Hour.

Discusses selected cytologic material. Emphasizes recognition, interpretation, oral presentation, and written description of cytology case materials. May be repeated to a maximum of 8 hours.

PATH 552 Diagnostic Cytology credit: 2 or 4 Hours.

Instruction in diagnostic cytology for clinical pathology majors. The course is for clinical pathology graduate students to advance their training in cytology. This is an intensive course with one-on-one training with the instructor. Clinical cytology cases and blood smears are evaluated microscopically and then a thorough written description and interpretation of each case is performed and reviewed. May be repeated in separate terms to a maximum of 30 graduate hours. Note that a maximum of 8 credit hours will count towards a graduate degree. Prerequisite: DVM degree or equivalent, clinical pathology graduate student or consent of instructor.

PATH 555 Comparative Oncology credit: 4 Hours.

Comparative study of the nature of mammalian and avian neoplasms based on general and special methods of tumor identification and classification; lectures, demonstrations, and laboratory. Prerequisite: VM 605 and VM 608, or equivalent.

PATH 556 Exotic/Wild Animal Diag Path 1 credit: 1 or 2 Hours.

Instruction in the performance of necropsy examinations on exotic and wild animals; emphasizes recognition, interpretation, oral presentations and written descriptions of gross and histologic lesions; emphasizes histologic features of lesions. For pathology majors only. May be repeated to a maximum of 10 hours. Prerequisite: VM 605 and VM 608; consent of instructor.

PATH 557 Exotic/Wild Animal Diag Path 2 credit: 0 to 2 Hours.

Instruction in the use of supplemental diagnostic data in the areas of bacteriology, clinical pathology, immunology, parasitology, toxicology, and virology in arriving at differential and definitive diagnoses of wild and exotic animals. Pathogenesis of gross and histologic lesions and mechanisms of lesion development are emphasized. For pathology majors only. May be repeated to a maximum of 10 hours. Prerequisite: PATH 556 or equivalent or consent of instructor.

PATH 558 Exotic/Wild Animal Path Sem credit: 0 to 1 Hours.

Discussion of selected pathologic and clinico-pathologic material pertaining to exotic and wild animals and presentation of a formal seminar. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Concurrent enrollment in PATH 556 or PATH 557 or consent of instructor.

PATH 559 Surgical Pathology credit: 0 to 2 Hours.

Discussion and interpretation of disease processes of domestic animals; emphasizes interpretation of pathologic changes in tissue specimens obtained during surgical procedures; correlates structure, function, and prognosis. Approved for letter and S/U grading. May be repeated to a maximum of 10 hours. Prerequisite: PATH 545 and PATH 546, or equivalent; consent of instructor.

PATH 560 Spatial Epidemiology credit: 4 Hours.

Patterns of health and disease in place and time; application of geographic information systems; analysis of time-space relations; clusters and diffusion of disease; geographic epidemiology of selected infectious and noninfectious diseases. Same as GEOG 560. Prerequisite: CHLH 474 or equivalent, or VM 608 or PATH 517 or equivalent; PATH 524 or SOC 485 or equivalent.

PATH 561 Veterinary Clinical Chemistry credit: 1 Hour.

Course will focus on the clinical interpretation and physiologic principles behind conventional clinical biochemical testing, and introduce newer concepts and procedures. The course is directed primarily to graduate veterinarians intending to seek board certification from specialty colleges that require basic knowledge of veterinary clinical pathology of their candidates. Approved for letter and S/U grading. Prerequisite: Graduate Veterinarian or consent of instructor.

PATH 575 Vet Info Tech/Computer App credit: 1 Hour.

Veterinary applications of word processing, spreadsheet, database, statistical, and health management software packages and various methods of information access and retrieval will be complemented by lecture/discussion and computer laboratory sessions. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 576 Communication Vet Consultation credit: 1 Hour.

Utilization of communication as a tool in veterinary consultation and management. Skills will be developed in oral and written communication through assigned presentations, technical reports, newsletters, and business letters. Veterinary applications will be emphasized. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 577 Vet Leadership Organ Behavior credit: 2 Hours.

Leadership principles and organizational theory with practical application to veterinary management and consultation. Includes individual, interpersonal, and organizational influences focusing on current issues in the veterinary profession. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 578 Veterinary Business Management credit: 4 Hours.

Instruction in and application of the principles of veterinary business management including economics, decision making, financial management, marketing, and legal issues. Emphasis on specific practice type (small animal, food animal, equine) depending on interest of students. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 579 Adv Concept Swine Health Med 1 credit: 3 Hours.

Instruction on the biostatistics involved in the effective analysis of swine production records, diagnostic tests, and clinical trials. Application of epidemiology principles in a swine production setting. Practical diagnostic, treatment, and preventive procedures for disease conditions related to swine production. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 580 Adv Concept Swine Health Med 2 credit: 4 Hours.

Illustrate effective methods to monitor and analyze the effects environmental conditions have on swine health and productivity. Design and implementation of programs to ensure product quality and consumer safety. Swine nutrition and lean growth modeling for optimal use of rations and providing nutritional consultation to swine producers. Evaluation, development, and application of genetic programs for swine production. Prerequisite: Two years of work experience as a veterinarian (post-graduate DVM) or consent of instructor; priority will be given to students enrolled in the Executive Veterinary Program.

PATH 590 Seminar credit: 0 or 1 Hours.

Required of all graduate students whose major is veterinary pathobiology. Approved for letter and S/U grading.

PATH 591 Design/Analysis Biomed Exper credit: 4 Hours.

Principles of sampling, treatment assignment, and statistical analysis applied to biomedical experiments; major emphasis include sample size determination, dose-response functions, single and multifactor designs, randomized blocks and repeated measures, and analysis of covariance. Prerequisite: CPSC 440 or PATH 524, or consent of instructor.

PATH 592 Special Problems credit: 1 to 4 Hours.

Basic and applied study including orientation and research on pertinent initial and continuing problems in the student's area of interest. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

PATH 593 Econ of Food Animal Health credit: 3 Hours.

Concepts and procedures for economically driven decision-making with special emphasis on veterinary medicine. Topics will include: partial budgeting, enterprise budgeting, break-even analysis, decision analysis, production economics, computer modeling and benefit-cost analysis. Published scientific literature will be reviewed to provide practical examples of economic decision-making in optimizing animal health management. 3 graduate hours. 3 professional hours. Prerequisite: Graduate Veterinarian; VM 608 or equivalent epidemiology course (requires third year standing in the professional curriculum); or consent of instructor.

PATH 594 Veterinary Pathobiology credit: 1 to 4 Hours.

Course is to be used to designate a trial or experimental course for five or more students, designed to be an elective in the CVM graduate curriculum. A course can be taught under this designation two times within a two year period and cannot be renewed as a PATH 594 course. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Prerequisites for each experimental course may vary and must be stated in a course outline prior to departmental approval.

PATH 596 Interdisciplinary Tox Sem credit: 1 Hour.

Same as ENVS 596 and CB 596. See CB 596.

PATH 598 Non-Thesis Research credit: 1 to 8 Hours.

Independent research to fulfill requirement for non-thesis alternative in Master of Science program only. Approved for S/U grading only. May be repeated to a maximum of 8 hours if topics vary. Credit is not given for both PATH 598 and PATH 599. Prerequisite: Must be Graduate Veterinarian.

PATH 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

PATH 636 Advanced Clinical Pathology credit: 2 Hours.

A case-based approach to clinical pathology. Students are required to critically evaluate clinical case data, turn in a written description of the case and be a discussion leader for at least one class period. Students will be provided with basic history and signalment of cases and with laboratory data including CBC, clinical chemistry, urinalysis and occasionally additional data. Focuses on the dog and cat, however horse and food animal cases will be presented.

PATH 639 Veterinary Forensic Medicine credit: 1 Hour.

This course is aimed at veterinary students. This is a small group lecture and discussion based class where we will discuss forensic veterinary medicine. Topics to be discussed include blunt force trauma, projectile injuries, record keeping and forensic entomology. Students will meet twice a week for an 8 week block. 1 professional hour. Approved for S/U grading only.

PATH 642 Geographic Methods for Health credit: 1 Hour.

An introduction to geographic information system software and applications through lectures and exercises. Uses application-based learning to address topics related to spatial analysis and mapping for animal and public health. Exercises include making maps of disease occurrence and disease rates, using census data for population estimates, and creating maps that combine environmental factors with patterns of illness. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Credit is not given for both PATH 642 and PATH 439.

PATH 644 Bioscientific Writing credit: 1 Hour.

Instruction in communicating research results to a scientific audience. Assignments focus on writing an abstract, constructing a poster presentation, and completing a short manuscript. Intended for veterinary students who have some previous experience in a research setting and access to experimental data that can be used as a basis of writing exercises. Prerequisite: Enrollment in the veterinary curriculum and consent of instructor.

PATH 645 Outbreak Investigation credit: 1 Hour.

Published cases of foodborne outbreaks and other outbreaks serve as the basic learning materials for the course. Details about particular diseases/illnesses, how outbreak investigation are conducted, how risk factors are identified in an outbreak, how these factors contribute to incidence of disease, and resolutions of outbreaks are examined. The course expands upon content in the core veterinary curriculum and allows student to hone and apply their epidemiology skills. This course is valuable for veterinary public practice and anyone interested in public health, food safety, and epidemiology. 1 graduate hour. 1 professional hour. May be repeated in separate terms up to 2 hours if topics vary. Prerequisite: DVM students: VM 608 or permission of instructor. Graduate students: None. Restricted to DVM or graduate students.

PATH 669 Veterinary Diagnostic Medicine credit: 1.5 to 3 Hours.

For VM-4 professional students, a veterinary diagnostic medicine clerkship in the Veterinary Diagnostic Laboratory. 1.5 to 3 professional hours. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 4.5 hours. Prerequisite: Fourth year standing or its equivalent in veterinary curriculum.

PATH 692 Special Problems credit: 1 to 3 Hours.

Individual research on a special problem chosen in consultation with the instructor and department head. Approved for both letter and S/U grading. May be repeated to a maximum of 6 hours if topics vary. 1 to 3 graduate hours. 1 to 3 professional hours. Prerequisite: Registration in veterinary curriculum with grade-point average of 3.0 or above, or consent of instructor.

PATH 694 Veterinary Pathobiology credit: 1 to 3 Hours.

To be used to designate a trial or experimental course for five or more students, designed to be an elective in the CVM professional curriculum. The course can be taught under this designation for two years or two offerings, whichever time is greater. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Registration in the veterinary curriculum or consent of instructor.

Persian (PERS)

PERS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PERS>)

Courses

PERS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

PERS 201 Elementary Persian I credit: 5 Hours.

Introduction to Persian, including conversation with a native speaker under the direction of a linguist-instructor, and a minimum of formal grammar and writing.

PERS 202 Elementary Persian II credit: 5 Hours.

Continuation of PERS 201, with introduction of more advanced grammar and with emphasis on more fluency in speaking and reading. Prerequisite: PERS 201 or equivalent.

PERS 403 Intermediate Persian I credit: 4 Hours.

General review of the essentials of grammar, selected reading of materials emphasizing Iranian life and culture, compositions, and practice in speech. 4 undergraduate hours. 4 graduate hours. Prerequisite: PERS 202.

PERS 404 Intermediate Persian II credit: 4 Hours.

General review of the essentials of grammar, selected reading of materials emphasizing Iranian life and culture, compositions, and practice in speech. 4 undergraduate hours. 4 graduate hours. Prerequisite: PERS 403.

PERS 453 Advanced Persian I credit: 3 or 4 Hours.

Students will develop the ability to read and understand paragraph level text, expand on their oral skills, continue to refine Persian writing skills and expand knowledge on Persian-speaking cultures. 3 undergraduate hours. 4 graduate hours. Prerequisite: PERS 403 and PERS 404; or consent of Persian Studies Program Director (determined after placement test taken by student).

PERS 454 Advanced Persian II credit: 3 or 4 Hours.

Continuation of PERS 453. Students will become independent users of the language by studying more complex structures and contexts such as stories, news reports and movies. Students will also learn details of Persian grammar and apply them in written tasks. 3 undergraduate hours. 4 graduate hours. Prerequisite: PERS 453; or consent of Persian Studies Program Director (determined after placement test taken by student).

Philosophy (PHIL)

PHIL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PHIL>)

Courses

PHIL 100 Intro to Philosophy-ACP credit: 3 Hours.

Consideration of some main problems of philosophy concerning, for example, knowledge, God, mind and body, and human freedom. Course is identical to PHIL 101 except for the additional writing component. Credit is not given for both PHIL 100 and PHIL 101. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

PHIL 101 Introduction to Philosophy credit: 3 Hours.

Consideration of some main problems of philosophy concerning, for example, knowledge, God, mind and body, and human freedom. Credit is not given for both PHIL 101 and PHIL 100.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

PHIL 102 Logic and Reasoning credit: 3 Hours.

Practical study of logical reasoning; techniques for analyzing and criticizing arguments, with emphasis on assessing the logical coherence of what we read and write.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

PHIL 103 Logic and Reasoning QR II credit: 3 Hours.

Introductory logic course that concentrates on investigating how the formal mathematical structure of statements, as well as the structure of the relationships among such statements, reveals the logical force of arguments that we use everyday. PHIL 102 takes a less formal, less mathematical approach to the same material. Credit is not given for both PHIL 103 and PHIL 102.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Quantitative Reasoning II

PHIL 104 Intro to Ethics-ACP credit: 3 Hours.

Some basic questions of ethics, discussed in the light of influential ethical theories and with reference to specific moral problems, such as: What makes an action morally right? Are moral standards absolute or relative? What is relation between personal morality and social morality, and between social morality and law? Course is identical to PHIL 105 except for the additional writing component. Credit is not given for both PHIL 104 and either PHIL 105 or PHIL 106. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

PHIL 105 Introduction to Ethics credit: 3 Hours.

Some basic questions of ethics, discussed in the light of influential ethical theories and with reference to specific moral problems, such as: what makes an action morally right? are moral standards absolute or relative? what is the relation between personal morality and social morality, and between social morality and law? Credit is not given for both PHIL 105 and either PHIL 104 or PHIL 106.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 106 Ethics and Social Policy credit: 3 Hours.

Examination of the moral aspects of social problems, and a survey of ethical principles formulated to validate social policy. Credit is not given for both PHIL 106 and either PHIL 104 or PHIL 105.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PHIL 107 Intro to Political Philosophy credit: 3 Hours.

Introduction to core ideas in political and legal philosophy, for example, rights, equality, political obligations, legitimacy of states, nationalism, and oppression.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PHIL 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, JS 108, REL 108, and SOC 108. See REL 108.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

PHIL 109 Religion & Society in West II credit: 3 Hours.

Same as ANTH 109, REL 109, and SOC 109. See REL 109.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

PHIL 110 World Religions credit: 3 Hours.

Same as REL 110. See REL 110.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

PHIL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

PHIL 198 Freshman Seminar credit: 3 Hours.

Investigation of selected fundamental topics of philosophical inquiry. See Schedule for current topics. Prerequisite: Freshman James Scholar.

PHIL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PHIL 201 Philosophy in Literature credit: 3 Hours.

Consideration of the philosophical themes implicit in a variety of important literary works, both classical and modern; may include such authors as Sophocles, Shakespeare, Goethe, Dostoevsky, and Sartre.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 202 Symbolic Logic credit: 3 Hours.

Introduction to the techniques of formal logic, dealing primarily with truth-functional logic and quantification theory.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

PHIL 203 Ancient Philosophy credit: 4 Hours.

Introduction to ancient philosophy, concentrating on Plato and Aristotle, dealing with such topics as metaphysics, ethics, and the theory of knowledge. Same as CLCV 203.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 206 Early Modern Philosophy credit: 4 Hours.

The history of philosophy from Descartes to Kant, concentrating on such topics as metaphysics, ethics, and the theory of knowledge.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 210 Ethics credit: 3 Hours.

Problems in ethical theory; the nature of right and wrong, justice, conscience, moral feelings, etc.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 214 Biomedical Ethics credit: 3 Hours.

Philosophical study of selected moral and social problems concerning medicine and biology, such as euthanasia, abortion, allocation of scarce medical resources, health care and rights, and genetic engineering.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 220 Special Topics credit: 3 Hours.

A consideration of readings on selected philosophical topics. May be repeated in the same semester to a maximum of 6 undergraduate hours and in separate semesters if topics vary. See Class Schedule for current topics.

PHIL 230 Philosophy of Religion Intro credit: 3 Hours.

Introduction to philosophical analysis of religious thought and experience. Same as REL 230.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 231 Religion and Philosophy credit: 3 Hours.

Same as REL 231. See REL 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 250 Conceptions of Human Nature credit: 3 Hours.

Comparative examination of important historical and contemporary conceptions of human nature.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 270 Philosophy of Science credit: 3 Hours.

Investigation of the nature of scientific knowledge by examining archetypal examples from physical science (e.g., Ptolemaic and Copernican astronomy); nature of scientific truth, validation of theories, nature of scientific theories, evolution of theories, experimental procedure, role of presuppositions, scientific revolutions, etc.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PHIL 307 Elmnts Semantics & Pragmatics credit: 3 Hours.

Same as LING 307. See LING 307.

PHIL 316 Ethics and Engineering credit: 3 Hours.

Same as ECE 316. See ECE 316.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

PHIL 325 Recent European Philosophy credit: 3 Hours.

Introduction to the major recent philosophical movements in Europe, such as phenomenology, existentialism, philosophical anthropology, and neo-Marxism.

PHIL 351 Thinking and Reasoning credit: 3 Hours.

Same as PSYC 351. See PSYC 351.

PHIL 356 Evolution of Mind credit: 3 Hours.

Same as PSYC 356. See PSYC 356.

PHIL 357 Intro Cognitive Science credit: 3 Hours.

Same as PSYC 357. See PSYC 357.

PHIL 380 Current Controversies credit: 3 Hours.

Philosophical examination of positions taken on some issue of current concern, for example, human sexuality, death and dying, feminism, race, intelligence, war, sociobiology, and environmental ethics. See Class Schedule for current topics. May be repeated with approval.

PHIL 390 Individual Study credit: 2 to 4 Hours.

Readings in selected philosophical topics. Course may be taken by honors students in partial fulfillment of department honors requirements. May be repeated to a maximum of 6 hours in separate terms. Prerequisite: Open to juniors and seniors with a grade-point average of 3.0 only by prior arrangement with a member of the faculty and with consent of the department director of undergraduate studies or the chair.

PHIL 398 Advanced Undergraduate Seminar credit: 3 Hours.

Seminar on selected philosophical topics; intended primarily for advanced undergraduate philosophy majors. May be repeated to a maximum of 6 hours. Prerequisite: A grade-point average of 3.0 and consent of instructor.

PHIL 404 Medieval Philosophy credit: 3 or 4 Hours.

History of philosophy from St. Augustine to William of Ockham. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 101 or PHIL 203.

PHIL 407 Logic and Linguistic Analysis credit: 3 or 4 Hours.

Same as LING 407. See LING 407.

PHIL 410 Classical Ancient Philosophers credit: 3 or 4 Hours.

Intensive study of one ancient philosopher or the intensive study of a major philosophical problem through the consideration of a number of ancient philosophers; chief emphasis on Plato and/or Aristotle. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy, preferably PHIL 203.

PHIL 411 Nineteenth Century Philosophy credit: 3 or 4 Hours.

Examination of the thought of such major figures as Hegel, Marx, and Nietzsche. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 412 Classical Modern Philosophers credit: 3 or 4 Hours.

Intensive study of one classical modern philosopher or the intensive study of major philosophical problem through the consideration of a number of classical modern philosophers, e.g., Descartes, Leibniz, Locke, Hume, Kant, and Hegel. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy, preferably PHIL 206.

PHIL 414 Major Recent Philosophers credit: 3 or 4 Hours.

Intensive study of one or two important philosophers of the present century, e.g., Wittgenstein, Dewey, Heidegger, or Quine. Topics vary; see Class Schedule. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated with approval, if topics vary. Prerequisite: One course in philosophy.

PHIL 419 Space, Time, and Matter-ACP credit: 3 or 4 Hours.

Same as PHYS 419. See PHYS 419.

This course satisfies the General Education Criteria for: Advanced Composition

PHIL 420 Space, Time, and Matter credit: 2 Hours.

Same as PHYS 420. See PHYS 420.

PHIL 421 Ethical Theories credit: 3 or 4 Hours.

Systematic study of selected classics in moral philosophy by such philosophers as Aristotle, Hume, Mill, Kant, and Nietzsche. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 422 Recent Developments in Ethics credit: 3 or 4 Hours.

Intensive treatment of issues in contemporary ethical theory. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated one time with approval. Prerequisite: One course in ethics.

PHIL 424 Philosophy of Religion credit: 3 or 4 Hours.

Considers central issues in the philosophy of religion, e.g., the justification of religious belief, the nature of God, religious experience, etc. Same as REL 424. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 425 Philosophy of Mind credit: 3 or 4 Hours.

Philosophical problems arising in connection with mental phenomena; the relation of mind and body; free will and determinism; our knowledge of other minds; and the self and personal identity. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 426 Metaphysics credit: 3 or 4 Hours.

Investigation of various metaphysical issues concerning, for example, existence, particulars and universals, causation, laws of nature, time, personal identity, material objects, and modality. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 429 Value Theory credit: 3 or 4 Hours.

Study of the nature and status of values, and of variable topics in value theory, e.g., different types of values, and problems of truth, justifiability, objectivity and relativism with respect to them. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated as topics vary to a maximum of 6 undergraduate hours, or 8 graduate hours. Prerequisite: Junior standing.

PHIL 430 Theory of Knowledge credit: 3 or 4 Hours.

Investigation of issues concerning, for example, the nature and possibility of knowledge; its forms and limits; its relation to belief, truth, and justification; and the nature of truth. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Same as NEUR 433 and PSYC 433. See PSYC 433.

PHIL 435 Social Philosophy credit: 3 or 4 Hours.

Selected topics from the nature of social organization, nature and convention, utility, justice, equality, liberty, rights, and duties. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 436 Phil of Law and of the State credit: 3 or 4 Hours.
Examination of issues in the philosophy of law, such as the nature of law, law and morality, justice, liberty and authority, punishment, and legal responsibility. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 438 Philosophy of Language credit: 3 or 4 Hours.
Historical or comparative study of the philosophy of language. Same as LING 438. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 439 Philosophy of Mathematics credit: 3 or 4 Hours.
Introduction to some of the main philosophical problems and contemporary viewpoints concerning mathematical concepts, mathematical methods, and the nature of mathematical truth. Same as MATH 439. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 441 Existential Philosophy credit: 3 or 4 Hours.
Study of a selection of the major writings of the more important existential philosophers, e.g., Kierkegaard, Nietzsche, Heidegger, Sartre, and de Beauvoir. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 443 Phenomenology credit: 3 or 4 Hours.
Study of the development of phenomenology from Husserl to the present. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 444 Topics in Recent European Phil credit: 3 or 4 Hours.
Examines the continental treatments of selected issues, such as interpersonal relationships, human nature, perception or interpretation; see Class Schedule for current topics. 3 undergraduate hours. 3 or 4 graduate hours. May be repeated in separate terms as topics vary to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: One course in philosophy.

PHIL 453 Formal Logic and Philosophy credit: 3 or 4 Hours.
Techniques and results of symbolic logic, with special attention to topics of philosophical importance. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 202 or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

PHIL 454 Advanced Symbolic Logic credit: 3 or 4 Hours.
Completeness, compactness, and Lowenheim-Skolem theorems for first-order logic; incompleteness and undecidability of formal systems; and additional material on proof theory, model theory, or axiomatic set theory as time permits. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PHIL 202 or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

PHIL 471 Contemporary Phil of Science credit: 3 or 4 Hours.
Examines important developments and controversies in recent philosophy of science. 3 undergraduate hours. 4 graduate hours. Prerequisite: One course in philosophy.

PHIL 472 Kierkegaard and the Self credit: 3 or 4 Hours.
Same as CWL 472, REL 472, and SCAN 472. See SCAN 472.

PHIL 477 Philosophy of Psychology credit: 3 or 4 Hours.
Psychology, broadly construed, is a cluster of disciplines devoted to the study of mind and behavior, including cognitive and developmental psychology, neuroscience, and artificial intelligence. Investigates the relationships that these disciplines bear to one another and of their overall potential to resolve age-old philosophical questions about the mind. Same as PSYC 477. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two courses in philosophy or two courses in psychology or consent of instructor.

PHIL 492 Thesis credit: 2 to 4 Hours.
Special training in philosophical investigation. Course may be taken by students pursuing graduation with distinction in partial fulfillment of those requirements. 2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 undergraduate hours. Prerequisite: Open to seniors with a grade-point average of 3.5 in all philosophy courses only by prior arrangement with a member of the faculty and with consent of the department director of undergraduate studies or the chair.

PHIL 501 Seminar on the History of Philosophy credit: 2 or 4 Hours.
Study of selected major philosophers, movements, problems, or topics in the history of philosophy. 2 or 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 507 Formal Semantics I credit: 4 Hours.
Same as LING 507. See LING 507.

PHIL 511 Seminar Ethical Theory credit: 2 or 4 Hours.
Intensive study of problems in ethical theory. Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 512 Seminar Social Philosophy credit: 2 or 4 Hours.
Seminar designed to study special problems in social philosophy. See Schedule for current topics. Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 513 Seminar Philosophy of Logic credit: 2 or 4 Hours.
Selected topics in contemporary logical theory. Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 514 Seminar in Cognitive Science credit: 2 or 4 Hours.
Same as PSYC 514, ANTH 514, CS 549, EPSY 551, and LING 570. See PSYC 514.

PHIL 517 Seminar Philosophy of Science credit: 2 or 4 Hours.
Various problems arising from specific studies in philosophy pertaining to science and vice versa. To be offered with varying topics. Course Information: Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 521 Seminar Contemporary Problems credit: 2 or 4 Hours.

Intensive study of selected problems or topics in contemporary philosophy. Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 523 Seminar Theory of Knowledge credit: 2 or 4 Hours.

Selected topics and writings of major importance in the contemporary philosophy of knowledge. Approved for letter and S/U grading. May be repeated. Letter grading applies when offered for 4 hours of credit. For Stage 3 Philosophy PhD students this course is approved for S/U grading when offered for 2 hours of credit. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 525 Seminar Philosophy of Mind credit: 2 or 4 Hours.

Selected topics from major writings in the philosophy of mind. Approved for letter and S/U grading. May be repeated in the same or separate terms. Approved for letter grading when offered for 4 hours; approved for S/U grading when offered for 2 hours - only available for Stage 3 Philosophy PhD students. Prerequisite: Consent of instructor for non-philosophy graduate students.

PHIL 530 Dissertation Seminar credit: 3 Hours.

Ongoing dissertation seminar required for all students who have passed the prelim requirement. Approved for S/U grading only. May be repeated in separate terms to a maximum of 24 hours. Prerequisite: Restricted to students satisfying requirements for the Ph.D. degree.

PHIL 547 Formal Semantics II credit: 4 Hours.

Same as LING 547. See LING 547.

PHIL 551 Pragmatics credit: 4 Hours.

Same as LING 551. See LING 551.

PHIL 583 Individual Topics credit: 2 or 4 Hours.

Individual study and oral and written reports on topics not covered in other courses. Topics and plan of study must be approved by the candidate's adviser and by the staff member who directs the work. May be repeated. (Summer session, 2 to 8 hours).

PHIL 590 Directed Research credit: 0 to 12 Hours.

Restricted to students satisfying requirements for the master's degree by writing a substantial essay. Approved for letter and S/U grading. May be repeated. Normally taken for 8 hours credit but may be taken for 12 hours credit with consent of department chair.

PHIL 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Physics (PHYS)

PHYS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PHYS>)

Courses

PHYS 100 Thinking About Physics credit: 2 Hours.

Conceptual and problem solving skills in preparation for PHYS 211: –analysis and mathematical descriptions of physical situations – understanding the meaning of the solutions Prerequisite: Credit or concurrent registration in MATH 220 or MATH 221.

PHYS 101 College Physics: Mech & Heat credit: 5 Hours.

Newton's Laws, work and energy, rotational motion, fluids, thermodynamics, and waves. A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 101 and either PHYS 211 or PHYS 213. Prerequisite: Trigonometry.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 102 College Physics: E&M & Modern credit: 5 Hours.

Electric forces and fields, electric potential, electric circuits, magnetic forces and fields, geometrical optics, relativity, and modern physics. A noncalculus-based approach for majors in the life sciences, preprofessional health programs, agriculture, and veterinary medicine. Credit is not given for both PHYS 102 and either PHYS 212 or PHYS 214. Prerequisite: PHYS 101.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 110 Physics Careers credit: 0 Hours.

Exploration of careers founded on physics undergraduate training. Introduction to the Physics Department, faculty, research and curricula. Outside speaker presentations. Approved for S/U grading only.

PHYS 123 Physics Made Easy credit: 3 Hours.

Inquiry-based, nonmathematical, hands-on study of physics for elementary school teachers. Coverage of most of the National Science Education K-4 Content Standards. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences

PHYS 140 How Things Work credit: 3 Hours.

Nonmathematical approach underscoring the generality and ubiquity of basic physical laws in understanding commonplace phenomena: musical instruments, photography, electric and electronic circuits, television, motors, engines, etc. Credit is not given to engineering majors.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 150 Physics of Societal Issues credit: 3 Hours.

Physics topics and applications relevant in the modern world: energy, quantum mechanics, electricity and magnetism, nuclear physics, waves, light, and outer space. Application to satellites, alternative energy, medical imaging, radiation, nuclear weapons, climate change, and electronics. Emphasis on analytical thinking and the applicability to modern societal issues.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 192 Science and Pseudoscience credit: 1 Hour.

Extra-sensory perception, alien abduction, and psychic crime-solving from the standpoint of scientific inquiry and exploration; the scientific method, how science progresses, and the types of argumentative fallacies that pervade the pseudoscientific community; examples of good science and how the scientific method is self-correcting.

PHYS 193 Physics of Music credit: 2 Hours.

Physics of music and musical instruments; acoustical physics, propagation of sound waves, the biological physics of human hearing, and the acoustical physics associated with all types of musical instruments.

PHYS 194 Behavior of Complex Systems credit: 1 Hour.

Exploration of systems with simple rules that nevertheless exhibit complex behavior. Lecture demonstrations on fractal growth, chaos, catastrophes, self-assembly, lightning, turbulence, explosions, and human rhythms. Simple computer models which exhibit regular, irregular, symmetric, and self-similar patterns and dynamics. Dynamics of isolated and coupled complex systems and mathematical tools for quantifying complex behavior.

PHYS 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PHYS 211 University Physics: Mechanics credit: 4 Hours.

Newton's Laws, work and energy, static properties and fluids, oscillations, transverse waves, systems of particles, and rotations. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 211 and PHYS 101. Prerequisite: Credit or concurrent registration in MATH 231.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 212 University Physics: Elec & Mag credit: 4 Hours.

Coulomb's Law, electric fields, Gauss' Law, electric potential, capacitance, circuits, magnetic forces and fields, Ampere's law, induction, electromagnetic waves, polarization, and geometrical optics. A calculus-based approach for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 212 and PHYS 102.

Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 213 Univ Physics: Thermal Physics credit: 2 Hours.

First and second laws of thermodynamics including kinetic theory of gases, heat capacity, heat engines, introduction to entropy and statistical mechanics, and introduction to application of free energy and Boltzmann factor. A calculus-based approach for majors in engineering, mathematics, physics and chemistry. Credit is not given for both PHYS 213 and PHYS 101. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 214 Univ Physics: Quantum Physics credit: 2 Hours.

Interference and diffraction, photons and matter waves, the Bohr atom, uncertainty principle, and wave mechanics. A calculus-based course for majors in engineering, mathematics, physics, and chemistry. Credit is not given for both PHYS 214 and PHYS 102. Prerequisite: PHYS 212.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Phys Sciences
Quantitative Reasoning II

PHYS 221 Enrichment Mechanics credit: 1 Hour.

Supplement to PHYS 211 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based mechanics. Prerequisite: PHYS 100; concurrent registration in PHYS 211.

PHYS 222 Enrichment E & M credit: 1 Hour.

Supplement to PHYS 212 with a collaborative group learning approach to improving conceptual understanding and problem solving in introductory calculus-based electricity & magnetism. Prerequisite: PHYS 100; concurrent registration in PHYS 212.

PHYS 225 Relativity & Math Applications credit: 2 Hours.

Theory of Special Relativity, with applications to kinematics and dynamics. Key mathematical methods as they apply to aspects of electromagnetic theory and classical mechanics, including vector analysis, series expansions, matrices, Fourier analysis, partial differentiation, three-dimensional calculus, and simple differential equations. Prerequisite: Credit or concurrent registration in PHYS 212.

PHYS 280 Nuclear Weapons & Arms Control credit: 3 Hours.

Nontechnical analysis of the physics of nuclear weapons, nuclear weapon effects, delivery systems, and defenses against nuclear attack; presentation of current issues; basis for making informed judgments about nuclear armaments and arms control. Same as GLBL 280.

This course satisfies the General Education Criteria for:

Advanced Composition

PHYS 298 Freshmen/Sophomore Special Topics in Physics credit: 0 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the introductory level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 credit hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with freshman or sophomore standing.

PHYS 325 Classical Mechanics I credit: 3 Hours.

Kinematics and dynamics of classical systems, including a review of Newtonian kinematics and dynamics. Three dimensional motion, variable mass, and conservation laws; damped and periodically driven oscillations; gravitational potential of extended objects and motion in rotating frames of reference; Lagrangian and Hamiltonian mechanics. Prerequisite: PHYS 225; credit or concurrent registration in MATH 285.

PHYS 326 Classical Mechanics II credit: 3 Hours.

Continuation of PHYS 325. Central force motion, collisions and scattering, rotational motion, coupled oscillations, continuous media, and fluid dynamics. Prerequisite: PHYS 325.

PHYS 329 Atmospheric Dynamics I credit: 3 Hours.

Same as ATMS 302. See ATMS 302.

PHYS 330 Atmospheric Dynamics II credit: 3 Hours.

Same as ATMS 312. See ATMS 312.

PHYS 398 Sophomore/Junior Special Topics in Physics credit: 1 to 4 Hours.

Topical offerings of technical interest, skills, and knowledge in physics, and its practice, intended to augment the existing curriculum at the intermediate level. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 hours if topics vary. Prerequisite: See Class Schedule or departmental course information for topics and prerequisites. For students with sophomore or junior standing.

PHYS 401 Classical Physics Lab credit: 3 Hours.

Experiments and techniques in classical mechanics and electromagnetism. Dynamics of electrical and mechanical oscillators in the linear domain. Fourier analysis of system response. Measurements of electrostatic fields, transmission lines, waves, and radiation. Electromagnetic phenomena in dielectrics, conductors, and magnetic materials. Instruction in data analysis and report writing. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent enrollment in PHYS 325.

PHYS 402 Light credit: 3 or 4 Hours.

Wave kinematics; geometrical optics: basic concepts, ray-tracing and matrix formalism, Gaussian imaging by thick lenses, stops, apertures, and intensity relations; interference; interference spectroscopy and coherence; diffraction: Fresnel-Kirchhoff formulation, Fraunhofer case, Fresnel case, and holography; polarized light. 4 undergraduate hours. 3 or 4 graduate hours. (3 hours without lab). Prerequisite: MATH 285; PHYS 102 or PHYS 214.

PHYS 403 Modern Experimental Physics credit: 4 or 5 Hours.

Techniques and experiments in the physics of atoms, atomic nuclei, molecules, the solid state, and other areas of modern physical research. 5 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in PHYS 486.

PHYS 404 Electronic Circuits credit: 4 or 5 Hours.

Physics of semiconductor devices; theory and application of discrete and integrated devices in linear circuits; use of operational amplifiers and feedback; regulation, oscillators, and modulation; emphasizes practical experience. 5 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 325.

PHYS 406 Acoustical Physics of Music credit: 4 Hours.

Acoustical physics associated with music and musical instruments, propagation of sound waves in and from musical instruments, and the biological physics of human hearing. Investigation of topics via advanced laboratory and data acquisition techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 419 Space, Time, and Matter-ACP credit: 3 or 4 Hours.

Identical to PHYS 420 except for the additional writing component including a final term paper. Same as PHIL 419. 3 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 419 and PHYS 420. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

This course satisfies the General Education Criteria for:
Advanced Composition

PHYS 420 Space, Time, and Matter credit: 2 Hours.

Philosophical examination of some fundamental concepts and theories of the physical world, such as time, matter, space, and geometry; interpretation of quantum theory. Same as PHIL 420. 2 undergraduate hours. 2 graduate hours. Credit is not given for both PHYS 420 and PHYS 419. Prerequisite: PHIL 101; PHYS 101 or PHYS 211.

PHYS 427 Thermal & Statistical Physics credit: 4 Hours.

Equilibrium thermodynamics, statistical mechanics, and kinetic theory of gases. A unified treatment is used in that the principles of heat and thermodynamics are discussed along with statistical postulates and the microscopic approach of introductory quantum mechanics. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 427 and any of ME 404, CHEM 444, MSE 500. Prerequisite: PHYS 213, PHYS 214, and PHYS 325.

PHYS 435 Electromagnetic Fields I credit: 3 Hours.

Static electric and magnetic fields, their interactions with electric charge and current, and their transformation properties; the effect of special relativity is incorporated. Macroscopic fields in material media are described. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 285; credit or concurrent enrollment in PHYS 325.

PHYS 436 Electromagnetic Fields II credit: 3 Hours.

Time-dependent fields. Electromagnetic induction, Maxwell's equations, electromagnetic wave propagation in various media and structures, and electromagnetic radiation from charge and current distributions. Relativistic covariance of Maxwell's equations. Course Information: 3 undergraduate hours. 3 graduate hours. Prerequisite: PHYS 435.

PHYS 460 Condensed Matter Physics credit: 4 Hours.

Bonding and structure of crystals; energy bands in insulators, semiconductors, and metals; electrical conductivity; optical properties; lattice vibrations; elasticity; point defects; dislocations. 4 undergraduate hours. 4 graduate hours. Credit is not given for both PHYS 460 and MSE 304. Prerequisite: PHYS 435; PHYS 485 or PHYS 486.

PHYS 466 Atomic Scale Simulations credit: 3 or 4 Hours.

Same as CSE 485 and MSE 485. See MSE 485.

PHYS 470 Subatomic Physics credit: 4 Hours.

The nature and properties of nuclei and elementary particles, symmetries, interactions, nuclear models, tools and techniques of experimental subatomic physics, and applications to power generation, astrophysics, chemistry, medicine, and biology. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 485 or PHYS 486.

PHYS 475 Introduction to Biophysics credit: 3 or 4 Hours.

Major concepts of physics inherent to biological systems. Basics of biology, including protein and DNA structure and their organization into cells with a focus on single molecule biophysics. Major experimental techniques including x-ray diffraction, optical and magnetic traps, and fluorescence microscopy, including new super-resolution techniques. Applications to cytoplasmic and nuclear molecular motors, bacterial motion, nerves, and vision. Same as BIOP 401. 3 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 213 and PHYS 214.

PHYS 485 Atomic Phys & Quantum Theory credit: 3 Hours.

Basic concepts of quantum theory which underlie modern theories of the properties of materials; elements of atomic and nuclear theory; kinetic theory and statistical mechanics; quantum theory and simple applications; atomic spectra and atomic structure; molecular structure and chemical binding. 3 undergraduate hours. 3 graduate hours. Credit is not given for both PHYS 485 and CHEM 442. Prerequisite: MATH 285 and PHYS 214.

PHYS 486 Quantum Physics I credit: 4 Hours.

Atomic phenomena integrated with an introduction to quantum theory; evidence for the atomic nature of matter and the properties of the Schrodinger equation, single particle solutions in one dimension, the hydrogen atom, perturbation theory, external fields, and atomic spectroscopy of outer electrons. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 285; PHYS 214; credit or concurrent registration in MATH 415.

PHYS 487 Quantum Physics II credit: 4 Hours.

Continuation of PHYS 486. Identical particles, spectral hyperfine structure, magnetic properties of matter, atomic spectroscopy of inner electrons, high-energy photon effects, molecular binding and spectra, emission and absorption of light, and symmetry principles. 4 undergraduate hours. 4 graduate hours. Prerequisite: PHYS 486.

PHYS 496 Intro to Physics Research credit: 3 Hours.

Examination of current research topics through extensive reading, writing, and oral-presentation activities. 3 undergraduate hours. No graduate credit.

This course satisfies the General Education Criteria for:
Advanced Composition

PHYS 497 Individual Study credit: 1 to 4 Hours.

Individual study at an advanced level in a subject not covered by course offerings. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

PHYS 498 Special Topics in Physics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in physics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary.

PHYS 499 Senior Thesis credit: 3 Hours.

Faculty-guided writing of a senior thesis involving independent research. Oral presentations of research and outside journal articles, proposal writing and reviewing, poster presentation, preparation of graduate school applications, and discussion of physics frontiers with outside experts. 3 undergraduate hours. No graduate credit. Prerequisite: PHYS 496.

PHYS 504 Statistical Physics credit: 4 Hours.

Single-particle distribution functions; classical and quantum mechanical systems, Boltzmann equation, virial theorem, and equations of state for gases; formal theory: ensembles, identical particles, thermodynamics of simple systems, and distribution functions; nonequilibrium problems; conservation laws and hydrodynamic equations, sound waves, and transport coefficients; plasmas, normal Fermi fluid, superfluids, and systems with internal degrees of freedom. Prerequisite: PHYS 427 and PHYS 486.

PHYS 505 Classical Electromagnetism credit: 4 Hours.

Review of Maxwell's equations; relativistic formulation of the electromagnetic field and the motion of charged particles; plane and guided waves; retarded potentials; radiation from simple antennas; radiation from accelerated charged particles; scattering and further topics. Prerequisite: PHYS 436.

PHYS 508 Mathematical Physics I credit: 4 Hours.

Core techniques of mathematical physics widely used in the physical sciences. Calculus of variations and its applications; partial differential equations of mathematical physics (including classification and boundary conditions); separation of variables, series solutions of ordinary differential equations and Sturm-Liouville eigenproblems; Legendre polynomials, spherical harmonics, Bessel functions and their applications; normal mode eigenproblems (including the wave and diffusion equations); inhomogeneous ordinary differential equations (including variation of parameters); inhomogeneous partial differential equations and Green functions; potential theory; integral equations (including Fredholm theory). Prerequisite: MATH 285.

PHYS 509 Mathematical Physics II credit: 4 Hours.

Continuation of PHYS 508. Further core techniques of mathematical physics widely used in the physical sciences. Complex variables; group theory in classical and quantum systems; tensors in physics; differential forms and their applications in mechanics; electromagnetism. Prerequisite: PHYS 508.

PHYS 510 Nonlinear Dynamics credit: 4 Hours.

Broad introduction to nonlinear dynamics of physical systems with varying degrees of complexity; survey of a variety of concepts associated with bifurcation phenomena, mappings, nonlinear oscillations, chaotic behavior, strange attractors, and solitons. Topics of current interest. Prerequisite: PHYS 326.

PHYS 513 Quantum Optics & Information credit: 4 Hours.

Experimental and theoretical fundamentals of quantum information, using nonclassical features of quantum physics (wave-particle duality, superposition, and entanglement) to surpass the information-processing capabilities of classical systems. Underlying fundamental quantum phenomena, including tests of nonlocality, quantum erasers, the quantum Zeno effect, squeezed light, multi-particle interference, state transformations of the Bloch sphere, and decoherence; quantum cryptography and teleportation; quantum information theory; quantum computation algorithms and techniques for error correction; experimental "qubit" systems. Prerequisite: Recommended: PHYS 580.

PHYS 514 Modern Atomic Physics credit: 4 Hours.

Rigorous survey of modern atomic, molecular, and optical physics, including a functional approach to theory and an overview of experimental techniques. Atomic structure, including fine and hyperfine structure, multi-electron atoms, and relativistic effects; interaction of single atoms with dynamic and static electromagnetic fields, ultra-cold collisions between atoms; laser cooling, evaporative cooling, and magnetic trapping; Paul and Penning traps; quantum degenerate gases; atom interferometry. Prerequisite: PHYS 427, PHYS 436, and PHYS 487.

PHYS 515 General Relativity I credit: 4 Hours.

Systematic introduction to Einstein's theory, with emphasis on modern coordinate-free methods of computation. Review of special relativity, modern differential geometry, foundations of general relativity, laws of physics in the presence of a gravitational field, linearized theory, and experimental tests of gravitation theories. Same as ASTR 515. Prerequisite: PHYS 436.

PHYS 516 General Relativity II credit: 4 Hours.

Continuation of PHYS 515 with emphasis on applications to astrophysics and cosmology. Relativistic stars, gravitational collapse, black holes, gravitational waves, numerical relativity, and cosmology. Same as ASTR 516. Prerequisite: PHYS 515.

PHYS 540 Astrophysics credit: 4 Hours.

Fundamental aspect of astrophysics and cosmology and new developments in these fields. Basic physical concepts and principles, the key observational evidence, and illustrative calculations. Relativistic cosmological models, inflation, Big-Bang nucleosynthesis, and the cosmic microwave background; formation and evolution of galaxy clusters, galaxies, and stars; formation, structure, and evolution of white dwarfs, neutron stars, and black holes; rotation- and accretion-powered pulsars, X-ray and y-ray stars, and gravitational radiation. Same as ASTR 540. Prerequisite: PHYS 435; PHYS 485 or PHYS 486.

PHYS 541 Physics of Compact Objects credit: 4 Hours.

Rigorous survey of the physical properties of black holes, white dwarfs, and neutron stars. Formation of compact objects. Equilibrium configurations, equations of state, stability criteria, and mass limits: the influence of rotation and magnetic fields. Pulsar phenomena. Black hole spacetimes. Hawking radiation. Mass flow in binary systems; spherical and disk accretion; high-temperature radiation processes; pulsar spin-up. Compact x-ray sources and x-ray bursts. Supermassive black holes in star clusters and dense galactic nuclei. Gravitational and neutrino radiation from supernova collapse and binary coalescence. Same as ASTR 541. Prerequisite: PHYS 436.

PHYS 542 Theoretical Stellar Physics credit: 4 Hours.

Same as ASTR 504. See ASTR 504.

PHYS 550 Biomolecular Physics credit: 4 Hours.

Physical concepts governing the structure and function of biological macromolecules; general properties, spatial structure, energy levels, dynamics and functions, and relation to other complex physical systems such as glasses; recent research in biomolecular physics; physical techniques and concepts from theoretical physics emphasized. Same as BIOP 550 and MCB 550. Prerequisite: CHEM 104; PHYS 485 or PHYS 487.

PHYS 552 Optical Spectroscopy credit: 4 Hours.

Theoretical and experimental fundamentals of optical spectroscopy. Light-matter interaction (absorption of UV, visible, IR), emission spectroscopy (fluorescence, Raman and light scattering), theoretical backgrounds of molecular electronic and vibrational transitions, modern experimental techniques, and data analysis of the optical spectroscopy experiments. Laboratory exercises applying spectroscopy to a broad spectrum of disciplines, including biophysical examples. Prerequisite: PHYS 427 and PHYS 487.

PHYS 554 Nonequilibrium Stat Mechanics credit: 4 Hours.

Mathematical description of classical and quantum stochastic systems, thoroughly addressing the tools and the mode of thinking of non-equilibrium statistical mechanics. Equilibrium statistical mechanics (review); Einstein and Smoluchowski diffusion equation; generalized moment expansion of correlation functions; noise-induced limit cycles; time series analysis; diffusion-controlled reactions; classical dynamics under the influence of stochastic forces; observables connected with Brownian transport, echoes, and hysteresis; spin-boson model. Examples from biological physics and theoretical condensed matter physics. Prerequisite: PHYS 504.

PHYS 560 Condensed Matter Physics I credit: 4 Hours.

Crystalline perfection, free-electron gas, screening, plasma oscillations, and dielectric response; Bloch electrons, Brillouin zones, and band structure; semiconductors, intrinsic and extrinsic, with applications; phonons, elasticity, and anharmonicity; ferromagnetism and second-order phase transitions; superconductivity. Prerequisite: PHYS 427 and PHYS 580.

PHYS 561 Condensed Matter Physics II credit: 4 Hours.

Hartree-Fock theory and electron-electron interactions; electron-phonon interactions; electron dynamics and transport; BCS theory of superconductivity; elastic properties; thermal properties due to anharmonicity; defects in solids. Prerequisite: PHYS 560 and PHYS 581.

PHYS 563 Phase Transitions credit: 4 Hours.

Phenomenology of phase transitions, scaling, critical behavior, and multicriticality; Landau theory of phase transitions; renormalization group methods, including lattice models and epsilon-expansion; numerical methods; critical dynamics; selected additional topics. Prerequisite: PHYS 504.

PHYS 565 Theory of Semicond & Devices credit: 4 Hours.

Same as ECE 535. See ECE 535.

PHYS 569 Emergent States of Matter credit: 4 Hours.

Consequences of broken symmetry in condensed matter, the emergence of novel ground states, and the nature of the excitations that arise. Examination of specific systems such as superconductivity, superfluidity, Bose-Einstein condensates, the quantum Hall states, liquid crystals, biological systems and patterns in Rayleigh-Benard convection. Prerequisite: PHYS 504 and PHYS 580.

PHYS 570 Subatomic Physics credit: 4 Hours.

Nuclear systematics, nucleon-nucleon interaction, shell model, and single-particle and collective excitations; hadron spectroscopy, hadronic quantum numbers, quark-parton model, and hadron dynamics; weak interactions. Prerequisite: PHYS 580; concurrent registration in PHYS 581.

PHYS 575 Particle Physics I credit: 4 Hours.

Basic calculations in elementary particle theory. Quantum electrodynamics, quantum chromodynamics, and the Glashow-Weinberg-Salam theory of weak and electromagnetic interactions as applied to the phenomenology of particle decays and high energy reactions. Prerequisite: PHYS 570. Recommended: credit or concurrent registration in PHYS 582.

PHYS 576 Particle Physics II credit: 4 Hours.

Continuation of PHYS 575. Current topics in particle theory. Typically three or four different subjects in depth which may change with each offering. Prerequisite: PHYS 575.

PHYS 580 Quantum Mechanics I credit: 4 Hours.

Second course in quantum mechanics. Operators, state vectors, and the formal structure of quantum theory; operator treatments of simple systems; angular momentum and vector addition coefficients; stationary state perturbation theory; introduction to scattering theory for particles without spin, partial wave analysis, and Born approximation; examples taken from atomic, nuclear, and elementary particle physics. Prerequisite: PHYS 485 or PHYS 487.

PHYS 581 Quantum Mechanics II credit: 4 Hours.

Spin and identical particles, simple many-particle systems and elements of second-quantization theory; time-dependent processes, radiative transitions, and quantization of the electromagnetic field; scattering of particles with spin; polarization; introduction to the Klein-Gordon and Dirac equations and properties of simple relativistic systems. Prerequisite: PHYS 580.

PHYS 582 General Field Theory credit: 4 Hours.

Standard techniques of field theory as used by experimenters and theorists; relativistic quantum mechanics of a single particle; Lagrangian field theories, perturbation theory, and calculation of lowest-order processes; introduction to Feynman diagrams and higher order processes; examples taken from quantum electrodynamics, solid-state and elementary particle physics, and many-body theory. Prerequisite: PHYS 581.

PHYS 583 Advanced Field Theory credit: 4 Hours.

Quantization and Feynman path integral; gauge theories and renormalization; renormalization group with applications to particle physics and critical phenomena; approximation methods and recent developments. Prerequisite: PHYS 582.

PHYS 596 Graduate Physics Orientation credit: 1 Hour.

Introduction to research in the Department of Physics. Advice on choosing a field of research and finding a research advisor. Faculty-presented overviews of the major areas of research available in the Physics Department. General discussions on instructional topics as well as ethics in teaching and sciences.

PHYS 597 Individual Study credit: 1 to 16 Hours.

Individual study in a subject not covered in course offerings may be arranged for credit by registration under this number. May be repeated. 2 to 16 hours for full term; 1 to 8 hours for half-term. Prerequisite: Consent of instructor.

PHYS 598 Special Topics in Physics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in physics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

PHYS 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Plant Biology (PBIO)

PBIO Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PBIO>)

Courses

PBIO 599 Thesis Research credit: 0 to 16 Hours.

Individual work under supervision of members of the staff in their respective fields. Approved for S/U grading only. May be repeated.

Plant Pathology (PLPA)

PLPA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PLPA>)

Courses

PLPA 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Experimental course on a special topic in plant pathology. Topic may not be repeated except in accordance with the Code. May be repeated in the same or subsequent terms. No more than 12 hours may be counted toward graduation.

PLPA 200 Plants, Pathogens, and People credit: 3 Hours.

Plant diseases and their impact on food supplies and human history are studied in lectures, demonstrations and discussions. Issues of food production and safety, pesticide use and human health, and the environment are considered. Includes the biology of pathogens that cause plant disease. Designed for non-science and science majors. Prerequisite: RHET 105 or equivalent.

This course satisfies the General Education Criteria for:

Advanced Composition

Nat Sci Tech - Life Sciences

PLPA 204 Introductory Plant Pathology credit: 3 Hours.

Concepts relating to causal agents of representative plant diseases, symptoms and diagnosis, modes of infection and spread, effects of environment on disease development, and methods of control.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

PLPA 395 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated to a maximum of 12 hours.

PLPA 401 Plant Pathogenic Fungi credit: 4 Hours.

Principles of the biology, ecology and pathogenesis of fungi that cause plant diseases; morphology, classification, and history of these pathogens. The course includes both lecture and laboratory components. 4 undergraduate hours. 4 graduate hours. Offered in alternate years.

Prerequisite: One year of biology or plant biology; and plant and animal genetics; and an introductory plant pathology course; or consent of instructor.

PLPA 402 Phytoparasitic Nematodes credit: 2 Hours.

Study of plant-pathogenic nematodes with emphasis on economically important groups; nematode morphology, identification, classification, development biology, ecology, and host-parasite relationships; interaction with fungi, bacteria and viruses in plant disease development, experimental and diagnostic techniques; and symptomology and control. 2 undergraduate hours. 2 graduate hours. Prerequisite: An introductory course in plant pathology and an introductory course in zoology, or consent of instructor.

PLPA 404 Plant Virology credit: 2 Hours.

Current knowledge of viruses and the diseases they cause in plants studied in lectures, discussions and laboratories. Topics include virus structure, replication, expression, taxonomy and transmission and viral disease detection, diagnosis, epidemiology and management. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: An introductory course in plant pathology and an introductory course in genetics, or consent of instructor.

PLPA 405 Plant Disease Diagnosis & Mgmt credit: 3 Hours.

Field and laboratory techniques in plant disease diagnosis and appraisal; identification of diseases of small grains, turf, corn, soybeans, forage crops, vegetables, fruit, forest and shade trees, and ornamentals, both on field trips and in laboratory exercises. Includes fundamentals of disease management. 3 undergraduate hours. 3 graduate hours. Prerequisite: PLPA 204 or equivalent.

PLPA 406 Phytobacteriology credit: 2 Hours.

Provides up-to-date coverage of prokaryotes that cause plant diseases. Lectures, discussions, and laboratories cover taxonomy, molecular biology, etiology, detection and identification, epidemiology and management of major plant pathogenic prokaryotes. 2 undergraduate hours. 2 graduate hours. Offered in alternate years. Prerequisite: An introductory course in Plant Pathology and Microbiology, or consent of instructor.

PLPA 407 Diseases of Field Crops credit: 3 Hours.

Studies the symptoms of major field crop diseases, life histories of causal organisms, and methods of control. Lecture and laboratory. Same as CPSC 407. 3 undergraduate hours. 3 graduate hours. Prerequisite: PLPA 204 or PLPA 401.

PLPA 504 Plant Nematology credit: 4 Hours.

Comprehensive study of plant-feeding nematodes with emphasis on economically important groups; nematode morphology, identification, classification, developmental biology, ecology, and host-parasite relationships; interaction with fungi, bacteria, and viruses in plant disease development; experimental and diagnostic techniques; symptomatology and control. Offered in alternate years. Prerequisite: PLPA 204 or PLPA 401; an introductory course in animal biology; or consent of instructor.

PLPA 509 Mol Bio of Microbe-Plant Inter credit: 3 Hours.

Detailed analysis of the microbe-plant interaction at the molecular level. Covers commensal, symbiotic, and pathogenic interactions from viewpoint of both plant and microbe. Emphasizes microbial and plant genes involved in the interactions, their organization, regulation of expression and the nature and function of the encoded gene products. Same as MCB 511. Offered in alternate years. Prerequisite: MCB 421 or PLPA 204 or equivalents.

PLPA 599 Thesis Research credit: 0 to 16 Hours.

Individual study and basic and/or applied research related to plant disease; required of all students working toward the Master of Science or Doctor of Philosophy in Plant Pathology. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated to a maximum of 16 hours if topics vary.

Polish (POL)

POL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/POL>)

Courses

POL 101 Elementary Polish I credit: 4 Hours.

Oral and written work on basic pronunciation, grammar, and vocabulary. For students with no prior work in Polish.

POL 102 Elementary Polish II credit: 4 Hours.

Continuation of POL 101 Prerequisite: POL 101.

POL 115 Intro to Polish Culture credit: 3 Hours.

Introduction to Polish culture and literature from a broad historical perspective. Drawing on novels and plays, film, the visual arts, and works of historical research, the course provides students with the basic concepts, methodologies and theories of literary and cultural interpretation, with an emphasis on modern Polish culture (1800-2010) within a broader European context. Same as REES 115.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

POL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

POL 201 Second Yr Polish I credit: 4 Hours.

Grammar review, conversation practice, written exercises, and selected readings. Prerequisite: POL 102 or equivalent.

POL 202 Second Yr Polish II credit: 4 Hours.

Continuation of POL 201. Prerequisite: POL 201.

POL 245 Survey of Polish Literature credit: 3 Hours.

Critical survey, in translation, of Polish literature from the Middle Ages to the end of the nineteenth century; special attention given to the works in their cultural context. Same as CWL 245.

POL 301 Third-Year Polish I credit: 3 Hours.

Reading and discussion of representative prose and poetry works of Polish authors since 1863. All readings are in the original language; the course emphasis is in the development of language skills. Prerequisite: POL 202 or consent of instructor.

POL 302 Third-Year Polish II credit: 3 Hours.

Reading and discussion of representative prose and poetry works of Polish authors to 1863. All readings are in the original language; the course emphasis is in the development of language skills. Prerequisite: POL 301 or consent of instructor.

POL 401 Fourth-Year Polish I credit: 3 Hours.

Analysis of the sound system and grammar of the contemporary Polish language. 3 undergraduate hours. 3 graduate hours. Prerequisite: Knowledge of another Slavic language or consent of instructor.

POL 402 Fourth-Year Polish II credit: 3 Hours.

Reading and analysis of selected texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: POL 401 or consent of instructor.

POL 446 Problems of Polish Literature credit: 3 or 4 Hours.

Critical study, in translation, of modern Polish fiction, drama, poetry, and essay, from Young Poland to the "New Wave"; their contribution to literary styles and genres in Poland and abroad; special emphasis on Wyspianski, Witkiewicz, and Gombrowicz. Same as CWL 436. 3 undergraduate hours. 4 graduate hours.

Political Science (PS)

PS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PS>)

Courses

PS 100 Intro to Political Science credit: 3 Hours.

Surveys the major concepts and approaches employed in the study of politics. Credit is not given for both PS 100 and PS 200.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

PS 101 Intro to US Gov & Pol credit: 3 Hours.

Examines the organization and development of national, state, and local governments in the U.S.; the federal system; the U.S. Constitutions; civil and political rights; the party system; and the nature, structure, powers, and procedures of national political institutions. This course may require limited participating as a subject in research.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

PS 125 Washington Experience credit: 3 Hours.

An examination of political Washington and policymaking. Through visits to think tanks, nonprofit organizations and agencies we will examine the policymaking world in Washington and get to know different participants in this process, what they do, and how they interact and work to affect policy and express their ideas. This course is a required component of the Illinois in Washington Program. Prerequisite: Acceptance to and enrollment in the Illinois in Washington Program.

PS 152 The New Middle East credit: 3 Hours.

Discussion of contemporary sociopolitical change and current events in the Middle East. We will explore the background to these events, the factors that are driving them, and the short-term and long-term implications for the region and the world. Course reflects diverse fields of study, including cultural studies, economics, education, history, law, linguistics, literature, media, religion, political science, and sociology. Same as SAME 152 and SOC 152.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

PS 180 IntroPolitics of Globalization credit: 3 Hours.

Introduction to the politics of globalization; identification of the principal actors, properties, and patterns of the politics of globalization that distinguish global politics from other forms of politics between and within groups, communities, states, and international organizations.

PS 191 Topics in Civic Leadership credit: 1 or 2 Hours.

Examines public and political life from the perspective of public and political leaders. Topics include professional development, career narratives, and/or development or selection of opportunities for civic or public service. May be repeated in separate terms if topics to vary to a maximum of 3 hours.

PS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

PS 200 Foundations of Pol Sci credit: 3 Hours.

Surveys the social scientific approach to the study of politics. Credit is not given for both PS 200 and PS 100.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 201 US Racial & Ethnic Politics credit: 3 Hours.

Examines efforts by racial and ethnic communities to organize politically and by society to allocate resources based on race or ethnicity. Topical focus includes African Americans, Latinos, Asian Americans, Native Americans, and white ethnics. The primary goal of the course is to develop a more comprehensive understanding of racial and ethnic politics by identifying commonalities and differences among these groups and their relationship to the state. Same as AAS 201, AFRO 201, and LLS 201.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

PS 202 Religion & Politics in the US credit: 3 Hours.

Examines how religion and politics influence each other in the United States, both historically and in contemporary society.

PS 220 Intro to Public Policy credit: 3 Hours.

Surveys the policy process including adoption, implementation, and evaluation. Topics may include reviews of substantive policy issues such as crime, energy, environment, poverty, foreign policy, civil liberties, or economic regulation. Prerequisite: PS 100 or PS 101, or consent of instructor.

PS 222 Ethics and Public Policy credit: 3 Hours.

Examination of the moral issues in public policy that arise in a democratic setting, utilizing conceptual tools from political and moral theory to evaluate policy decisions involving means and ends between conflicting goals. Prerequisite: PS 100, PS 101, or consent of instructor.

PS 224 Politics of the National Parks credit: 2 or 3 Hours.

Examines the politics of national parks in the United States, including creation of parks, local support or opposition to parks, and park policy as well as policy questions such as the value of wilderness ecosystem management, endangered species protection, and role of parks in national identity and remembrance of events such as the Civil War, the Indian wars, or the civil rights movement. Same as RST 224. Additional fees may apply. See Class Schedule. May be repeated in separate terms to a maximum of 10 hours.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 225 Environmental Politics & Policy credit: 3 Hours.

Examinations of the political, economic, ecological, and cultural trade-offs between the use and the preservation of the environment, with particular emphasis on the preservation of land and water resources in national parks, forests, and other reserved lands. Same as RST 225.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 230 Intro to Pol Research credit: 3 Hours.

Surveys the principles that guide empirical research in political science; emphasizes definition of research problems, principles and practices of measurement, use of data as evidence, and data analysis. Prerequisite: PS 100 or PS 101, or consent of instructor.

PS 231 Strategic Models credit: 3 Hours.

Introduces strategic models of political behavior and their implications for our understanding of politics. Uses simple models, inspired by game theory, to examine fundamental political questions.

PS 240 Intro to Comp Politics credit: 3 Hours.

Surveys the basic concepts and principles of political analysis from a comparative perspective.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 241 Comp Politics in Dev Nations credit: 3 Hours.

Provides comparative and historical insights into the problems affecting the developing world by examining social, economic and political changes in Africa, Asia, and Latin America.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

PS 242 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, ANTH 222, and SOC 222. See AFST 222.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

PS 243 Pan Africanism credit: 3 Hours.

Provides an introduction to Pan African political movements and ideologies from the Americas to continental Africa. Examines the political, social, economic, and ideological relationships and connections between Africans and their descendants in the diaspora from an historical and comparative perspective. Same as AFRO 243, AFST 243, and SOC 267.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

PS 270 Intro to Political Theory credit: 3 Hours.

Introduces the nature, structure, and purposes of political theory; examines major works on the problems of political order, obedience, justice, liberty, and representation to distinguish and clarify different theoretical approaches.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

PS 272 Women and Politics credit: 3 Hours.

Examines the political status and roles of women. Topics include women's political behavior; feminist and anti-feminist politics; and contemporary legislative and public policy issues, such as educational equity, equal rights legislation, and health care delivery for women. Same as GWS 272.

PS 273 Environment and Society credit: 3 Hours.

Same as ESE 287, GEOG 287 and NRES 287. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

PS 280 Intro to Intl Relations credit: 3 Hours.

Structure and processes of international relations, trends in international politics, and the future of the international system. Credit is not given for both PS 280 and PS 281.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PS 281 Intro to Intl Relations-ACP credit: 3 Hours.

This course is identical to PS 280 except for the additional writing component that fulfills the campus' advanced composition requirement. Credit is not given for both PS 280 and PS 281. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition
Social Beh Sci - Soc Sci

PS 282 Governing Globalization credit: 3 Hours.

Examines the historical, socio-economic, political, and moral dimensions associated with the rise of a global society and its governance.

Prerequisite: Completion of campus Composition I general education requirement; completion of one course in a social science or consent of instructor.

This course satisfies the General Education Criteria for:

Advanced Composition

Social Beh Sci - Soc Sci

PS 283 Intro to Intl Security credit: 3 Hours.

Surveys the major issues associated with arms control, disarmament and international security. Also examines the military, socio-economic, and political dimensions of weapons systems, military strategy, the ethics of modern warfare, nuclear proliferation, and regional security issues. Same as GLBL 283.

PS 289 Politics of the Vietnam War credit: 3 Hours.

Examines questions about the war in Vietnam and the era during which it was fought. Focuses on official policy questions, such as the decision making process, the legality of the war, the question of war crimes, and lessons for international relations. Domestic issues, such as the rise and effect of the antiwar movement, are also discussed. Prerequisite: Allen Hall residency or consent of Unit One director.

PS 292 Undergraduate Research Practicum credit: 1 to 4 Hours.

Familiarize students with processes for producing, validating and analyzing political science data through experiential learning. Nature and topical focus of research projects vary. May be repeated up to 4 hours in separate terms. Prerequisite: Consent of faculty member supervising the practicum.

PS 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in an approved study-abroad program in Political Science, appropriate to the student's course of study. Approved for letter and S/U grading. May be repeated to a maximum of 34 hours per academic year. Prerequisite: Overall GPA 2.75, 3.00 grade point average in Political Science, admission to approved program.

PS 300 Special Topics credit: 3 Hours.

Selected readings and research in political science. See Class Schedule for current topics. May be repeated to a maximum of 6 hours if topics vary. Prerequisite: Six hours of political science, or consent of instructor.

PS 301 The US Constitution I credit: 3 Hours.

Analyzes issues related to judicial interpretation of the constitution; the separation of governmental powers; federalism; checks and balances among the three branches of the national government; and the jurisdiction of federal courts. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 302 The US Constitution II credit: 3 Hours.

Analyzes issues involved in free speech, freedom of religion, rights of the criminally accused, and government's responsibility to protect persons from discrimination based on race or sexual preference. Pays special attention to the role of law and judges. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 303 The US Congress credit: 3 Hours.

Examines the legislative function in government; the structure and organization of Congress; legislative procedures; pressure groups and lobbying; the relation of legislature to other branches of government; and problems of legislative reorganization. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 304 The US Presidency credit: 3 Hours.

Examines the multiple roles of the president; the determinants and growth of presidential influence; presidential decision making; the president's role in the formulation and implementation of public policy; and the president's multiple constituencies. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 305 The US Supreme Court credit: 3 Hours.

Examines how the modern Supreme Court resolves major issues in American constitutional politics. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor; PS 301 or PS 302.

PS 306 Judicial Politics credit: 3 Hours.

Introduction to the study of courts and judges as political institutions and actors. Focuses primarily on federal courts in the United States, but also covers courts in the American states. Addresses topics such as how judges are selected; who or what determines which cases are heard; the influence of ideology and the law on judges' decisions; the relationships that exist between the courts in the judiciary; the role of the president and the Senate in judicial decisions; and judges' decisions that run contrary to the public's wishes. Prerequisite: PS 101.

PS 307 Separation of Powers credit: 3 Hours.

Explores how the checks and balances built into the US Constitution affect the interactions between the Executive, Legislative, and Judicial branches. Addresses topics such as whether Congress is less productive during times of divided government; why some presidential nominees sail through confirmation, while others take years to be confirmed; and whether Supreme Court justices pay attention to the preferences of the President and Congress when deciding cases. Prerequisite: PS 101.

PS 308 Politics, Policy & Regulation credit: 3 Hours.

Explores how federal agencies (e. g., the Environmental Protection Agency, and the Department of Defense) shape national policy. Provides students with a background in the concepts and ideas that political scientists use in the study of the federal bureaucracy, and motivates further study of political institutions. Students will use traditional political science and legal texts to analyze contemporary policy problems. Prerequisite: PS 101.

PS 309 State Gov in the US credit: 3 Hours.

Surveys the origins and evolution of state government in the United States. Topics include history, structure and dynamics of state governments, laws and the judiciary, state legislatures, political parties, organized interests, bureaucracies, demographic change and electoral patterns, and political conflicts, and coalitions. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 310 Politics of Organizations credit: 3 Hours.

Introduction to the study of public organizations with a focus on formal political organizations including parties, legislatures, and bureaucracies. In-depth analysis of two of the main problems confronted by organizations: collective action problems and delegation problems. Students will acquire an understanding of these problems as well as different ways in which they can be addressed. A strong emphasis is also placed on developing the analytical skills necessary for informed analysis of political interactions involving formal organizations. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 311 Political Parties in the US credit: 3 Hours.

Examines the organization and operation of the American party system; national, state, and local organizations and their interactions; the convention and primary systems; and campaign methods and finance. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 312 Politics and the Media credit: 3 Hours.

Examines the processes of mass-mediated political communication in democratic societies. Special emphasis will be given to the role of news media in democratic theory, factors shaping the construction of news such as journalism routines, media economics, and the strategic management of news by political elites. Same as CMN 325 and MACS 322.

PS 313 Congress and Foreign Policy credit: 3 Hours.

Examines cases of foreign-policy making over 100 years with a focus on the struggle between the legislative and executive branches, constitutional questions, explanations for changes in behavior, and the impact on democratic process. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 314 Political Psychology credit: 3 Hours.

Explores the psychological processes that underlie political attitudes and behaviors. Specifically, we will take theories from social, personality, cognitive, and evolutionary psychology and apply them to political phenomena. Topics will include how politics is affected by cognitive biases, emotions, persuasion, social influence, identity, prejudice and discrimination, personality, and evolution and genetics. We will also explore what we can learn about basic human psychology by studying politics carefully. Prerequisite: PS 101.

PS 315 African American Politics credit: 3 Hours.

Examines the role of race in stimulating change in American political life; types of strategies employed in the civil rights struggle; how race affects electoral participation and the broader political and economic conditions of African Americans. Same as AFRO 315. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 316 Latina/Latino Politics credit: 3 Hours.

Examines the role of Latino electorates in shaping state and national politics. Reviews the histories of Latino national origin groups, examines public policy issues of concern to Latinos, successes and failures of Latino empowerment strategies, and the electoral impact of Latino votes. Focus will be primarily on Mexican Americans, Puerto Ricans, and Cuban Americans and an assessment of the degree to which their political agendas are likely to merge over the coming years. Same as LLS 316. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 317 Asian American Politics credit: 3 Hours.

Provides an overview of the role of Asian Americans in the American political system. Topics include: the international context of emigration, the history of different Asian groups in the U.S., demographic patterns, issues of identity, classification, and pan-ethnicity, voting behavior, minority representation, and public policy. Same as AAS 317. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 318 Interests Grps & Soc Movements credit: 3 Hours.

Focuses on two important forces in American politics that provide ways for citizens to affect public policy: interests groups and social movements. Examination of organized interest groups, including their organization, growth, activity, and impact in American politics. Examines the formation and role of social movements. Prerequisite: PS 101, or six hours of Political Science credit, or consent of instructor.

PS 319 Campaigns and Elections credit: 3 Hours.

Examines the dynamics of United States congressional and presidential campaigns, including electoral rules, campaign organization and finance, candidate strategy, role of parties, interest groups, and the media, campaign effects, and proposals for reform. Prerequisite: PS 101 or six hours of Political Sciences credit.

PS 320 Public Opinion credit: 3 Hours.

Examines the nature of public opinion in contemporary American politics. Considers the extent to which public opinion is organized by ideology, values, party identification and other group-related identities. Will analyze both the sources and consequences of public opinion and the nature of public support for democracy and democratic institutions. Will investigate the relationship between public opinion and policymaking. Prerequisite: PS 101.

PS 321 Principles of Public Policy credit: 3 Hours.

Examines different approaches to evaluating the performance of public sector organizations, including private sector accountability principles. Focuses on how to improve the performance of governmental agencies, as well as corporate social responsibility. Same as ACCY 321, ACE 321, and BADM 303. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 322 Law and Public Policy credit: 3 Hours.

Examines the nature of law, law makers, and law appliers; the determinants of law-making; and the societal impact of law. Prerequisite: PS 101, six hours of Political Science credit, or consent of instructor.

PS 323 Law and Representation credit: 3 Hours.

Examines political and legal policies related to electoral representation including constitutional protections of voting rights and related topics such as a gerrymandering, vote counting, majority minority districts, and the Voting Rights Act. Prerequisite: PS 101 or six hours of Political Science or consent of instructor.

PS 328 Introduction to Biology and Politics credit: 3 Hours.

Examines the biological processes that underlie political attitudes and behaviors. Specifically, we will take theories from behavioral and molecular genetics, psychophysiology, neuroscience, and evolutionary psychology and apply them to political attitudes and behaviors. Topics will include how evolutionary adaptations shape political life, how genes affect political traits, the effects of physiological differences on how people experience the political world, and what political insights can be drawn from studying differences in brain structures and functioning. Prerequisite: PS 101.

PS 329 Immigration & Citizenship credit: 3 Hours.

Examination of the conceptual issues associated with citizenship and immigration, considering current political debates from a variety of perspectives: empirical, historical, and normative. Focuses on the United States but will also examine the immigration and citizenship processes of other nations as well. Among topics considered: why people migrate; consequences of migration; efforts to integrate immigrants; public opinion, citizenship traditions and rationales; membership; belonging, and national identify; post national citizenship. Prerequisites: PS 101, 6 hours of Political Science credit, or consent of instructor.

PS 330 Intro to Political Behavior credit: 3 Hours.

Analyzes the relationship between political attitudes and public opinion formation. The course also discusses political participation, political tolerance, and attitudes toward political leaders. Prerequisite: POLS 101, six hours of Political Science credit, or consent of instructor.

PS 331 Intro to Electoral Behavior credit: 3 Hours.

Examines the social, psychological and institutional determinants of individual voting decisions. Prerequisite: POLS 101, six hours of Political Science credit, or consent of instructor.

PS 339 Political Violence credit: 3 Hours.

Survey of various forms of political violence and examination of competing theories about why these types of political violence occur and their implications. The different "categories" of violence under examination constitute pressing topics in the study of conflict in both international relations and comparative politics. These categories, which may overlap conceptually or empirically, include phenomena such as mass collective action in protests, riots, repression and torture, coups, civil war and insurgency, genocide and massacres, sexual violence during war, self sacrifice, and terrorism. Prerequisite: PS 240 or PS 241 or PS 280, six hours of Political Science credit, or consent of instructor.

PS 340 Politics in Intl Development credit: 3 Hours.

Examines the ways in which the wealthy countries of the world, international organizations and non-governmental organizations have tried to catalyze or facilitate economic and human development in the poorer countries of the world. Prerequisite: PS 240 or PS 241 or PS 281, or six hours of Political Science credit, or consent of instructor.

PS 341 Gov & Pol in Africa credit: 3 Hours.

Examines contemporary economic, social, and political processes in Africa, focusing on three basic explanatory themes: historical patterns of development; emerging patterns of class and interest; and leadership strategies. Same as AFRO 341. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 343 Gov & Pol of China credit: 3 Hours.

Introduces the government and politics of modern China. Same as EALC 343. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 345 Gov & Pol of SE Asia credit: 3 Hours.

Provides a comparative analysis of the political development of the countries of Southeast Asia. Emphasis is placed on differing approaches to the governance and public policy formation, as well as economic, social, historical, and cultural influences on political development. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 346 Gov & Pol of South Asia credit: 3 Hours.

Provides a comparative analysis of the political development of India, Pakistan, Sri Lanka, and other nations in South Asia. Emphasis is placed on the differing approaches to governance and public policy formation, as well as the economic, social, historical, geographical and cultural influences on political development. Same as ASST 346. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 347 Gov & Pol of Middle East credit: 3 Hours.

Analyzes the transformation of Middle Eastern society from Morocco to Iran, as case studies in political modernization. The politics of the area are studied with special reference to causes and character of modernization, role of leadership, ideologies and institutions, methods and theories for analyzing political systems undergoing fundamental transformation, and implications for U. S. policy. Same as ASST 347. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 348 Gov & Pol in Western Europe credit: 3 Hours.

Examines the major governmental systems of continental Europe; the evolution, structure, and functioning of the political institutions of France, Germany, Italy, Spain, Switzerland, and the Scandinavian countries. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 351 Gov & Pol Post-Soviet States credit: 3 Hours.

Examines the evolution, structure, and functioning of post-Soviet governments. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 352 Gov & Pol of East Europe credit: 3 Hours.

Examines the collapse of communism and efforts to develop capitalism and democracy. Special emphasis is given to national conflict and European integration. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 353 Gov & Pol of Latin America credit: 3 Hours.

Examines the origin and development of Latin American political institutions. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 355 Democratization credit: 3 Hours.

Examines the global process of democratization, with special attention to gains and failures in selected areas since 1974. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 356 Comparative Political Economy credit: 3 Hours.

Examines the effect of domestic political processes on economic performance, including monetary, fiscal, and trade policies. Topics include partisan influences on policy, interest group intermediation, political accountability for economic outcomes, and consequences of product and capital market internationalization. Same as GBL 356. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor.

PS 357 Ethnic Conflict credit: 3 Hours.

Explores the bases of nationalist and ethnic identities across a variety of different national and cultural contexts, and how these are related to conflict at the intrastate and interstate levels. Consideration is given to the characteristics and patterns of ethnic conflict with special emphasis on how and when ethnic tensions become manifested in violent conflict. The course concludes with consideration and evaluations of various domestic and international approaches to conflict management and resolution. Same as GBL 357. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor. This course satisfies the General Education Criteria for: Advanced Composition

PS 358 Comparative Political Behavior credit: 3 Hours.

Examines themes of political behavior such as political participation, electoral politics, political culture, and contentious politics from a cross-national perspective. Prerequisite: PS 240, or PS 241, or six hours of Political Science credit.

PS 371 Classical Political Theory credit: 3 Hours.

Considers the major works of Greek and Roman political theory, stressing their relevance to modern political analysis and action. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 372 Modern Political Theory credit: 3 Hours.

Provides critical analysis of political theories from the fifteenth century to the present. The discussions focus on topics such as the development of conceptions of human nature, the role of the state, justice, legitimacy, obligation, individual rights, equality, and mechanisms of maintenance and change. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 373 Democratic Theory credit: 3 Hours.

Examines theories of the nature and conditions of democracy; compares and analyzes contemporary democratic institutions. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 374 Future Politics credit: 3 Hours.

Examines visions of the future drawn from science fiction literature as a way to engage with political and social theory and to cultivate the political imagination. Prerequisite: Six hours of political science credit or consent of instructor.

PS 376 American Political Theory credit: 3 Hours.

Surveys American political thought from colonial times to the present. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 377 Topics Contemp Pol Theory credit: 3 Hours.

Examines specific topics and writers of contemporary political theory. Recent themes have included conceptions of power, rights, justice, and radical political thought. May be repeated to a maximum of 9 hours. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 378 Topics Non-Western Pol Thought credit: 3 Hours.

Considers political thought outside of the Greco-Roman, European, and North American tradition. May be repeated if topics vary. Prerequisite: PS 270, six hours of Political Science credit, or consent of instructor.

PS 379 Intl Rel & Domestic Politics credit: 3 Hours.

Examines conceptual linkages between international relations and domestic politics. Emphasizes theoretical explanations of and empirical evidence for these linkages. Prerequisite: PS 280 or PS 281, or six hours of Political Science credit, or consent of instructor.

PS 380 International Cooperation credit: 3 Hours.

A study of cooperation among states. Cooperation dilemmas and their solutions, with focus on institutional arrangements that are aimed to facilitate cooperation among states. Prerequisite: PS 280 or PS 281, six hours of Political Science credit, or consent of instructor.

PS 382 Intl Political Economy credit: 3 Hours.

Examines the interaction between international politics and economics; locates ideologies and practices in the context of international economic relations. Considers such topics as international trade, the global monetary order, multi-national corporations, economic aid relationships, and food and energy politics. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 384 Politics of Globalization credit: 3 Hours.

Examines the basic concepts and politics associated with the emergence of the global society. This course evaluates divergent theoretical explanations for the emergence of global politics, as well as how and why the global society governs itself. It examines the strengths and shortcomings of the nation-state, markets, and democratization as responses to the imperatives of order, welfare, and legitimacy. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 385 Politics of the European Union credit: 3 Hours.

Considers the history of the European Union and its current functions and operations. Focuses on the ongoing process of political and cultural integration. Consists of sections in Illinois and abroad, interacting extensively via the worldwide web. Same as EURO 385, FR 385, and GER 385. Prerequisite: PS 240 or PS 241, six hours of Political Science credit, or consent of instructor; cross-listings require language training appropriate for enrollment in the respective overseas programs.

PS 386 International Law credit: 3 Hours.

Analyzes the concepts and bases of public international law. Topics include sources and subjects of international law, as well as issues of jurisdiction, territory, law of the sea, and use of military force. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 387 National Security Policy credit: 3 Hours.

Examines principal theories of international security and evaluates their capacity to explain the security behavior of states and other key international actors. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 389 International Communications credit: 3 Hours.

Same as MACS 389. See MACS 389.

PS 390 American Foreign Policy credit: 3 Hours.

Considers the major foreign policy decisions currently confronting the United States government: analyzes their background, principal issues, and alternative actions, as well as the policy formulation process. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 391 Soviet & Post-Sov Foreign Pol credit: 3 Hours.

Surveys Soviet and Post-Soviet foreign policy from 1917 to the present, with emphasis upon the forces shaping this policy; special attention to the interplay of ideology and national interest in policy formulation. Prerequisite: PS 280 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 392 Intl Organizations&Regionalism credit: 3 Hours.

Examines regionalism and regional international organizations and their consequences for multilateralism cooperation, and conflict. Prerequisite: PS 280.

PS 393 Diplomatic Studies Practicum credit: 4 Hours.

Practical introduction to the study of international organizations, consisting of three parts: academic modules in Urbana-Champaign; guest lectures and site visits in Vienna, Austria, and field trips TBA; and a final research paper based on fieldwork in Vienna, extending into late June. Enrollment requires prior admission to the Vienna Diplomatic Program.

PS 394 Crisis Diplomacy credit: 3 Hours.

A comparative study of foreign policy decision-making and diplomacy among the major states from 1816-1948 with a focus on crisis bargaining, management, and escalation. Foreign relations of Britain, France, Germany, Russia, Italy, Japan, and the United States are covered in light of international relations theories. Emphasis is placed on how domestic political struggles, like those between hard liners and accommodationists, and external factors, like alliances and international norms, affect decision-making. Comparisons are made between those crises that are peacefully settled and those that escalate to war and/or get out of control. Prerequisite: PS 280, PS 281, PS 283, or consent of instructor.

PS 395 International Organization credit: 3 Hours.

Examines the development of basic principles underlying world organization; also considers the principles, structure, methods, and operation of international governmental institutions. Gives special attention to the United Nations and related agencies and to their evolution from the League of Nations system. Credit is not given for both PS 383 and PS 395. Prerequisite: PS 280 or PS 281 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 396 International Conflict credit: 3 Hours.

Examines the conditions that promote war and peace between states. General topics covered are: historical patterns in warfare; causes of war, including arms races and power distributions; outcomes of war; and approaches to peace. Credit is not given for both PS 381 and PS 396. Prerequisite: PS 280 or PS 281 or PS 283, six hours of Political Science credit, or consent of instructor.

PS 397 Authoritarian Regimes credit: 3 Hours.

Examines the various aspects of the politics in authoritarian regimes: their emergence and breakdown, the policy choices and institutions typically adopted, leadership change, and the theories that explain them. Historical case studies and statistical data will be used to examine real-world cases. Prerequisite: PS 240 or PS 241; or six hours of Political Sciences credit; or consent of instructor.

PS 398 Strategic Interntl Relations credit: 3 Hours.

Examination of basic concepts and tools for analyzing foreign policy and understanding international politics and economy. Simple game-theoretic models will be used to explore the logic and the mechanisms behind key policy issues in international economy, cooperation, security, and institutions. Prerequisite: PS 280 or PS 281; or six hours of Political Sciences credit; or consent of instructor.

PS 399 Politics of International Treaties credit: 3 Hours.

Treaties are agreements between sovereign states governed by international law. This course examines why countries commit to treaties and why they comply with them. It will provide advanced undergraduate students with the opportunity to read a range of scholarly works on international agreements and to conduct their own research on related topics. Prerequisite: PS 280.

PS 408 Islam & Politics in Mid. East credit: 3 or 4 Hours.

Same as REL 408 and SAME 408. See REL 408.

PS 410 Neighborhoods and Politics credit: 3 or 4 Hours.

Introduction to the social and political impacts of neighborhood life through readings, discussion, and field work. The political theories of local social networks, social ecology, the social context, third places, the physical form, and public space are examined. Students do library research and field work examining theories of social capital, civic engagement, new urbanism, public space, social context and urban form. Same as HDES 410. 3 undergraduate hours. 4 graduate hours. Prerequisite: PS 100 or PS 101 or consent of instructor.

PS 411 Campaigning to Win credit: 3 or 4 Hours.

Same as CMN 424. See CMN 424.

PS 413 Sex, Power and Politics credit: 3 or 4 Hours.

Same as GWS 478. See GWS 478.

PS 415 Europe and the Mediterranean credit: 3 or 4 Hours.

Same as EURO 415 and ITAL 415. See EURO 415.

PS 418 Language&Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, SLAV 418, and SPAN 418. See FR 418.

PS 456 Democracy and Identity credit: 3 or 4 Hours.

A normative and empirical examination of the special issues surrounding the development and maintenance of democracy in plural societies. Analyzes the impact of racial, ethnic and religious diversity on citizenship, civil rights, political institutions and public policy, as well as on democratic stability more generally, in established and newly emergent democracies. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

PS 457 Dem Gov in a Global Setting credit: 3 or 4 Hours.

Examination of the basic concepts and politics associated with the emergence of a global society. Students evaluate competing explanations for the emergence of this new politics and how and why the global society governs itself. It examines the strengths and weaknesses of the nation-state, markets, and democratization as responses, respectively, to the imperatives of order, welfare, and legitimacy in the governance of world's peoples and states. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

PS 480 Energy and Security credit: 3 Hours.

Same as GLBL 480 and NPPE 480. See NPPE 480.

PS 490 Individual Study credit: 1 to 4 Hours.

Special topics not treated in regularly scheduled courses; designed primarily for juniors and seniors. 1 to 4 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

PS 491 Internship credit: 0 to 6 Hours.

Students follow a program of study and research related to an approved internship under the direction of the internship director and/or a faculty sponsor. Consult departmental undergraduate advisor or internship director. 0 to 6 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated to a maximum of 12 undergraduate hours. Prerequisite: 45 credit hours completed, one year in residence at an institution of higher learning, minimum 2.5 grade point average, coursework related to the internship, and acceptance to the internship director or undergraduate director and by faculty sponsor. Students enrolled in internship courses may not register for more than 18 hours total for all courses during the semester of the internship course.

PS 492 UG Research Assistance credit: 0 to 3 Hours.

Assist departmental faculty in on-going research. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours. Credit is not given for more than nine hours toward completion of the political science major from any combination of PS 490, PS 491, and/or PS 492. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head.

PS 494 Junior Honors Seminar credit: 3 Hours.

Research, reading, and discussion in selected topics and works in literature of political science. A major research project is required in preparation for PS 495. 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours if topics vary. Credit is not given for non-honors courses and honors seminar on the same topic. Prerequisite: Admission to Political Science Honors Program or consent of department.

PS 495 Senior Honors Seminar credit: 3 Hours.

Provides an advanced overview of methodological issues in political science especially identification of research questions and design of research strategies in political science appropriate for a senior thesis. Requires completion of a substantial research proposal. 3 undergraduate hours. No graduate credit. Credit is not given for more than six hours towards any combination of PS 495 and PS 496. Neither PS 495 nor PS 496 counts towards the 30 hours required for completion of the political science major. Prerequisite: Admissions to Political Science Honors Program or consent of instructor.

PS 496 Senior Honors Thesis credit: 2 to 6 Hours.

2 to 6 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Written consent of instructor of department approval; open only to seniors whose major is political science and who have a general University grade point of 3.0.

PS 501 Democratic Political Inst I credit: 4 Hours.

Involves intensive analysis of major institutions and processes of democratic politics (national, state, local); research on selected topics in American government.

PS 502 Democratic Political Inst II credit: 4 Hours.

Discusses contemporary theories about the impact of democratic institutions on politics and policy.

PS 503 US Congress credit: 4 Hours.

Traces the development of Congress as an institution with special attention to the role of norms; considers intra-institutional aspects of Congress including committee decision-making, floor voting, and leadership; examines congressional relationships with other actors including the presidency and Supreme Court, interest groups, and constituents.

PS 506 Pol Parties and Elections credit: 4 Hours.

Examines the role of political parties and elections in the political process; traces the evolution of American parties as a political institution, assesses their impact upon the policy-making processes, and considers macro-level influences upon the electoral process.

PS 507 Collect Action & Interest Grps credit: 4 Hours.

Provides a broad analysis of collective action, interest groups, and politics; examines the meaning of political interests and the forms they take; reviews various approaches to the study of interest groups; analyzes the formation and operation of interest groups; examines innovation and change in interest group politics and research.

PS 511 Proseminar Pol Behavior I credit: 4 Hours.

Introduces interdisciplinary approaches to the analysis of political behavior; formation of opinions, interests, roles, and beliefs.

PS 512 Proseminar Pol Behavior II credit: 4 Hours.

Continuation of PS 511. Prerequisite: PS 511.

PS 514 Founds of Organizational Behav credit: 4 Hours.

Same as BADM 510, PSYC 553, and SOC 575. See BADM 510.

PS 517 Civic Leadership Practicum I credit: 2 or 4 Hours.

The practicum seminar is the capstone experience of the BA/MA Civic Leadership Program and serves as the principal bridge between the academic and multi-faceted practicum components of the program. The Fellows will engage in an in-depth exploration of a predetermined policy issue (health care, international trade, welfare reform, citizen engagement, for example). The practicum seminar members will, over two semesters, prepare a background paper and report with options and recommendations, which the seminar members will be expected to make a part of the public debate and policymaking process. Prerequisite: Graduate standing in the Civic Leadership Program.

PS 518 Civic Leadership Practicum II credit: 2 or 4 Hours.

Continuation of PS 517. Prerequisite: Graduate standing in the Civic Leadership Program.

PS 519 Topics in American Politics credit: 4 Hours.

Selected research topics designed for graduate study in American Politics. May be repeated to a maximum of 12 hours.

PS 521 Phil Bases of Pol Inquiry credit: 4 Hours.

Reviews the scope and subject matter of political science; methodological issues in political science and major conceptions of methodology as embodied in the current literature.

PS 522 Research Design and Techniques credit: 4 Hours.

Provides an overview of research techniques for answering questions of concern in political science; indicates the range of available tools; discusses problems in concept formation; and presents current methods of concept measurement. Prerequisite: PS 521 or consent of instructor.

PS 523 The Comparative Method credit: 4 Hours.

Reviews strategies for systematic research based on small number of cases. Emphasis on problems of conceptualization, measurement, and analysis.

PS 524 Methods in Intl Rel credit: 4 Hours.

Deals with major research methodologies in contemporary international relations; includes case studies, aggregate data, content analysis, survey research, gaming and simulations, and causal modeling; presumes knowledge of basic international relations theory. Prerequisite: PS 580.

PS 525 Formal Theory I: Game Theory credit: 4 Hours.

Introduction to game theory and its applications to the study of politics. Study of the central ideas and techniques of game theory.

PS 526 Formal Theory II: Applications credit: 4 Hours.

Survey of major topics in formal political theory and the application of key game-theoretic methods to the study of politics. Prerequisite: PS 525 or consent of instructor.

PS 530 Quant Pol Analysis I credit: 4 Hours.

Introduction to data analysis and inferential statistics, including data collection, analysis and interpretation, sampling, and measures of statistical association and significance. Also introduces statistical software.

PS 531 Quant Pol Analysis II credit: 4 Hours.

Second class in inferential statistics, emphasizing the linear model and assumptions behind linear models. Prerequisite: PS 530 or consent of instructor.

PS 532 Quant Pol Analysis III credit: 4 Hours.

Select topics in inferential statistics, including models for limited dependent variables. Topics vary by semester and may include spatial econometrics, bootstrap models, ecological inference, and causal inference. Prerequisite: PS 531 or consent of instructor.

PS 540 Proseminar Comp Politics I credit: 4 Hours.

Surveys the major works, theories, and approaches that define the field of comparative politics. The substantive focus of the course is on advanced industrial countries.

PS 541 Proseminar Comp Politics II credit: 4 Hours.

Surveys the major works, theories, and approaches that define the field of comparative politics. The substantive focus of the course is on developing countries. Prerequisite: Completion of PS 540 is recommended.

PS 543 Global Democratization credit: 4 Hours.

Examines the roles of domestic and international factors, modes of transition, institutional choices and economic reforms in the transition from authoritarian rule. Comparisons are made of cases in Southern and Eastern Europe, Latin America, East Asia, the former Soviet Union, and others. Prerequisite: Completion of PS 540 or PS 541 is recommended.

PS 544 Politics of African States credit: 4 Hours.

Advanced research seminar. Focus will alternate among such topics in African politics as (a) the politics of agriculture (b) state and society (c) African political systems and the challenge of democratic practice and (d) political and economic crisis in Sub-Saharan Africa. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: PS 242 and PS 341 or consent of instructor.

PS 545 Politics of Post-Soviet States credit: 4 Hours.

Study of states which have experienced extended interludes of communist power, especially including the new states of the former Soviet Union, the post-communist regimes of Eastern Europe and China, through a comparative examination of political, economic, and ethnonational problems of regime transformation. Analytic and research papers required. Prerequisite: Completion of PS 540 or PS 541 is recommended.

PS 546 Comparative Political Behavior credit: 4 Hours.

Examines the political behaviors and opinions of common citizens in dissimilar national contexts, focusing on the theoretical literature and empirical research on topics such as political participation, political culture and contention politics from a cross-national perspective. Prerequisite: PS 540 or PS 541.

PS 548 Political Economy credit: 4 Hours.

Same as ECON 572. See ECON 572.

PS 549 Topics in Comparative Politics credit: 4 Hours.

Selected research topics designed for graduate study in Comparative Politics. May be repeated to a maximum of 12 hours.

PS 571 History of Pol Theories I credit: 4 Hours.

Reading, analysis and discussion of the leading political thinkers from the Greeks to the middle of the seventeenth century.

PS 572 History of Pol Theories II credit: 4 Hours.

Reading, analysis and discussion of the leading political thinkers from the middle of the seventeenth century to the present.

PS 579 Topics in Pol Theory credit: 4 Hours.

Reading, analysis, and discussion of selected topics of political theory. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

PS 580 Proseminar Intl Rel I credit: 4 Hours.

Examines major theories and approaches to the study of international relations.

PS 581 International War credit: 4 Hours.

Focuses on the conditions that influence war and peace between nation-states. Considers various factors at different levels of analysis (individual, national, dyadic, and systematic) in an attempt to understand why nations go to war. Readings will consist of current research in this topic area-without ignoring "classical" works. Prerequisite: PS 580.

PS 582 Intl Political Economy credit: 4 Hours.

Comprehensive introduction to major traditions in contemporary thought on the political structure and workings of the global economy. Presumes background knowledge pertaining to the workings of the international economy and its institutions as well as familiarity with the assumptions and approaches of classical I. P. E. thought and International Relations theory. Prerequisite: PS 580.

PS 583 International Organizations credit: 4 Hours.

Examines the development and operations of international organizations with special emphasis on United Nations and related agencies. Focuses on activities in security, economic, and social issue area. Prerequisite: PS 580.

PS 584 International Cooperation credit: 4 Hours.

Major theoretical perspectives and controversies in the literature of international cooperation and international institutions. Although broad spectrums of issues are covered, the focus is on basic logical questions, lines of reasoning, and analytical frameworks. Prerequisite: PS 580.

PS 585 Conflict Management credit: 4 Hours.

Examines the conditions that influence the processes and outcomes of conflict management between nation-states. Assesses various approaches used in conflict management research with a special emphasis on the relationship between conflict management and theories of IR. Assumes some background knowledge regarding empirical studies of war. Prerequisite: PS 580.

PS 586 Prosem Intl Relations II credit: 4 Hours.

Part two of a two course sequence examining major theories and approaches to the study of international relations. Prerequisite: PS 580.

PS 587 Research Seminar in IR credit: 4 Hours.

Advanced seminar in international relations, providing graduate students with original research experience. Students design and execute a research program, resulting in a major paper suitable for conference presentation and/or publication. The seminar will rotate among specific research topics in the area of international conflict, international law and organization, and international political economy respectively. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: PS 580.

PS 589 Topics in Intl Rel credit: 4 Hours.

Selected topics designed for graduate study in international relations. May be repeated under different instructors to a maximum of 12 hours. Prerequisite: PS 580 or PS 524, or consent of instructor.

PS 590 Research in Selected Topics credit: 2 to 12 Hours.

Research in selected topics by arrangement with the instructor.

PS 596 Evaluating New Research credit: 2 Hours.

Accompanies the Politics Workshop, which brings in speakers from outside the department to present their research. The goal is to expose graduate students to the practice of engaging critically with research presentations from all fields of political science. Students will learn "best practices" in providing feedback about ongoing research projects. They will have the opportunity to utilize these skills both in class discussions and as discussants for the speakers in the Workshop 2 graduate hours. No professional credit. Approved for S/U grading only. May be repeated for up to 4 graduate hours in separate semesters. Prerequisite: Graduate standing in political science required.

PS 597 Preparing Future Faculty credit: 0 Hours.

Provides graduate students an insight on the responsibilities and expectations of academic faculty. Core responsibilities - research, teaching and service - required of faculty is discussed, along with important resources and strategies to aid students in obtaining a faculty appointment and plotting a successful career path. Approved for S/U grading only. May be repeated in separate terms.

PS 598 Dissertation Design Seminar credit: 0 Hours.

Addresses the basic steps involved in the development of a dissertation proposal; aims to facilitate the completion of the dissertation proposal for students who have passed the qualifying examinations. Approved for S/U grading only. Prerequisite: Successful completion of required qualifying examinations.

PS 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Portuguese (PORT)

PORT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PORT>)

Courses

PORT 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PORT 200 Advanced Grammar credit: 3 Hours.

The study of the structure of modern Portuguese in both its phonological and syntactic aspects for the student who already has a functional command of the language, with emphasis on developing ability to analyze and interpret grammatical structures. Prerequisite: PORT 202 or consent of instructor.

PORT 201 Intensive Beginning Portuguese credit: 4 Hours.

Accelerated language learning course designed for beginners, equivalent to two semesters. Early emphasis on production skills; comprehension-based skills will be introduced in rapid succession. Course designed for speakers and non-speakers of Romance languages. Some focus on those linguistics structures specific to Portuguese which differ significantly from equivalents in other Romance languages.

PORT 202 Intensive Intermediate Portuguese credit: 4 Hours.

Continued development of reading, writing and conversational skills. Completion of this course fulfills the third-semester level of Portuguese language instruction. Followed by a 200- or 300-level course in Portuguese, this course fulfills the fourth-semester level of Portuguese language instruction. Prerequisite: PORT 201 or consent of instructor.

PORT 320 Readings in Portuguese credit: 3 Hours.

Readings and discussion in Portuguese of a variety of texts by leading Luso-Brazilian writers covering various genres and themes. Designed to emphasize reading skills and discussion, rather than literary criticism. May be repeated if topics vary. Prerequisite: PORT 202 or equivalent.

PORT 334 Brazilian Women's Lit Trans credit: 3 Hours.

Study of gender, race and class in Brazil through the study of these issues as documented by women's voices. Beginning with an analysis of the early representation of women during the Portuguese colonization of the new world up to the present through translations of contemporary literature written by women. Requires no knowledge of Portuguese language. Same as GWS 334.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

PORT 400 Intensive Beginning Portuguese credit: 4 Hours.

Accelerated language learning course designed for beginners, equivalent to two semesters. Early emphasis on production skills; comprehension-based skills will be introduced in rapid succession. Course designed for speakers and non-speakers of Romance languages. Some focus on those linguistics structures specific to Portuguese which differ significantly from equivalents in other Romance languages. 4 undergraduate hours. 4 graduate hours.

PORT 404 Studies in Luso-Brazilian Culture credit: 3 or 4 Hours.

Affords a broad understanding of Luso-Brazilian civilization and culture. May be offered in English (no prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: If taught in Portuguese: PORT 403 (former 320) or equivalent or consent of instructor.

PORT 406 Brazilian Film credit: 3 or 4 Hours.

Study of the evolution of Brazilian cinema through selected films to explore the nature and development of contemporary Brazilian aesthetics. May be offered in English (non prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. Prerequisite: If taught in Portuguese: PORT 402 (former 200) or 403 (former 320) or equivalent.

PORT 410 Topics in Brazilian Literature credit: 3 or 4 Hours.

May be offered in English (no prerequisites) or Portuguese (see prerequisite statement). See section description for details on the language of instruction each semester. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 Undergraduate hours or 8 Graduate hours in separate terms if topics vary. Prerequisite: If taught in Portuguese: PORT 402 (former 200) or 403 (former 320) or equivalent.

PORT 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, ITAL 435, LING 462, RMLG 435, and SPAN 435. See SPAN 435.

PORT 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, ITAL 460, SLS 460, and SPAN 460. See EIL 460.

PORT 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, ITAL 489, LING 489 and SPAN 489. See LING 489.

PORT 510 Seminar Brazilian Literature credit: 4 Hours.

Advanced study of literary movements, major writers, and intellectual and cultural ideas in Brazilian literature; subject matter varies each time the course is offered. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: PORT 410 or consent of instructor.

PORT 520 Seminar Portuguese Literature credit: 4 Hours.

Advanced studies on a specific topic, writer, group of writers, or literary movement in Portuguese literature; subject matter may vary. May be repeated if topics vary.

PORT 559 Sem Romance Ling credit: 4 Hours.

Same as FR 559, ITAL 559, LING 559, RMLG 559, and SPAN 557. See SPAN 557.

PORT 571 Proseminar For Lang Tchg credit: 4 Hours.

Same as SPAN 571. See SPAN 571.

PORT 572 Theory and Literary Criticism credit: 4 Hours.

Same as SPAN 572. See SPAN 572.

PORT 573 Professional/Academic Writing credit: 4 Hours.

Same as GER 553, ITAL 573, and SPAN 573. See SPAN 573.

PORT 580 Classroom Lang Acquisition credit: 4 Hours.

Same as EIL 580, FR 580, GER 580, ITAL 580, SLS 580, and SPAN 580. See SPAN 580.

PORT 584 Theories in SLA credit: 4 Hours.

Same as CI 584, EALC 584, EPSY 563, FR 584, GER 584, ITAL 584, LING 584, and SPAN 584. See SPAN 584.

PORT 588 Sem Second Lang Learn credit: 4 Hours.

Same as EALC 588, FR 588, GER 588, ITAL 588, LING 588, and SPAN 588. See SPAN 588.

PORT 595 Special Topics Port & Braz Lit credit: 1 to 4 Hours.

Independent study/research under the direction of a faculty member. May or may not fulfill requirements for a particular degree program in Spanish, Italian and Portuguese. Consult graduate advisor. May be repeated in same or subsequent terms to a maximum of 8 hours.

PORT 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Professional Science Master (PSM)

PSM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PSM>)

Courses

PSM 501 PSM Industry Seminar I credit: 0 to 1 Hours.

Engagement with students across science disciplines to address current developments in the science professions. Management and leadership challenges in science and issues facing science professionals in the workplace are addressed. Learning occurs through lecture and discussion with industry leaders. Taken in the first semester of the Professional Science Master's (PSM) cohort. Approved for letter and S/U grading; S/U grading only if taken for 0 hours credit; letter grade only if taken for 1 hour credit.

PSM 502 PSM Industry Seminar II credit: 0 to 1 Hours.

Taken in the second semester of the PSM cohort, builds on the experience of the first semester industry seminar. Learning occurs through guest lectures by and discussions with industry leaders. Project management is explored. Engagement with students across science disciplines to address current developments in the science professions. Practical issues facing science professionals in the workplace are addressed. Approved for letter and S/U grading; S/U grading only if taken for 0 hours credit; letter grade only if taken for 1 hour credit. Prerequisite: PSM 501.

PSM 503 PSM Industry Seminar III credit: 0 to 1 Hours.

Taken in the final semester of the PSM cohort, focuses on the shared experiences of the summer internship and on career development. Students present and critique, individual and in teams, the value and lessons learned from the internship. Discussions and exercises center on long-term career development and lifelong learning and commitment to science. Approved for letter and S/U grading; S/U grading only if taken for 0 hours credit; letter grade only if taken for 1 hour credit. Prerequisite: PSM 502.

PSM 520 Special Topics-Sci & Business credit: 0 to 3 Hours.

Special, emerging, or advanced topics in science and business. Topics will vary by offering. May be used to pilot course offerings before adding them to the PSM curriculum. Open to Illinois Professional Science Master's (PSM) students only. Approved for letter and S/U grading. May be repeated in the same term up to 6 hours or separate terms up to 9 hours; this is contingent on program approval and other requirements.

PSM 555 PSM Internship credit: 0 to 1 Hours.

Practical learning experience in which business knowledge and skills are applied to science problems and opportunities. In consultation with program coordinators, students find internship companies and positions that match their individual career objectives and meet the learning goals of the program. Learning objectives, deliverables, and performance evaluation are determined for each student by the program coordinator. Completed in the summer after the first year of study. Open to Illinois Professional Sciences Master's (PSM) students only. Internationals holding student visas must have prior authorization from International Student and Scholar Services. Approved for letter and S/U grading. May be repeated in separate terms.

Psychology (PSYC)

PSYC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/PSYC>)

Courses

PSYC 100 Intro Psych credit: 4 Hours.

Study of human behavior with special reference to perception, learning, memory, thinking, emotional life, and individual differences in intelligence, aptitude, and personality; emphasis on the scientific nature of psychological investigations; and discussion of research methods and the relation of their results to daily life and everyday problems. Lectures, discussions, and six hours of participation as a subject in psychological experiments. Credit is not given for both PSYC 100 and either PSYC 103 or PSYC 105.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 102 Psych Orientation credit: 0 Hours.

Lectures designed to acquaint the psychology major with the various specializations available in the field, career exploration procedures, and a wide range of opportunities of special interest to psychology students. Recommended for freshmen in psychology. Approved for S/U grading only.

PSYC 103 Intro Experimental Psych credit: 4 Hours.

Surveys the field of psychology with an emphasis on experimental approaches to understanding the mind and human behavior; addresses perception, learning, memory, thinking, motivation, emotions, personality, development, intelligence, and other topics in psychology. Credit is not given for both PSYC 103 and either PSYC 100 or PSYC 105. Lectures with discussion, debates, and laboratory experiments in weekly sections.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 105 Psych Introduction credit: 4 Hours.

Study of human behavior with special reference to perception, learning, memory, thinking, emotional life, and individual differences in intelligence, aptitude, and personality; emphasis on the scientific nature of psychological investigations; and discussion of research methods and the relation of their results to daily life and everyday problems. Lectures, discussions, and six hours of participation as a subject in psychological experiments. Lectures meet four days per week. See class schedule for enrollment restrictions. Credit is not given for both PSYC 105 and either PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated.

PSYC 201 Intro to Social Psych credit: 3 Hours.

Systematic study of social factors in individual and group behavior; attention to social perception, motivation, and learning; attitudes, norms, and social influence processes; the development and dynamics of groups; and the effects of social and cultural factors on the individual. Prerequisite: PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 204 Intro to Brain and Cognition credit: 3 Hours.

Introduction to the interdisciplinary field of cognitive neuroscience, which is concerned with how the cognitive systems supporting a broad range of capacities including memory, attention, and social and emotional processing, arise from the functioning of specific brain modules and brain mechanisms. Emphasizes how functional brain imaging and other cognitive neuroscience methods can be brought to bear on answering these questions. Prerequisite: PSYC 100 or PSYC 103 or PSYC 105.

PSYC 207 Psychology of Prejudice and Discrimination credit: 3 Hours.

Examines the psychological causes and social consequences of prejudice and discrimination in society. Learn about the current state of prejudice and discrimination in the U.S., empirical methods for studying prejudice and discrimination, and psychological interventions for reducing prejudice and discrimination. Topics include stereotyping, cognitive biases, group conflict, ideology, implicit associations, subtle and benevolent forms of prejudice, and microaggressions.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

PSYC 210 Behavioral Neuroscience credit: 3 Hours.

Survey of current knowledge and speculation regarding the brain's role in perception, motivation, sexual behavior, thinking, memory, and learning, based upon human clinical data and research in animal models. Prerequisite: PSYC 100, PSYC 103, or consent of instructor.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

PSYC 216 Child Psych credit: 3 Hours.

Study of the psychological development of the child. Credit is not given for both PSYC 216 and EPSY 236. Prerequisite: PSYC 100 or PSYC 103.

PSYC 220 Images of Mind credit: 3 Hours.

Introduction to neuroimaging and cognitive neuroscience, with a particular emphasis on critically evaluating neuroscience in the media. In addition to surveying reports in the popular press and their corresponding science articles, covers basic neuroanatomy, neuroimaging techniques, and a range of topics from cognitive neuroscience. Prerequisite: PSYC 100, PSYC 103, PSYC 105 or consent of instructor.

PSYC 224 Cognitive Psych credit: 3 Hours.

Introduction to the psychological study of human information processing and memory; acquisition, retrieval, and forgetting; and general knowledge, concepts, reasoning, and related issues in cognition. Prerequisite: PSYC 100 or PSYC 103.

PSYC 230 Perception & Sensory Processes credit: 3 Hours.

Survey of the experimental psychology of sensory and perceptual processes and behavior; emphasis on the contribution of behavior science to understanding subjective experience of the physical and social environment. Prerequisite: An introductory course in psychology, physiology, or animal biology.

PSYC 235 Intro to Statistics credit: 3 Hours.

Development of skill and understanding in the application of statistical methods to problems in psychological research; topics include descriptive statistics, probability theory and distributions, point and interval estimation, and hypothesis testing. Credit is not given for both PSYC 235 and any of STAT 100, ECON 202, EPSY 480, PSYC 301, SOC 485. Prerequisite: PSYC 100 or PSYC 103; college algebra or equivalent; or consent of academic advisor.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

PSYC 238 Psychopathology and Problems in Living credit: 3 Hours.

Conceptions and facts about disordered behavior, including psychoses, neuroses, and other patterns of psychological disturbance. Prerequisite: PSYC 100 or PSYC 103.

PSYC 239 Community Psych credit: 3 Hours.

Redefines human and social problems and the implications for social programs and policies; reviews the historical antecedents, conceptual models, strategies and tactics of social and community programs; and employs examples from selected social systems (e.g., criminal justice, education, employment, and mental health). Prerequisite: PSYC 100 or PSYC 103.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

PSYC 245 Industrial Org Psych credit: 3 Hours.

Systematic study of the application of psychological methods and principles in business and industry; emphasis on personnel selection and factors influencing efficiency. Prerequisite: PSYC 100 or PSYC 103; credit or concurrent registration in a statistics course.

PSYC 248 Learning and Memory credit: 3 Hours.

Survey of basic phenomena in learning and memory emphasizing experimental data from animal and human research. Prerequisite: PSYC 100 or PSYC 103.

PSYC 250 Psych of Personality credit: 3 Hours.

Study of personality from various points of view: biological, experimental, social, and humanistic; surveys theory and empirical research in the study of personality. Prerequisite: PSYC 100 or PSYC 103.

PSYC 265 Power, Status, and Influence credit: 3 Hours.

Explores how individuals experience power, status, and influence. The course will focus on the personality and social factors that lead people to attain an elevated rank in society. We will examine how social position shapes basic psychological processes including social perception, relationship strategies, emotion, and well-being across the life course. Multiple forms of power and status will be studied, including those based on peer respect, class, race, gender, and physical dominance.

PSYC 290 Research Experience in Psych credit: 1 to 4 Hours.

Supervised participation in research and scholarly activities, usually as an assistant to an investigator. Approved for S/U grading only. May be repeated to a maximum of 9 hours. Prerequisite: Ten hours of psychology or cognate area, or written consent of instructor.

PSYC 296 Introduction to Current Topics in Psychology credit: 0 to 3 Hours.

Introductory treatment of current topics in the field of psychology. May be repeated up to 6 hours in the same semester, to a total of 9 hours in subsequent semesters. Prerequisite: PSYC 100 or consent of instructor.

PSYC 301 Psychological Statistics credit: 5 Hours.

Development of skill and understanding of statistical methods for problems in psychological research; topics include descriptive statistics, probability theory and distributions, point and interval estimation, and hypothesis testing. The class also involves a computer laboratory. Strongly recommended to students who plan to pursue graduate studies in Psychology. Credit is not given for both PSYC 301 and any of STAT 100, ECON 202, EPSY 480, PSYC 235, SOC 485.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

PSYC 302 Applied Neuroscience credit: 3 Hours.

Examines topics in neuroscience highly relevant to our daily lives, especially as it pertains to mental health. Topics include neurobiology related to anxiety, depression, addiction, exercise, learning, memory, and personality characteristics. Special attention will be paid to race, sex, and socioeconomic differences and their influence on both genetic risk and environmental stress. The class will emphasize critical thinking and conceptualization and will frequently include open discussions. Same as NEUR 302. Prerequisite: PSYC 100 or equivalent.

PSYC 306 Psychology of Morality credit: 3 Hours.

Presents an overview and analysis of historical and current theory and research on moral psychology. Explores development of morality, moral reasoning and decision-making, rational and biased inputs to moral judgments, moral emotions, moral impression formation and person perception. Emphasis is on the social psychology of morality, but other perspectives such as developmental, cognitive, political, and individual differences will be explored. Prerequisite: PSYC 100 or equivalent.

PSYC 308 Psychology of Religion and Spirituality credit: 3 Hours.

Examines major topics in the psychology of religion and spirituality to promote reflection on how religion shapes attitudes, behavior, and contemporary U.S. society. Through the lens of psychology, we explore questions such as: Why are some people religious and spiritual? How do we study religion and spirituality from a psychological perspective? What do religion and spirituality look like across the lifespan? Does religion shape prejudice, morality, violence, or altruism? What is the role of religion in promoting health? Overall, we will examine these and other questions to promote greater understanding regarding the role of religion and spirituality in the lives of individuals and larger society. Same as REL 308. Prerequisite: PSYC 100 or equivalent.

PSYC 311 Behavioral Neuroscience Lab credit: 4 Hours.

Introduction to the research techniques used in behavioral neuroscience: includes behavioral analysis of drug effects, anatomy of the brain, hormones and behavior, neural circuits and related topics. Students will have direct experience working with laboratory rats to understand their importance in the advancement of our knowledge about how the brain functions. Prerequisite: Credit or concurrent registration in PSYC 210, or consent of instructor.

PSYC 312 Psychology of Race & Ethnicity credit: 3 Hours.

Exploration of the theoretical, empirical, and experiential writings concerning the issues of race and ethnicity as they relate to human behavior from the perspective of the individual in various social contexts. Same as AFRO 312. Prerequisite: PSYC 100.

PSYC 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, HDFS 314, RST 314, and REHB 314. See CHLH 314.

PSYC 316 Intro to Psych of Hearing credit: 3 Hours.

Examines the physiology and psychophysics of hearing from the micromechanics of the cochlea to the localization of sound and the acoustics of concert halls, to understand how the auditory system processes information to create perceptions of acoustic events. Prerequisite: PSYC 210.

PSYC 318 Psych of the Infant credit: 3 Hours.

Early infant behavior, emphasizing critical evaluation of the various research techniques; prenatal and perinatal influences, ontogeny of psychological processes, environmental determinants, and infant assessment. Prerequisite: PSYC 216.

PSYC 320 The Teenage Years credit: 3 Hours.

An introduction to development during the teenage years (12-18). The course will cover research on biological, cognitive, social, and emotional development. Topics will include pubertal development and its social consequences, changing relationships with parents, identity development, the increasingly important role of peers, school adjustment, the emergence of psychopathologies, and high risk behaviors such as substance use. The course will focus on normative development in the U.S., but it will also cover cross-cultural development. Prerequisite: PSYC 100 and PSYC 216.

PSYC 321 Human Memory credit: 3 Hours.

Advanced treatment of human memory. Examines basic theory and methodology; types of memory; semantic, episodic, procedural, memory for language, places, and events; knowledge and memory; autobiographical memory; exceptional memory; mnemonics. Prerequisite: Six hours in psychology at or above the 200 level, such as PSYC 224 or PSYC 248.

PSYC 322 Intro Intellectual Disability credit: 3 Hours.

Same as REHB 322 and SPED 322. See SPED 322. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

PSYC 324 Developmental Psychopathology credit: 3 Hours.

Overview of major theories and research in the field of developmental psychopathology. An emphasis will be placed on understanding how psychopathology is conceptualized from a developmental perspective. Topics will involve issues related to etiology, assessment, classification/diagnosis, and intervention. A range of psychological problems in childhood and adolescence will be discussed to illustrate the central themes. Prerequisite: PSYC 100 and either PSYC 216 or PSYC 238, or consent of instructor.

PSYC 326 Development and Relationships credit: 3 Hours.

Advanced overview of theory and research on interpersonal relationships across the life course and their implications for emotion, cognition, and behavior. Particular emphasis is placed on close relationships, i.e., romantic partners, family members, and mentors. Same as EPSY 330. Prerequisite: PSYC 216.

PSYC 328 Psychology of Gender credit: 3 Hours.

Discusses the similarities and differences between males and females across the lifespan, looking at possible biological and social explanations. Some of the topics covered include how children learn gender roles, similarities and differences across cognitive and social abilities, mental and physical health, and gender in different settings, including at work, at school, and at home. The course will also focus on agents of socialization, including the media, peers, and family. Prerequisite: PSYC 100 or equivalent.

PSYC 331 Cognitive Psych Lab credit: 4 Hours.

Examination of the methods used to study human thought processes, including attention, memory, decision-making, language and concepts. Students will learn to design, carry out, and report research in cognitive psychology. Prerequisite: PSYC 224 or PSYC 248; PSYC 235.

PSYC 332 Social Psych Methods Lab credit: 4 Hours.

Lecture and laboratory in the methods and techniques of social psychology research in laboratory settings. Same as SOC 382. Prerequisite: PSYC 201; PSYC 235 or SOC 280.

PSYC 333 Social Psych in Society Lab credit: 4 Hours.

Methods and techniques of social psychological research in natural settings. Students formulate and carry out research problems using procedures appropriate for research in natural settings. Prerequisite: PSYC 201; PSYC 235 or SOC 280.

PSYC 334 Perception Lab credit: 4 Hours.

Examination of the research methods used to study human visual and spatial processes, including visual illusion, attention, imagery, navigation and spatial memory. Students will learn to design, carry out, and report psychological research. Prerequisite: PSYC 230 and statistics (PSYC 235 or equivalent).

PSYC 336 Topics in Clin/Comm Psych credit: 3 Hours.

Survey and critical review of subdisciplines in clinical/community psychology; concepts, methods, and assessments, intervention strategies and tactics. Subdisciplines addressed will vary. See Class Schedule for current titles. May be repeated with approval to a maximum of 6 undergraduate hours in same term, or to a maximum of 9 undergraduate hours in subsequent terms. Prerequisite: PSYC 238 or PSYC 239 or both depending on topic.

PSYC 340 Community Projects credit: 4 Hours.

Principles of psychology applied to service problems in the community; students serve as nonprofessional mental health workers in supervised experiences in schools, hospitals, and other nontraditional settings. May be repeated in the same or subsequent terms to a maximum of 8 undergraduate hours. Prerequisite: PSYC 100; junior or senior standing; and consent of instructor. Individual sections may require additional courses and prerequisites - consult the instructor.

PSYC 341 Advanced Community Projects credit: 4 Hours.

Advanced discussion and practicum on principles of psychology which may supplement mental health and other human services in a community. Students serve as nonprofessional mental health workers in supervised experiences in school hospitals and other nontraditional settings. May be repeated in the same or subsequent terms to a maximum of 8 undergraduate hours. Prerequisite: PSYC 340 and consent of instructor.

PSYC 350 Personality Lab credit: 4 Hours.

Study of personality emphasizing active participation in designing, conducting, analyzing, and presenting of research; lectures concern the practical aspects of research methodology and the philosophy of personality research; and laboratory involves conducting original research in small groups. Prerequisite: PSYC 235 or equivalent; and PSYC 250 or consent of instructor; completion of campus Composition I general education requirement.

PSYC 351 Thinking and Reasoning credit: 3 Hours.

An overview of historical and contemporary research on thinking, reasoning, and problem-solving. Topics will include normative systems of logic, defeasible/non-monotonic reasoning, psychological models of reasoning, heuristic problem-solving, insight and creativity, Bayesian decision-making, decision-making biases, and fast-and-frugal heuristics. Same as PHIL 351. Prerequisite: Either PSYC 100 and PSYC 224, or PHIL 101 and PHIL 102, or consent of instructor.

PSYC 352 Attitude Theory and Change credit: 3 Hours.

Comprehensive analysis of theories of attitude acquisition, organization, and change; emphasis on attitude change through communication and effects of persuasive communication on public opinion. Same as MACS 352 and SOC 300. Prerequisite: PSYC 201 or equivalent.

PSYC 353 Social Cognition credit: 3 Hours.

Analysis of theory and research on problems related to the manner in which persons judge themselves and others on the basis of information received; topics include impression formation integration, determinants of interpersonal attractions, and attribution processes. Prerequisite: PSYC 201 and PSYC 235, or consent of instructor.

PSYC 356 Evolution of Mind credit: 3 Hours.

Interpretation of human thought and behavior through the lens of evolutionary theory. Presents the basics of evolutionary theory as applied to human and animal psychology, describes the results of research on selected subtopics, and evaluates alternative explanations of human behavior that historically have been offered and continue to influence the social sciences today. The goal is to enhance understanding of why we behave the way we do. Special emphasis will be placed on philosophical analysis of the presented material. Same as PHIL 356. Prerequisite: PSYC 100 or PHIL 101 or MCB 150 or consent of instructor.

PSYC 357 Intro Cognitive Science credit: 3 Hours.

In-depth introduction to cognitive science: the study of mind and intelligence, natural and artificial. Covers major integrative themes including inverse optics and vision; induction and reasoning; learnability; language; philosophy; minds and brains; evolution; computation and computability; experimental and modeling techniques; information theory; knowledge representation; interrelations among these topics. Same as PHIL 357. Prerequisite: One of PSYC 224, PSYC 248, PHIL, 202, PHIL 270, or consent of instructor.

PSYC 358 Human Factors credit: 4 Hours.

Same as IE 340. See IE 340.

PSYC 361 The Psychology of Aging credit: 3 Hours.

Survey of changes in behavioral function in later adulthood, with emphasis on methodologies for studying aging, cognitive function, personality, social psychology, and psychopathology. Prerequisite: PSYC 100; Recommended: PSYC 216 or PSYC 224.

PSYC 363 Developmental Child Psych Lab credit: 4 Hours.

Provides students with a background in developmental research methodology, such as observational techniques used with children. Students will gain experience collecting data and learn how to write research papers. Prerequisite: PSYC 216 and PSYC 235, or equivalent.

PSYC 365 Stress, Trauma and Resilience credit: 3 Hours.

Provides an overview of traumatic stress, with a particular emphasis on the biological and social factors that shape human responses to trauma. Students will become familiar with the definition and range of potentially traumatic events in various social contexts (e.g. military vs. civilian), as well as the genetic and environmental features that influence vulnerability vs. resilience to trauma. Prerequisite: PSYC 100 or equivalent.

PSYC 370 Understanding Suicide credit: 3 Hours.

Exploration of the enigma of suicide, covering its many dimensions including the historical, literary, neurobiological psychological, sociological, cultural, public health, and personal/subjective. Suicide has been studied from each of these perspectives, and while there is agreement that it is a "multidimensional malaise," bringing these dimensions together has been extremely challenging. Explores this challenge through lectures and discussions. Prerequisite: PSYC 238.

PSYC 373 Culture & Psychology credit: 3 Hours.

Centers on cross-cultural study of substantive areas such as personality, motivation, socialization, interpersonal behavior, psychological environments, cognition and cognitive development, ethnocentrism and stereotypes, and visual perception; emphasis on methodological limitations and contributions of cross-cultural study; and discussion of current problems and research. Same as ANTH 373. Prerequisite: Six hours of psychology or anthropology, or consent of instructor.

PSYC 379 Clinical/Abnormal Psych Lab credit: 4 Hours.

Introduction to research methods used in clinical psychology covering research concerned with psychopathology. Students will learn concepts and key terms; read and discuss research reports; and obtain first-hand experience designing, carrying out, and reporting on their own research. Students in the class will be the participants for all student-developed research. Prerequisite: PSYC 238.

PSYC 381 Beg Prac in Mental Hlth credit: 4 Hours.

Didactic instruction and supervised practicum experience in a community treatment agency; self-report, observational, and physiological approaches to client assessment; and lecture-discussion and direct agency experience each week.

PSYC 383 Adv Prac in Mental Hlth I credit: 4 Hours.

Supervised practicum experiences in a community agency.

PSYC 385 Adv Prac in Mental Hlth II credit: 4 Hours.

Supervised practicum experiences in a community agency.

PSYC 396 Intermediate Current Topics in Psychology credit: 0 to 3 Hours.

Intermediate treatment of current topics in the field of psychology. May be repeated to a maximum of 6 hours in a semester, to a maximum of 12 hours in subsequent semesters. Prerequisite: PSYC 100 or consent of instructor; particular sections may have additional 200-level prerequisites.

PSYC 398 Junior Honors Seminar credit: 3 Hours.

Seminar on experimental methods and contemporary psychological research. Prerequisite: Junior standing and admission to departmental honors program.

PSYC 402 Intro Clin Neuropsych credit: 4 Hours.

Fundamental concepts of clinical neuropsychology will be introduced, and students will learn the neuropsychological measures that are typically employed in assessment. The course will take a developmental perspective, and readings will address assessment issues in children and adolescents as well as adults. The course will be conducted as a lecture/seminar, with a focus on class participation. Actual testing data will be distributed to the class, and discussion will focus on interpretation and case conceptualization. Students will also be required to learn about and administer tests. 4 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and PSYC 238 or consent of instructor.

PSYC 403 Memory and Amnesia credit: 3 or 4 Hours.

Examination of the nature of amnesia and what it teaches us about the organization of normal human memory. Coverage will include studies of amnesia and other circumscribed memory impairments in human patients, taken from the scientific literature, which will be compared to the descriptions of amnesia in movies, literature, and the media. Same as NEUR 403. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and/or PSYC 224, or consent of instructor.

PSYC 404 Cognitive Neuroscience credit: 3 or 4 Hours.

Examination of research concerned with identifying and characterizing the cognitive systems supporting such capacities as memory, attention, and visual processing, and with understanding how such cognitive activities arise from the functioning of specific brain modules and brain mechanisms. Same as NEUR 405. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 and/or PSYC 224, or consent of instructor.

PSYC 410 Hate Crimes credit: 3 Hours.

Same as AFRO 410. See AFRO 410.

PSYC 413 Psychopharmacology credit: 3 or 4 Hours.

Behavioral and physiological effects of chemicals either used therapeutically to treat psychological disorders or that may be abused for their psychotropic effects; emphasizes mechanisms and models for the study of drug action. Same as NEUR 413. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PSYC 210, MCB 150, or consent of instructor.

PSYC 414 Brain, Learning, and Memory credit: 3 or 4 Hours.

Conveys a knowledge of current research on the physiological bases of learning and memory; considers a wide range of topics from molecular (e.g., cellular morphological and functional plasticity) to relatively molar (e.g., effects of clinical and experimental brain damage on learning and memory processes). Same as NEUR 414. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210, MCB 150, or consent of instructor.

PSYC 416 African American Psychology credit: 3 or 4 Hours.

Same as AFRO 411. See AFRO 411.

PSYC 417 Neuroscience of Eating & Drinking credit: 3 or 4 Hours.

Eating and drinking are critical to survival. Despite complex and redundant mechanisms, aberrant ingestive behaviors occur and can result in extreme body weights. This course is designed to critically probe and review the current understanding of neural and behavioral mechanisms of eating and drinking. Students will learn how eating and drinking are closely related to physical and mental health, and how to apply this knowledge to live a healthier life. Same as FSHN 417 and NEUR 417. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 100 or equivalent.

PSYC 420 Theories of Psychotherapy credit: 4 Hours.

Same as EPSY 420. See EPSY 420.

PSYC 421 Principles of Psychophysiology credit: 3 or 4 Hours.

Theoretical and practical aspects of human psychophysiology; measurement techniques and the application of psychophysiological principles to problems in developmental, clinical, social, and experimental psychology. Same as NEUR 421. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 235, six hours of psychology, and an introductory course in physiology.

PSYC 423 Language Acquisition credit: 3 or 4 Hours.

Survey of theory and research on the acquisition of language, concentrating on the acquisition of a first language by the young child. Same as LING 423 and MACS 423. 3 undergraduate hours. 4 graduate hours. Prerequisite: Six hours of psychology or linguistics above the 100-level, or consent of instructor.

PSYC 425 Psych of Language credit: 3 or 4 Hours.

Survey of theory and research in the psychology of language; topics include relation of linguistics and psychology, language development, and influence of language on perception, memory, and thought. 3 undergraduate hours. 4 graduate hours. Credit is not given for both PSYC 425 and LING 425. Prerequisite: Six hours of psychology or consent of instructor.

PSYC 427 Language and the Brain credit: 3 or 4 Hours.

Same as LING 427 and SHS 427. See SHS 427.

PSYC 432 Genes and Behavior credit: 3 Hours.

Same as ANTH 432, IB 432 and NEUR 432. See IB 432.

PSYC 433 Evolutionary Neuroscience credit: 3 or 4 Hours.

Current methods, tools, and progress in evolutionary biology and quantitative genetics of brain and behavior of vertebrates. Same as NEUR 433 and PHIL 433. 3 undergraduate hours. 4 graduate hours. Prerequisite: IB 150 or PSYC 210.

PSYC 437 Advanced Psychology Lab credit: 4 Hours.

An advanced laboratory course in different areas of psychology. Detailed descriptions are provided under the individual sections. 4 undergraduate hours. No graduate credit. May be repeated in separate semesters to a maximum of 8 undergraduate hours. Prerequisite: PSYC 100, additional courses and prerequisites may be required depending on the lab.

PSYC 443 Psychophysiology in Ex & Sport credit: 3 or 4 Hours.

Same as KIN 443. See KIN 443.

PSYC 445 Cognitive Neuroscience Lab credit: 4 Hours.

Study of the basic principles underlying scanning of the brain using functional Magnetic Resonance Imaging (fMRI). The lectures introduce how to use an MRI scanner, the basic biophysics that makes functional imaging possible, experimental design for fMRI, and basic data analysis. During the labs, students will get hands on experience analyzing fMRI data. Same as NEUR 445. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of the following: PSYC 204, PSYC 210, PSYC 220, or consent of the instructor. PSYC 235 or equivalent is recommended.

PSYC 447 Psych of Sport Performance credit: 3 or 4 Hours.

Same as KIN 447. See KIN 447.

PSYC 450 Cognitive Psychophysiology credit: 3 or 4 Hours.

Survey of the theory and practice of using recordings of brain electrical activity to study normal and abnormal perception, attention, decision-making, memory, response preparation, and language. Same as NEUR 450. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 224 or equivalent; PSYC 210 recommended.

PSYC 451 Neurobio of Aging credit: 0 to 4 Hours.

Study of the neurobiological consequences of aging with an emphasis on brain changes at the cellular and systems level, using animal models of healthy and pathological aging. Same as KIN 458 and NEUR 451. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210 or related courses or consent of instructor.

PSYC 453 Cog Neuroscience of Vision credit: 3 or 4 Hours.

Overview of the neuroscience of the visual system, the eye and subcortical structures, with a focus on the visual cortex and higher-level vision (e.g. attention and object perception). Same as NEUR 453. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 210, PSYC 220, PSYC 224, PSYC 230 or consent of instructor.

PSYC 455 Organizational Psych credit: 2 to 4 Hours.

Social psychological research and theory applied to industrial problems; emphasis on interaction and communication theory, role theory, leadership theory, motivational and perceptual theory, and group structure theory as an aid in understanding and analyzing industrial problems. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: PSYC 201 or PSYC 245.

PSYC 456 Human Performance and Cognition in Context credit: 3 or 4 Hours.

Same as EPSY 456 and IE 445. See EPSY 456.

PSYC 462 How Children Think credit: 3 or 4 Hours.

Examines the development of children's thinking from birth through the preschool and elementary school years. Addresses questions such as the following: What do babies know about the world? What can they perceive, and how do their perceptual abilities develop? How do children come to understand other people's actions and mental states? How do they think about biological categories (such as animals and plants) and social categories (such as boys and girls)? When and how do children learn what numbers mean? How is children's development influenced by culture? 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 216.

PSYC 465 Personality and Soc Dev credit: 3 or 4 Hours.

Major theories of personality and social development, with attention to processes of social learning, individual differences in personality development, and outcomes of social development; applications to school, home, and other field settings. Same as EPSY 405. 3 undergraduate hours. 4 graduate hours. Prerequisite: PSYC 216 or EPSY 236 or equivalent.

PSYC 466 Image and Neuroimage Analysis credit: 3 or 4 Hours.

Fundamental concepts, techniques/algorithms, and emerging directions of research in image and neuroimage analysis: image enhancement, image and brain image segmentation, neuroimage registration, functional magnetic resonance imaging (fMRI) time series analysis, and brain connectivity, etc. Same as STAT 466. 3 undergraduate hours. 4 graduate hours. Prerequisite: One of STAT 400, PSYC 406, an equivalent, or consent of instructor; basic programming experience in Matlab, or C/C++, or similar.

PSYC 468 Psych and Law credit: 2 to 4 Hours.

Examines relationship of the administrative, civil, and criminal justice systems to educational and mental health institutions; individual rights, social issues, and psychological well being. 3 undergraduate hours. 2 to 4 graduate hours. Prerequisite: Six hours of social science.

PSYC 472 Environmental Psychology credit: 4 Hours.

Same as NRES 472. See NRES 472.

PSYC 475 Personnel Psych credit: 3 or 4 Hours.

Introduces problems and research relevant to personnel issues in organizations. Topics include: individual differences; selection of personnel; test theory; performance appraisal; equal employment opportunity legislation, regulation, and litigation; assessing bias in selection. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: PSYC 235 or equivalent, and either PSYC 245 or BADM 313.

PSYC 477 Philosophy of Psychology credit: 3 or 4 Hours.

Same as PHIL 477. See PHIL 477.

PSYC 484 Ethical Practice of Statistics credit: 3 or 4 Hours.

Study of the ethical practice of statistics, defined as being in accord with the accepted rules and standards for right conduct that govern the discipline of statistics and its many areas of application. An emphasis is placed on the use of statistical and probabilistic reasoning in the social, behavioral, and biomedical sciences, with particular stress on the relation to law and the judiciary. Same as STAT 484. 3 undergraduate hours. 4 graduate hours. Prerequisite: An introductory statistics class, e.g., PSYC 235, PSYC 301, STAT 100, ECON 202, EPSY 480, SOC 280.

PSYC 489 Neural Network Modeling Lab credit: 3 or 4 Hours.

Introduction to neural network modeling, the principles of neural computation, learning algorithms and the evaluation of neural networks as models of human perception and cognition. 3 undergraduate hours. 4 graduate hours. Prerequisite: College algebra or equivalent; computer programming experience, or consent of instructor.

PSYC 490 Measurement & Test Develop Lab credit: 4 Hours.

The measurement of human behavior in psychological studies; the construction and use of psychological tests; introduction to tests of intelligence, achievement, personality, and interest; and practice in test construction, administration, and validation. Lectures and laboratory. 4 undergraduate hours. 4 graduate hours. Prerequisite: A knowledge of statistics equivalent to that from PSYC 235.

PSYC 492 Capstone Undergrad Research credit: 3 Hours.

Capstone experience for undergraduate students doing advanced research in any area of psychology. Provides in-depth background knowledge of their research, and teaches students to make effective oral and written presentations of their findings. In conjunction with PSYC 494, will facilitate the preparation of a Bachelor's thesis that can be submitted for the awarding of the departmental distinction at graduation. May be taken for two semesters with the first semester emphasizing a review of the literature and the second semester concentrating on the presentation of the results. 3 undergraduate hours. No graduate credit. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Senior standing in Psychology, consent of instructor, and students must arrange to do a research project with a faculty member.

PSYC 494 Advanced Research in Psych credit: 1 to 4 Hours.

Supervised independent investigation of special topics in psychology; requires a written report with a final copy submitted for departmental records. 1 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 12 hours. Prerequisite: Ten hours of psychology or cognate area, or written consent of instructor.

PSYC 495 Internship Capstone Experience credit: 3 Hours.

This capstone seminar will connect students' summer internship experiences to their academic major in Psychology and to their career goals. Students will reflect, discuss and build on their internship experiences to help them identify the skills and abilities they have and need to be successful. They will participate in both individual assignments and team projects that will facilitate their ability to communicate in the many different careers available to students with a degree in psychology. 3 undergraduate hours. No graduate credit. Prerequisite: Completion of an internship during previous summer.

PSYC 496 Adv Current Topics in Psych credit: 2 to 4 Hours.

Advanced treatment of current topics in the field of psychology. 2 to 4 undergraduate hours. 2 to 4 graduate hours. May be repeated to a maximum of 9 hours. Prerequisite: PSYC 100 and junior standing, or consent of instructor; particular sections may have additional 200-level and/or 300-level prerequisites.

PSYC 498 Senior Honors Seminar credit: 3 Hours.

Continuation of PSYC 398, this course assists students in the Psychology Honors Program with the researching and writing of an undergraduate honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. 3 undergraduate hours. No graduate credit. Prerequisite: PSYC 398.

This course satisfies the General Education Criteria for: Advanced Composition

PSYC 499 Senior Honors Seminar II credit: 3 Hours.

The completion of writing of an undergraduate honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. Students also create posters describing their work for presentation at the Psychology Honors Poster Fair and the Campus Undergraduate Research Symposium. 3 undergraduate hours. No graduate credit. PSYC 398 and PSYC 499 are approved for General Education credit only as a sequence. All courses must be completed to receive Advanced Composition credit. Prerequisite: PSYC 498.

This course satisfies the General Education Criteria for: Advanced Composition

PSYC 500 Professional Develop for Psych credit: 1 to 4 Hours.

Provides practical guidance to graduate students in psychology about a variety of professional issues, including topics such as publishing, speaking, writing, teaching, research ethics, mentoring, interviewing for jobs, and preparing for different career options. The course is discussion-based and provides a forum to address common questions and problems encountered by graduate students in psychology. 1 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated up to 8 credit hours if topics vary.

PSYC 501 Best Psych Research Practices credit: 2 to 4 Hours.

Explores topics concerning the best research practices used in the different areas of psychology. Examination of recent advances in research design, analysis, and reporting will hone methodological and statistical intuitions. Students will investigate the growing literature on problematic practices, consider proposed solutions, and construct and evaluate simulations to enhance their understanding of the best methodologies so they can contribute to a more open and reproducible psychological science. 2 to 4 graduate hours. No professional credit. May be repeated up to 8 graduate hours, if topics vary.

PSYC 503 Categories and Concepts credit: 4 Hours.

The psychology of human concepts, including concept learning, categorization, the structure of concepts in memory and conceptual development. Prerequisite: Graduate standing in psychology or consent of the instructor.

PSYC 504 Theories of Attention credit: 2 or 4 Hours.

Systematic study of the psychology of attention, including focused and divided attention, dual-task performance, attention and memory, attention and automatization, and skilled performance. The emphasis is primarily theoretical, focusing on current approaches and the historical developments that led to them. Prerequisite: Graduate standing in Psychology or consent of instructor.

PSYC 506 Statistical Methods I credit: 4 Hours.

Techniques in applied statistics used in psychological research, including simple linear regression, partial and multiple correlation, and nonparametric methods; thorough review of statistical estimation and significance tests; emphasizes applied statistics and statistical computing. 4 graduate hours. No professional credit. Credit is not given for both PSYC 506 and SOC 586. Prerequisite: Graduate standing or consent of instructor.

PSYC 507 Statistical Methods II credit: 4 Hours.

Continuation of PSYC 506. Experimental design, including Latin Squares, factorials, and nested designs; expected mean squares; analysis of covariance; emphasizes the general linear model. 4 graduate hours. No professional credit. Credit is not given for both PSYC 507 and SOC 587. Prerequisite: PSYC 506.

PSYC 508 Intro to Systems Neuroscience credit: 4 Hours.

In-depth, comprehensive introduction to the structure and function of the nervous system. This focus is on systems neuroscience rather than at the cellular or molecular neuroscience. To prepare students for study in a variety of areas in neuroscience at the graduate level, the lectures will supply key, fundamental knowledge in many areas of neuroscience and then progress to an advanced level. The labs will provide a solid, basic knowledge of neuroanatomy and experience working with different neuroscience techniques. Same as MCB 508 and NEUR 508. Prerequisite: Graduate standing or consent of instructor.

PSYC 509 Psych Scaling Multidimen Meth credit: 4 Hours.

Basic scaling theory; metric, non-metric, and individual differences multidimensional scaling models and methodology, emphasizing underlying assumptions and interpretation; and applications of scaling methods to measurement problems in social and personality psychology, perception, cognition, and sociology. Same as SOC 589. Prerequisite: PSYC 407, SOC 587, or equivalent course in quantitative methods.

PSYC 510 Advances in Behavioral Neuroscience credit: 3 or 4 Hours.

Deals with the relevance of behavioral neuroscience to the subdisciplines of psychology; topics include behavioral genetics, hormones and sexuality, eating and drinking, human memory models and the brain, biorhythms in normal and abnormal behavior, physiology of sensing and perceiving, selective attention, and others. Same as NEUR 510. 3 or 4 graduate hours. No professional credit. Consent of instructor is required for more than 3 hours of credit. Prerequisite: PSYC 210 or consent of instructor.

PSYC 514 Seminar in Cognitive Science credit: 2 or 4 Hours.

In-depth view of cognitive science: the study of mind and intelligence. Covers major areas of cognitive science including: anthropology, artificial intelligence, cognitive neuroscience, cognitive psychology, emotions, linguistics, and philosophy. Lectures focus on prominent questions and issues in each area highlighted by descriptions of current research. Also explores interconnections among these fields. Same as ANTH 514, CS 549, EPSY 551, LING 570, and PHIL 514. Prerequisite: Minimally second semester graduate standing in a cognitive science discipline including: anthropology, computer science, educational psychology, electrical engineering, linguistics, philosophy, psychology, or consent of instructor.

PSYC 515 Neurotoxicology credit: 3 Hours.

Same as CB 514 and ENVS 514. See CB 514.

PSYC 516 Perception credit: 4 Hours.

Systematic study of methods and research findings in the field of human perception, together with an evaluation of theoretical interpretations. Prerequisite: Twelve hours of psychology.

PSYC 518 Exp Psych Human Learn credit: 4 Hours.

Data and theories of verbal learning; verbal mediators and their functions in learning and retention; transfer of training; short-term and long-term memory; and conceptualizations of the forgetting process. Prerequisite: Twelve hours of psychology or consent of instructor.

PSYC 521 Knowledge Representation credit: 4 Hours.

Surveys theories and data about the representation of knowledge by human beings; examines images, concepts, semantic features, propositions, semantic nets, rules, parallel distributed, procedural, schemas, mental models, and theories. Prerequisite: Background in either cognitive psychology, linguistics, or artificial intelligence.

PSYC 523 Prob Solving and Cog Skill Acq credit: 4 Hours.

Selected topics in how people solve problems and learn cognitive skills. A broad range of empirical findings will be discussed, along with psychological and computational accounts. Prerequisite: Consent of instructor.

PSYC 524 Dev Psycholinguistics credit: 2 or 4 Hours.

Examination of empirical and theoretical literature on the acquisition of language; emphasis on universal patterns in the acquisition of a first language and on a consideration of explanations, both psychological and linguistic, for these patterns. Same as LING 524 and MDIA 524. Prerequisite: LING 425, PSYC 425 or PSYC 462, or consent of instructor.

PSYC 525 Psycholinguistics credit: 2 or 4 Hours.

Critical survey of psychological research on language and communication; emphasis on psychological processes that allow humans to produce and understand speech, writing, and gesture. Same as LING 525 and MDIA 525. Prerequisite: Consent of instructor.

PSYC 526 Adv Psycholinguistics credit: 2 or 4 Hours.

Overview of psychological research investigating the perceptual, cognitive, neuropsychological, and behavioral events that accompany speaking, reading, or listening to language. Examines adult language processing as well as the development of specific language skills and the nature of related language disorders. Same as EPSY 566. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: PSYC 525 or consent of instructor.

PSYC 529 Second Lang Acq & Bilingualism credit: 4 Hours.

Same as LING 529. See LING 529.

PSYC 530 Found of Ind Org Psych credit: 4 Hours.

Theoretical and empirical foundations of various content areas in industrial-organizational psychology; sample topics include employee selection and placement, training, human factors engineering, work motivation, employee attitudes, leadership, and organizational theory. Same as LER 530. Prerequisite: Twelve hours of psychology or consent of instructor.

PSYC 531 Psych Measurement in Indus credit: 4 Hours.

Application of psychometric methods and the finding of differential psychology to the selection, classification, and performance evaluation of industrial personnel. Prerequisite: PSYC 407 or equivalent.

PSYC 532 Intro to Clin-Comm Psych III credit: 4 Hours.

Part 3 of a 4 part sequence designed to provide clinical community graduate students with a broad overview of theories, approaches, and methods in clinical and community psychology. This set of courses includes coverage of all major domains in clinical-community psychology, including psychopathology/problems in living, clinical-community assessment, diagnosis, effective interventions and their evaluation, and prevention. These courses are also meant to engage graduate students in the process of critical inquiry in clinical-community psychology. Required of all entering graduate students in clinical-community psychology. Prerequisite: Consent of instructor required for all students not admitted to graduate program in clinical-community psychology.

PSYC 533 Intern in Ind Org Psych credit: 4 Hours.

Supervised practice in organizational practice and research, implementation of programs, evaluation, feedback of survey results, applied assessments, assistance in EAP programs, and development of personnel guidelines; emphasizes applications of principles and procedures. Offered in special interest of graduate students in I/O psychology program. Prerequisite: Graduate standing in Psychology, credit or concurrent registration in PSYC 530, and consent of instructor.

PSYC 534 Models of Decision and Choice credit: 4 Hours.

Survey of mathematical and other formal models of human judgment and decision processes. Emphasizes differences between normative and descriptive models. Same as ACCY 595. Prerequisite: PSYC 407.

PSYC 536 Dev Cultural Psychology credit: 4 Hours.

Analysis of current developments, trends, and controversies in developmental cultural psychology, with an emphasis on how child development unfolds in dynamic cultural contexts; detailed examination of contexts that shape children's development within and across cultures, social addresses, and historical eras; foregrounds theories and methods that treat children as meaning makers who actively navigate and transform complex cultural realities.

PSYC 537 Development & Psychopathology credit: 4 Hours.

Overview of major concepts, issues, and research in the field of developmental psychopathology, which is an interdisciplinary field influenced by psychology, medicine, neuroscience, and other disciplines. Explores youth psychopathology from a developmental perspective, focusing on the intersection between normative and atypical development. Introduces students to assessment and classification, key theories of etiology, and research design issues. Representative disorders will be discussed as examples of how these issues interface with specific types of youth psychopathology. Both pioneering and contemporary research in the field will be covered.

PSYC 538 Intro to Clin-Comm Psych I credit: 4 Hours.

Part 1 of 4 part sequence designed to provide clinical-community graduate students with a broad overview of theories, approaches, and methods in clinical and community psychology. This set of courses includes coverage of all major domains in clinical-community psychology, including psychopathology/problems in living, clinical-community assessment, diagnosis, effective interventions and their evaluation, and prevention. These courses are also meant to engage graduate students in the process of critical inquiry in clinical-community psychology. Required of all entering graduate students in clinical-community psychology. Prerequisite: Consent of instructor required for all students not admitted to graduate program in clinical-community psychology.

PSYC 539 Intro to Clin-Comm Psych II credit: 4 Hours.

Part 2 of a 4 part sequence designed to provide clinical-community graduate students with a broad overview of theories, approaches, and methods in clinical and community psychology. This set of courses includes coverage of all major domains in clinical-community psychology, including psychopathology/problems in living, clinical-community assessment, diagnosis, effective interventions and their evaluation, and prevention. These courses are also meant to engage graduate students in the process of critical inquiry in clinical-community psychology. Required of all entering graduate students in clinical-community psychology. Prerequisite: Consent of instructor required for all students not admitted to graduate program in clinical-community psychology.

PSYC 540 Social Development credit: 4 Hours.

Same as EPSY 530. See EPSY 530.

PSYC 541 Personality and Behav Dynamics credit: 2 or 4 Hours.

Theory and research in personality, emphasizing personality as individual differences among persons and personality as attributed to persons by others; explores the measurement, antecedents, and consequences of such differences and attributions. Prerequisite: Twelve hours of psychology.

PSYC 545 Intro to Clin-Comm Psych IV credit: 4 Hours.

Part 4 of a 4 part sequence designed to provide clinical-community graduate students with a broad overview of theories, approaches, and methods in clinical and community psychology. This set of courses includes coverage of all major domains in clinical-community psychology, including psychopathology/problems in living, clinical-community assessment, diagnosis, effective interventions and their evaluation, and prevention. These courses are also meant to engage graduate students in the process of critical inquiry in clinical-community psychology. Required of all entering graduate students in clinical-community psychology. Prerequisite: Consent of instructor required for all students not admitted to graduate program in clinical-community psychology.

PSYC 546 Intervention & Assessment credit: 2 to 4 Hours.

This two-semester course sequence covers research and methods of intervention, prevention, and assessment/diagnosis in clinical and community psychology. Includes scholarly readings and didactic discussions, as well as supervision of applied work in which the students engage. Instruction in ethical standards and professional development is provided. Emphasis is given to empirically-supported assessment, intervention, and supervision in clinical and community psychology. Approved for S/U grading only. May be repeated. Prerequisite: Credit or concurrent registration in PSYC 538, PSYC 539, PSYC 532, or PSYC 545, or consent of instructor.

PSYC 547 Internship credit: 0 to 16 Hours.

Supervised field experience in clinical psychology. Approved for letter and S/U grading. Prerequisite: Consent of instructor.

PSYC 551 Theory in Social Psychology credit: 4 Hours.

Overview of the major theoretical perspectives in experimental social psychology, including theories of attitudes, motivation, emotion, interpersonal and intergroup relations, and the self. Prerequisite: Consent of instructor.

PSYC 552 Soc Psych Theory and Meth II credit: 4 Hours.

Second of a two-course sequence for first-year graduate students in social psychology. Advanced theoretical and research approaches to a broad range of issues in social psychology; participation and seminar presentations by social psychology program faculty. Each student participates in seminar presentations and develops and conducts a research study in conjunction with one or more faculty members. Prerequisite: Consent of instructor.

PSYC 553 Founds of Organizational Behav credit: 4 Hours.

Same as BADM 510, PS 514, and SOC 575. See BADM 510.

PSYC 554 Classroom Learning credit: 4 Hours.

Same as EPSY 552. See EPSY 552.

PSYC 558 Attitudes credit: 4 Hours.

Intensive analyses of recent developments in attitude theory and research; emphasis on the attitude-behavior relationship; and examination of theories of attitude and attitude change with respect to their utility in predicting and changing social behavior. Prerequisite: Consent of instructor.

PSYC 559 Small Groups credit: 4 Hours.

Intensive examination of current research and theory on structure, process, and performance of groups; critical examination of recent research and theoretical literature; and development of research designs for related issues in the field. Prerequisite: Consent of instructor.

PSYC 563 ResearchMethods:Clin/CommPsych credit: 4 Hours.

Examination of research methods and strategies in Clinical and Community Psychology and related fields; issues involved in casual inference from experimental and quasi-experimental designs; qualitative research methods. Prerequisite: PSYC 406.

PSYC 567 Personality Assessment credit: 4 Hours.

Methods and theory in the quantitative assessment of personality; review of research findings and trends. Same as EPSY 567. Prerequisite: PSYC 407 or equivalent.

PSYC 569 Cognitive Development credit: 4 Hours.

Intensive examination of current research on infant cognition. Topics include: object segregation, object permanence, physical reasoning, object individuation, number, and psychological reasoning. Prerequisite: Consent of instructor.

PSYC 570 Prin and Meth of Tchg Psych credit: 0 to 4 Hours.

Designed for graduate students in psychology; areas considered include developing course objectives and content; developing and presenting teaching-learning situations; evaluating the attainment of course objectives; advising and counseling students; ethics in teaching; and research problems on the teaching of psychology. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 12 hours. Prerequisite: Second-year graduate standing in psychology or consent of instructor.

PSYC 573 Clin/Comm: History & Systems credit: 4 Hours.

One of a series of independent study courses to help Clinical/Community Psychology graduate students develop breadth of knowledge in the broader field of Psychology. Involves an overview of the history and systems of psychological thought and satisfies the breadth requirement in the area. Prerequisite: Before enrolling in this course, students must develop and maintain a portfolio of engagement with the breadth area of History and Systems demonstrating 45 hours effort. Students must first meet with the course instructor to present their portfolio. Instructor approval required. Clinical/Community Psychology graduate students only.

PSYC 574 Microskills & Prof Standards credit: 2 Hours.

This year-long course covers professional standards and ethics, which emphasizes applied skills for the practice of Clinical and Community Psychology. Students will learn basic skills in rapport-building, including initiating the first contact or session, reflective listening, and paying attention to affect, body language, and interpersonal process in session or interactions. Instruction in professional ethics, supervision, and consultation. Students may practice some of the learned skills by developing relationships with gatekeepers of local organizations and providing consultation and supervision or engaging in collaborations to improve the quality of life of community members. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Clinical/Community Psychology graduate students only; or consent of instructor.

PSYC 575 Clinical/Community: Diversity credit: 2 Hours.

Addresses issues of human diversity in the research and applied work of Clinical/Community Psychologists. Diversity is broadly defined and includes attention to, for example: national origin, culture, race, ethnicity, social class, physical ability, cognitive ability, sexual orientation, gender identity, and privilege/oppression. Utilizes both the scholarly literature on diversity, and experiential exercises to develop knowledge and cultural competence. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Clinical/Community Psychology graduate students only; or consent of instructor.

PSYC 576 Clinical/Community: Biological credit: 4 Hours.

One of a series of independent study courses to help Clinical/Community Psychology graduate students develop breadth of knowledge in the broader field of Psychology. Involves an overview of the research and theory in the major subdomains within the area of Biological Psychology and satisfies the breadth requirement in the area. Prerequisite: Before enrolling in the course, students must develop and maintain a portfolio of engagement with the breadth area of Biological Psychology demonstrating 45 hours of effort. Students must first meet with the course instructor to present their portfolio. Instructor approval required.

PSYC 577 Clinical/Community:Cog/Affect credit: 4 Hours.

One of a series of independent study courses to help Clinical/Community Psychology graduate students develop breadth of knowledge in the broader field of Psychology. Involves an overview of the research and theory in the major subdomains within the area of Cognitive/Affective Psychology and satisfies the breadth requirement in the area. Prerequisite: Before enrolling in this course, students must develop and maintain a portfolio of engagement with the breadth area of Cognitive/Affective Psychology demonstrating 45 hours of effort. Students must first meet with the course instructor to present their portfolio. Instructor approval required.

PSYC 578 Clinical/Community:Development credit: 4 Hours.

One of a series of independent study courses to help Clinical/Community Psychology graduate students develop breadth of knowledge in the broader field of Psychology. Involves an overview of the research and theory in the major subdomains within the area of Developmental Psychology and satisfies the breadth requirement in the area. Prerequisite: Before enrolling in this course, students must develop and maintain a portfolio of engagement with the breadth area of Developmental Psychology demonstrating 45 hours of effort. Students must first meet with the course instructor to present their portfolio. Instructor approval required.

PSYC 579 Clinical/Community: Social credit: 4 Hours.

One of a series of independent study courses to help Clinical/Community Psychology graduate students develop breadth of knowledge in the broader field of Psychology. Involves an overview of the research and theory in the major subdomains within the area of Social Psychology and satisfies the breadth requirement in the area. Prerequisite: Before enrolling in this course, students must develop and maintain a portfolio of engagement with the breadth area of Social Psychology demonstrating 45 hours of effort. Students must first meet with the course instructor to present their portfolio. Instructor approval required.

PSYC 581 Applied Regression Analysis credit: 4 Hours.

Same as EPSY 581. See EPSY 581.

PSYC 587 Hierarchical Linear Models credit: 4 Hours.

Same as STAT 587 and EPSY 587. See EPSY 587.

PSYC 588 Covar Struct and Factor Models credit: 4 Hours.

Introduction to covariance structure models, linear structural equations, and factor analysis; identification and parameter estimation problems; assessing goodness-of-fit; use of up-to-date computer software implementing current estimation methods; applications to a wide variety of social and behavioral science modeling problems. Same as EPSY 588, SOC 588, and STAT 588. Prerequisite: PSYC 594, STAT 571, or SOC 587.

PSYC 589 Categorical Data in Ed/Psyc credit: 4 Hours.

Same as EPSY 589 and SOC 579. See EPSY 589.

PSYC 590 Individual Research credit: 0 to 16 Hours.

For graduate students who wish to conduct research on special problems not included in graduate theses. Approved for S/U grading only. Prerequisite: Consent of instructor.

PSYC 593 Seminar credit: 2 or 4 Hours.

Discussion of current topics in their historical setting, with special emphasis on research problems. 2 or 4 graduate hours. No professional credit. May be repeated if topics vary.

PSYC 594 Multivar Anlys in Psych and Ed credit: 4 Hours.

Examines the principal methods of descriptive and inferential statistics used in the analysis of multiple measurements, emphasizing linear transformations, multiple regression, principal components, multivariate analysis of variance, canonical correlation and variates, discriminant functions and variates, and conventional procedures of factor analysis; involves both theory and applications. Same as EPSY 584 and SOC 584. Prerequisite: PSYC 407 or EPSY 581 or EPSY 582 or consent of instructor.

PSYC 595 Theories of Measurement I credit: 4 Hours.

Same as EPSY 585. See EPSY 585.

PSYC 596 Theories of Measurement II credit: 4 Hours.

Same as EPSY 586. See EPSY 586.

PSYC 598 Proseminar in Psychology credit: 0 to 4 Hours.

Weekly presentation and discussions of current research by faculty, graduate students and visiting scholars. Sections of these proseminars are offered by each division in the Psychology Department. Requirements include attendance and participation in discussion. Same as NEUR 598. 0 to 4 graduate hours. Approved for S/U grading only. May be repeated.

PSYC 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Recreation, Sport, and Tourism (RST)

RST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RST>)

Courses

RST 100 Recreation, Sport, and Tourism in Modern Society credit: 3 Hours.

This course examines central issues in defining leisure, recreation, sport, and tourism. Historical, philosophical, sociological, psychological, and economic approaches to understanding these areas, their behaviors and meanings, social contexts, and personal and social resources are examined. By the end of the semester, students should understand their history and evolution, as well as their impact on contemporary society. This course satisfies the General Education Criteria for: Social Beh Sci - Soc Sci

RST 101 Orientation to Recreation, Sport and Tourism credit: 1 Hour.

Introduction to Recreation, Sport and Tourism which provides an overview of the RST curriculum, areas of study, and opportunities available for a career in the field.

RST 110 Service Delivery in RST credit: 2 Hours.

Introduces students to the concepts, principles, and practices related to the provision of leisure services; description of the various fields of professional practices and basic elements of leisure service systems such as budgeting, planning, staffing, and characteristics of client populations.

RST 120 Foundations of Recreation credit: 3 Hours.

Examines historical and philosophical foundations of various organizations responsible for providing recreation opportunities and services. Program planning, evaluation, and marketing and financing strategies are examined in the public, not-for-profit and private recreation delivery systems.

RST 130 Foundations of Sport Mgt credit: 3 Hours.

Examines career opportunities within the sport industry and provides knowledge relevant to the management, marketing, legal, and financial operations of sport organizations. Incorporates applications in a variety of sport entities including intercollegiate athletics, campus recreation, event and facility management, professional sport, management and marketing agencies, and international sport.

RST 140 Nature and Wilderness credit: 2 Hours.

Origins of the nature and wilderness preservation movements; philosophy behind nature conservation and outdoor activities; role of parks, outdoor recreation, and nature-tourism in contemporary life.

RST 150 Foundations of Tourism credit: 3 Hours.

Survey of travel and tourism with emphasis upon tourist behavior, motivations, preferences, decision-making, attractions, transportation services, facilities and information sources. Examines travel and tourism as an element of leisure service delivery from an interdisciplinary perspective.

RST 180 Professional Applications credit: 3 Hours.

This course examines elements of administration, programming, and facility planning and management to high profile recreation, sport, and tourism destinations. The course consists of 6 modules completed during the second 8 weeks and concludes with a 12-day domestic tour (offered in May/early June) of RST related destinations in Indiana, Ohio, New York, Massachusetts, and Pennsylvania. The course will provide students with a unique opportunity to engage with industry leaders at the destinations. The course allows students to explore, discuss, compare and contrast RST destinations, facilities, and professions and apply concepts from the classroom. Additional fees may apply. See Class Schedule.

RST 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Covering various topics for undergraduates in Recreation, Sport & Tourism. Additional fees may apply. See Class Schedule. Approved for Letter and S/U grading. May be repeated, as topics vary.

RST 200 Leadership in Recreation, Sport and Tourism credit: 2 Hours.

Leadership theories and practices as related to design and delivery of leisure programs. Processes of group development and interpersonal communication in leisure service organizations.

RST 216 Leisure and Technology credit: 3 Hours.

Focuses on the roles of technology in leisure and related industries and explores the impact of technology on leisure from both the consumer and producer perspectives. Reviews important technologies, discusses their use as transformative mechanisms, and considers their impact on leisure activities in society.

RST 217 Public Recreation credit: 3 Hours.

Course examines the public sector and its role in the provision of local park and recreation services. Students will explore its philosophical foundations, organizational structure, policy-making process, and the administrative tasks of public recreation providers.

RST 218 Entrepreneurship credit: 3 Hours.

In-depth study of the delivery of leisure services in the for-profit sector. Covers the scope and administrative functions of recreation enterprises, including an analysis of planning, controlling, and developing recreation enterprises.

RST 224 Politics of the National Parks credit: 2 or 3 Hours.

Same as PS 224. See PS 224.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

RST 225 Environmental Politics & Policy credit: 3 Hours.

Same as PS 225. See PS 225.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

RST 230 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.

Course is designed to increase awareness and knowledge of the needs of members of ethnic and racial minorities, people of lower socio-economic status, women, older adults, people of alternative lifestyles, and people with disabilities when it comes to recreation, sport, and tourism services. It introduces students to concepts and factors that influence the delivery of recreation, sport, and tourism services to diverse populations. Same as HDFS 263 and KIN 230.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

RST 240 Financial Resource Management in Recreation, Sport and Tourism credit: 3 Hours.

This course examines financial concepts in the RST industry across public, private, for-profit, and not-for-profit sectors. It covers revenue management, pricing strategies, grantsmanship, fundraising, sponsorship, budgeting, and ratio analysis. Prerequisite: RST 100 and RST 210.

RST 242 Nature and American Culture credit: 3 Hours.

Appreciation and critique of cultural meanings associated with American natural landscapes. Traditional perspectives including colonial American, romantic, and science-based conservation are characterized, as well as revisionist themes aligned with gender, cultural pluralism, and societal meanings of parks and protected areas. Implications of diversity in cultural meanings toward nature are developed and provide the basis for assessing tenets of contemporary environmental policy and supporting concepts associated with community-based conservation. Same as HIST 282, LA 242, and NRES 242.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

RST 255 Ethical Issues in Recreation, Sport and Tourism credit: 2 Hours.

Explores ethical issues related to government, recreational sport, sport tourism and travel, journalism and media, education, coaching, and business. Students become familiar with concepts and principles of applied ethics and gain insight in to the complexity of ethical issues in recreation, sport and tourism.

RST 300 Leisure Programming credit: 3 Hours.

Develops understanding of the process of leisure/recreation programming and the practical aspects of program design and delivery. Prerequisite: RST 100.

RST 312 Discovery, Tourism and Travel credit: 3 Hours.

Same as HIST 315. See HIST 315.

RST 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, HDFS 314, PSYC 314, and REHB 314. See CHLH 314.

RST 316 Leisure and Human Development credit: 3 Hours.

Examines changes in expressive style and behavior over the life course, and the interaction of leisure with developmental processes. Prerequisite: RST 100 or consent of instructor.

RST 325 Marketing in Recreation, Sport and Tourism credit: 3 Hours.

Application of marketing concepts to the delivery of leisure services. Introduces consumer decision theory analysis. Provides an integrative study of the methods and models for developing and evaluating alternative marketing strategies.

RST 335 Leisure and Consumer Culture credit: 3 Hours.

Examination of contemporary patterns and meanings of leisure in a consumer society. Understanding of the impact of consumption on expressions of identity, gender, social class, race and ethnicity.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

RST 340 Facility Management in Recreation, Sport and Tourism credit: 3 Hours.

Basic understanding of park operations, facility design, construction, and maintenance practices; staff allocations, job analysis, contract administration, organizational structures. Prerequisite: RST 100 and RST 110.

RST 341 Community Recreation Planning credit: 3 Hours.

Studies the outdoor recreational use of lands in the public domain and their planning, concepts, and processes related to planning resource based systems; multiple-use in planning; planning criteria for outdoor recreation facilities. Additional fees may apply. See Class Schedule. Prerequisite: Junior standing; or consent of instructor.

RST 346 Case Study: Endless Summer credit: 3 Hours.

Same as KIN 346 and MACS 346. See KIN 346.

RST 350 Tourism and Culture credit: 3 Hours.

Studies the relationships that exist between tourists, hosts, their respective culture(s), and the cultural environments in which they interact. Studies tourism and its impacts across cultural boundaries, as well as concepts of cultural authenticity, modernity, image creation, social justice, diversity, and representation of social, racial and ethnic groups. Field trip required. Additional fees may apply. See Class Schedule. Prerequisite: Junior or Senior standing.

RST 354 Legal Aspects of Sport credit: 3 or 4 Hours.

A study of legal principles and their impact on the sport industry; the course examines the application of different areas of law including tort, contract, constitutional, anti-trust, and intellectual property law to professional, amateur and recreational sport.

RST 357 Technology & Sport credit: 3 Hours.

Same as HIST 343. See HIST 343.

RST 365 Civic Engagement in Wellness credit: 3 Hours.

Same as AHS 365, CHLH 365, KIN 365, and SHS 370. See KIN 365.

RST 370 Research Methods & Analysis credit: 3 Hours.

Educates students in principles of research design, data collection, measurement, methods of statistical analysis, techniques in summarizing data, and the interpretation and application of research findings to the field of Leisure Studies.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

RST 390 Honors credit: 2 Hours.

Same as CHLH 390 and KIN 390. See KIN 390.

RST 393 Special Problems credit: 1 to 3 Hours.

Special projects in research and independent investigation in any phase of health, physical education, recreation, or related areas selected by the student. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; grade-point average of 3.0; consent of academic advisor, instructor, and head of department.

RST 410 Administration of Leisure Serv credit: 3 or 4 Hours.

Development of overall leisure management function. Analysis of administration and policies such as organizational structure, executive leadership, decision-making, financing, and public relations. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Undergraduates: Completion of campus Composition I general education requirement and upper level standing.

This course satisfies the General Education Criteria for: Advanced Composition

RST 429 Contemporary Issues in Recreation, Sport and Tourism credit: 4 Hours.

Provides a capstone experience to encourage critical and creative thinking regarding knowledge students accrued from prior courses. The first eight weeks students will meet as a whole and focus on leisure concepts in general, and the second eight weeks students will focus on their specific concentration, (Sport Management, Tourism, or Community Recreation). 4 undergraduate hours. 4 graduate hours. Prerequisite: RST 120, or RST 130, or RST 150, and senior status.

RST 440 HR Management in RST credit: 3 Hours.

Concepts, principles, and objectives of supervision; the nature of the supervisory relationship; supervisory functions and processes; identification and application of methods and techniques; organizational and operational patterns of supervision in recreation and park settings. 3 undergraduate hours. No graduate credit.

RST 450 Tourism Planning & Development credit: 4 Hours.

Examines tourism planning and development processes from both applied and conceptual perspectives. Emphasis is placed on tourism planning and development strategies that evaluate destination potential and consider travel destination choice behavior. 4 undergraduate hours. 4 graduate hours. Prerequisite: RST 150 or consent of instructor. Not intended for students with Freshman or Sophomore class standing.

RST 459 Heritage Management credit: 3 or 4 Hours.

Same as ANTH 460 and LA 460. See ANTH 460.

RST 480 Orientation to Practicum credit: 1 Hour.

Prepares and places students in the Leisure Studies Practicum. Students must document completion of 300 hours of field work. Topics include placement requirements and policies, resumes, interviewing, letters of application, and the role and issues of professional practice. 1 undergraduate hour. 1 graduate hour. Prerequisite: Junior standing; RST 100 and RST 110.

RST 485 Practicum credit: 12 Hours.

Students are assigned to University-approved field training stations in an internship capacity for a minimum of forty hours per week for sixteen weeks. Both the agency and the University provide supervision. 12 undergraduate hours. 12 graduate hours. Approved for S/U grading only. Prerequisite: Senior standing; RST 480 and RST 410.

RST 501 Concepts & Applications in Recreation, Sport & Tourism credit: 4 Hours.

Basic philosophical, historical, and scientific foundations and developments in leisure and recreation; analyses of the significance of leisure in modern societies; critical review of major writings in the field with attention to particular special problem areas and current issues. Prerequisite: RST 100 or equivalent.

RST 502 Critical Issues Recreation Mgt credit: 4 Hours.

In-depth study of the public administrative functions in large complex organizational structures; development of an understanding of change and evolution in leisure service agencies as related to the internal and external environments; study of various management styles and situations in leisure service agencies. Same as NRES 504. 4 graduate hours. No professional credit. Prerequisite: Basic course in administration or organization of leisure service agencies.

RST 503 Adv Leisure Research Methods credit: 4 Hours.

Examines methods and techniques of conducting and evaluating leisure research; experimental and survey designs and procedures; data collection, reduction and analysis. Prerequisite: RST 100 or equivalent; RST 370 or equivalent; a course in introductory statistics.

RST 512 Managing Recreation, Sport & Tourism Organizations credit: 4 Hours.

Examines theoretical and technical principles of personnel managers in leisure service agencies; recruitment, training, selection, and evaluation of personnel with special emphasis on applied measurement concepts and legislation related to personnel administration in leisure services. Prerequisite: RST 410 or consent of instructor.

RST 515 Marketing in RST credit: 4 Hours.

Examines quality service issues and service strategies needed to attain competitive advantage across leisure industries. Using a customer-focused management framework, the course focuses on customer satisfaction and retention, linking service quality, customer lifetime value, profitability segmentation, services mapping, understanding customer expectations and developing service and customer-focused relationship marketing strategies.

RST 516 Finance & Budgeting in RST credit: 4 Hours.

Addresses the financial needs of organizations in recreation, sport and tourism. Students are introduced to the terminology and financial measurement tools used by academics and firms in the industry. Current economic issues, revenue streams, and budgeting are emphasized. Students develop the ability to critically assess the financial strengths and vulnerabilities of individual organizations and the field as a whole. An in-depth examination of an organization's internal and external environment in recreation, sport or tourism serves as the capstone.

RST 518 Event Management credit: 4 Hours.

Analyze special events from theoretical and applied perspectives and draw from the social sciences, management, the arts, and related professional fields to analyze the experience and attributed meanings of planned events. Students will acquire an in-depth knowledge of the specialized field of event management and become familiar with techniques and strategies required for successful planning, promotion, implementation and evaluation of special events within recreation, sport and tourism contexts.

RST 520 Critical Issues Sport Mgt credit: 4 Hours.

An analysis of the sport industry with special emphasis given to the role and function of the sport manager. Addresses advanced issues related to organizational theory, finance, marketing, sponsorship, contemporary management and leadership, decision making and strategic planning.

RST 530 Critical Issues Tourism Mgt credit: 4 Hours.

Exposes students to advanced theories, methods, practices and principles that govern tourism behavior. Survey the body of literature on tourism, examining ongoing debates regarding how individuals travel and the structures of institutions that shape travel.

RST 550 Theory and Methods of Leisure credit: 4 Hours.

Surveys concepts, methods, and problems of leisure research that are common to community recreation, sport and tourism. Histories of theoretical and methodological development are discussed, appreciated and critiqued. Examines the development of ideas through literature, with discussion centered on explaining the evolution of a given concept.

RST 551 Contemporary Issues in Leisure credit: 4 Hours.

Provides students with a greater understanding and appreciation of the various disciplines that influence, and are related to, leisure. Examines how these disciplines might influence future research in leisure studies. Prerequisite: RST 550.

RST 555 Diversity in Leisure Behavior credit: 4 Hours.

Examines diversity as it relates broadly to leisure behavior and services, and quality of life issues. Examines leisure diversity in terms of sexual identity, age, social class, gender, race, ethnicity, as well as mental and physical ability.

RST 560 Teaching in the Professoriate credit: 4 Hours.

Same as CHLH 565, KIN 565, and SHS 565. See KIN 565.

RST 570 Cultural Aspects of Tourism credit: 4 Hours.

Develops an advanced understanding of relationships between tourists and the toured, including in-depth knowledge of the phenomenon of tourism and its consequences for individuals and societies. Examines the complexity of movement of peoples across cultural boundaries, coupled with theories related to authenticity, modernity, image creation, social justice, diversity, and representation of social, racial and ethnic groups. Same as ANTH 570. Prerequisite: Graduate standing.

RST 584 Management Internship credit: 2 to 4 Hours.

Work-study experience in the management aspects of leisure service delivery systems. Students are assigned to agencies in their special fields of study and are closely supervised by University faculty. Prerequisite: RST 484 or graduate standing.

RST 590 Doctoral Research Seminar and Colloquium credit: 1 Hour.

Required of all doctoral students for four semesters. Presentations and discussions of current research by doctoral students, faculty members, visiting scholars, and professional leaders. Discussion of topics critical to the academic preparation of doctoral students will also be included, e.g., ethics of conducting research, publication process, grantsmanship, and academic job search. Approved for S/U grading only. May be repeated for up to 4 credit hours toward degree requirements.

RST 593 Special Problems credit: 2 to 4 Hours.

Independent research on special projects. May be repeated. Prerequisite: Open only to students majoring in recreation, sport and tourism.

RST 594 Special Topics in Leisure credit: 2 to 4 Hours.

Lecture courses in topics of current interest; specific subject matter will be announced in the Class Schedule. Prerequisite: Will be determined for each section offered and will be indicated in the Class Schedule.

RST 599 Thesis Research credit: 0 to 16 Hours.

Preparation of thesis in leisure studies. Approved for S/U grading only. May be repeated.

Rehabilitation Counseling (REHB)

REHB Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/REHB>)

Courses

REHB 199 Undergraduate Open Seminar credit: 1 to 4 Hours.

May be repeated to a maximum of 8 hours.

REHB 314 Introduction to Aging credit: 3 Hours.

Same as CHLH 314, HDFS 314, RST 314, and PSYC 314. See CHLH 314.

REHB 322 Intro Intellectual Disability credit: 3 Hours.

Same as PSYC 322 and SPED 322. See SPED 322.

This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

REHB 330 Disability in American Society credit: 3 Hours.

Presents a range of issues pertaining to disability including demographics, disability rights, services, policies and current issues. Applies a disability studies perspective in which problems associated with individuals' impairments are seen to result from socially imposed barriers. Same as CHLH 330.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

REHB 401 Introduction to Rehabilitation credit: 4 Hours.

Orientation to general field of rehabilitation; includes foundations, resources, assessment, counseling, and placement. 4 undergraduate hours. 4 graduate hours.

REHB 402 Medical Aspects of Disability credit: 4 Hours.

Examination of the scope of physical, mental and cognitive disabilities, their causes, complications, and treatment. 4 undergraduate hours. 4 graduate hours.

REHB 407 Disability, Culture & Society credit: 3 or 4 Hours.

Same as ANTH 404, CHLH 407, and KIN 407. See CHLH 407.

REHB 419 Counseling Pre-Practicum credit: 2 to 4 Hours.

Same as EPSY 419. See EPSY 419.

REHB 435 Work and Disability credit: 2 Hours.

Examines theories of job placement, job seeking skills, and techniques for outreach with employees. Focuses on a systems approach to job placement for persons with disabilities. Topics include supported employment, labor market trends, and job restructuring. Lab time with disabled clients who are active in the job search process is required. 2 undergraduate hours. 2 graduate hours.

REHB 501 Rehabilitation Research credit: 4 Hours.

This course has been designed for students who are interested in pursuing a career in rehabilitation and disability research. The course will cover major topics of research methods and techniques used in rehabilitation and disability research. A review of experimental designs and methods, human subject research, and disability related funding agencies will also be covered. 4 graduate hours. No professional credit.

REHB 520 Psycho-Social Aspects credit: 4 Hours.

Study of the social and emotional adjustment of individuals with disabilities; evaluation of effects imposed by societal attitudes; analysis of the implications for rehabilitation professionals in dealing with individuals who have a disability; review of relevant research. Same as SPED 520.

REHB 536 Assessment in Rehabilitation credit: 4 Hours.

Theory and practice of vocational evaluation techniques for persons with disabilities. Reviews basic psychometric instruments and adds practical experience with work samples and computer-based testing. Includes hands-on experience in the evaluation of disabled clients. Prerequisite: REHB 401 or one basic course in testing.

REHB 545 Transition and Voc Planning credit: 3 Hours.

Same as SPED 545. See SPED 545.

REHB 583 Counseling Internship credit: 4 Hours.

Development of individual counseling skills in a rehabilitation setting; emphasis on vocational evaluation and placement skills as developed in case management and planning experiences as well as adjustment to disability, vocational choice, and job placement techniques. May be repeated to a maximum of 8 hours. Prerequisite: REHB 401, REHB 520, REHB 536, and consent of instructor.

REHB 585 Rehabilitation Practicum credit: 4 Hours.

Practical experience in a major area of rehabilitation; discussion/laboratory sections cover such practicum topics related to administration, counseling, or supported employment and other rehabilitation services. Prerequisite: REHB 301 and consent of instructor.

REHB 593 Special Problems credit: 2 to 4 Hours.

Independent research on special projects. Open only to majors. May be repeated to a maximum of 8 hours. Prerequisite: REHB 401; consent of instructor.

REHB 594 Special Topics credit: 1 to 4 Hours.

Lecture course on topics of current interest; specific subject matter announced in Schedule. May be repeated to a maximum of 8 hours. Prerequisite: Will be determined for each topic and will be indicated in Schedule; REHB 401; consent of instructor.

REHB 599 Thesis Research credit: 0 to 8 Hours.

Preparation of thesis in rehabilitation. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Satisfactory standing in the master's program.

Religion (REL)

REL Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/REL>)

Courses

REL 101 Bible as Literature credit: 3 Hours.

Themes and literary genres in the Bible, emphasizing content important in Western culture. Same as CWL 111 and ENGL 114.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

REL 104 Asian Mythology credit: 3 Hours.

Introductory survey of the mythologies of India, China, and Japan. Same as ASST 104.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

REL 106 Archaeology and the Bible credit: 3 Hours.

Examination of archaeological evidence, especially from Syria-Palestine, and discussion of its use in the interpretation of Biblical literature.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

REL 108 Religion & Society in West I credit: 3 Hours.

Introduction to classic writers and texts in Western religious and social thought from antiquity to the Enlightenment, with emphasis on their social and historical contexts. Same as ANTH 108, JS 108, PHIL 108, and SOC 108.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 109 Religion & Society in West II credit: 3 Hours.

Introduction to classic writers and texts in Western religious and social thought from the Enlightenment to the present, with emphasis on their social and historical contexts. Same as ANTH 109, PHIL 109, and SOC 109.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 110 World Religions credit: 3 Hours.

Survey of the leading living religions, including Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam; examination of basic texts and of philosophic theological elaborations of each religion. Same as PHIL 110.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

REL 111 Elementary Greek I credit: 4 Hours.

Same as GRK 101. See GRK 101.

REL 112 Elementary Greek II credit: 4 Hours.

Same as GRK 102. See GRK 102.

REL 115 Language and Culture in India credit: 3 Hours.

Same as HNDI 115 and LING 115. See LING 115.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

REL 116 Faith & Self in Global Context credit: 3 Hours.

Whether in fourth-century North African, tenth-century Japan, fourteenth-century Spain, or twentieth-century America, men and women have wrestled with the question of who they are and how they are to relate to the world. Through autobiographic writings, by reading the words of women and men attempting to make sense of the world and their place in it, we hope to focus attention on the personal dimensions of faith and of cross cultural contact at the same time that we provide an introduction to the worlds' major religions.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

REL 120 A History of Judaism credit: 3 Hours.

Examines the social, political, economic, and intellectual history of the Jews from Abraham to the present-day, with particular attention to Jewish thought and society. Same as HIST 168.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil

REL 121 Introduction to Christianity credit: 3 Hours.

Typological and historical approaches to major forms of Christianity: Eastern Orthodoxy, Catholicism, and Protestantism.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

REL 122 History East Asian Religions credit: 3 Hours.

Same as EALC 122. See EALC 122.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

REL 127 Introduction to Catholicism credit: 3 Hours.

Introduction to the academic study of Catholicism in its historical, philosophical and religious dimensions with an emphasis on its historical diversity.

REL 130 Jewish Customs and Ceremonies credit: 3 Hours.

The major festivals and life-cycle rituals of Judaism; focuses on sacred time, interaction of external and internal factors producing change and conservatism, relationship of ritual and theology, and the thematic development inherent in the rituals.

REL 132 Zen credit: 3 Hours.

Introduces the history, teachings, and practice of Zen Buddhism in China and Japan. Same as EALC 132.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

REL 140 Native Religious Traditions credit: 3 Hours.

Same as AIS 140. See AIS 140.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - US Minority

REL 160 Ancient Greek & Roman Religion credit: 3 Hours.

Same as CLCV 160. See CLCV 160.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

REL 170 Nature Religion credit: 3 Hours.

Introductory survey of religious traditions that locate sacred realities in the natural world, and of ecological traditions that attribute spiritual significance to nature. Same as ESE 170.

REL 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and Associates. May be repeated one time. Prerequisite: Consent of departmental honors advisor.

REL 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Undergraduate Open Seminar. May be repeated.

REL 200 Classical & Koine Greek I credit: 4 Hours.

Same as GRK 201. See GRK 201.

REL 201 Hebrew Bible in English credit: 3 Hours.

Analyzes the critical issues in the interpretation of the literature of the Hebrew Bible/Old Testament; surveys the history and religion of Ancient Israel with special reference to Israel's setting in the ancient Near East. Prerequisite: Sophomore standing or consent of instructor.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

REL 202 New Testament in English credit: 3 Hours.

Analyzes the literature of the New Testament in its social and religious setting, with special reference to the ministry and teaching of Jesus, the emergence of the church as a sect within ancient Judaism, and the development of Christian institutions in the Graeco-Roman world. Prerequisite: Sophomore standing or consent of instructor.

REL 203 History of the Bible credit: 3 Hours.

Broad historical survey of the formation and impact of Christian and Jewish Bibles through the centuries. Designed to give students an academic setting for investigating the complex (and ongoing) history of the Bible. Two guiding questions will be: How have historical developments informed different versions of the Bible: How have versions of the Bible informed cultural and political developments? Same as HIST 291.

REL 204 Classical & Koine Greek II credit: 4 Hours.

Same as GRK 202. See GRK 202.

REL 205 Intensive Biblical Hebrew credit: 5 Hours.

Acquisition of reading knowledge of biblical Hebrew and a familiarity with all major aspects of biblical Hebrew grammar. Same as HEBR 205.

REL 208 Cultures & Literatures of South Asia credit: 3 Hours.

Introduction to the literary traditions of South Asia from the beginnings to the end of the Mughal era. Students will read - in translation - selections from a wide range of texts beginning with the earliest Vedic Hymns to the seventeenth and eighteenth century Sufi poetry and songs. Provides students an understanding of the heterogeneous and rich literary and cultural past of the region. Same as ASST 208, CWL 208, and SAME 208.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Non-West

REL 212 History of Antisemitism credit: 3 Hours.

Same as JS 201. See JS 201.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

REL 213 Intro to Islam - ACP credit: 4 Hours.

Course is identical to REL 214 except for the additional writing component. See REL 214. Same as SAME 213. Credit is not given for both REL 213 and REL 214. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:

Advanced Composition

Humanities - Hist Phil

Cultural Studies - Non-West

REL 214 Introduction to Islam credit: 3 Hours.

History of Islamic thought from the time of Muhammad to the present, including the prophethood of Muhammad, the Qur'an, theology and law, mysticism and philosophy, sectarian movements, modernism and legal reform, and contemporary resurgence. Same as SAME 214. Credit is not given for both REL 213 and REL 214.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

REL 215 African Muslim Cultures credit: 3 Hours.

Same as AFST 213 and HIST 213. See HIST 213.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Non-West

REL 220 Jewish Storytelling credit: 3 Hours.

Same as CWL 221, ENGL 223, JS 220, and YDSH 220. See YDSH 220.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

REL 221 American Judaism credit: 3 Hours.

Forms of Judaism in America: Reform, Conservative, Reconstructionist, Orthodox, and Hasidic Judaism; the American rabbi; Zionism in America; American Jewish communal life; national Jewish organizations; the American synagogue; and the secular Jew. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

REL 223 The Qur'an (Koran) credit: 3 Hours.

Introduction to the Qur'an (Koran), the holy scripture of Islam, examining its major doctrines, thematic development, literary style, and its relationship to pre-Qur'anic, especially Biblical, traditions. Special attention is given to various methods Muslims have used to interpret the Qur'an. Same as CWL 223 and SAME 223. Prerequisite: REL 213 or REL 214.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

REL 224 Chinese Thought Confucius to Mao credit: 3 Hours.

Same as EALC 222 and HIST 222. See EALC 222.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

REL 230 Philosophy of Religion Intro credit: 3 Hours.

Same as PHIL 230. See PHIL 230.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

REL 231 Religion and Philosophy credit: 3 Hours.

Introduces students to philosophical and theological perspectives and methodologies by focusing on one or two key thinkers, books, or topics. Study and critical assessment will attend to the larger historical context. Same as PHIL 231.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

REL 232 Ancient Greek Sanctuaries credit: 3 Hours.

Same as ARTH 218, and CLCV 232. See CLCV 232.

REL 235 History of Religion in America credit: 3 Hours.

Examines the religious history of the lands that have become the United States and the people who have become known as Americans through texts written by and about people of all races and creeds. From the precontact era through the twentieth century, this course emphasizes the diversity of American religion, the discord caused by and present in American religion, and the many instances of dialogue that have been a part of America's religious history. Same as HIST 289.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil

REL 236 Religion, Violence & America credit: 3 Hours.

Examination of the interactions among religion, violence, and American culture from the colonial period to the twenty-first century. Using a wide range of primary and secondary texts, students will study the perspectives of the perpetrators and victims of religiously motivated and/or religiously justified violence, both in domestic and international affairs. Same as HIST 290.

This course satisfies the General Education Criteria for:
Cultural Studies - Western

REL 242 Holocaust Religious Response credit: 3 Hours.

The theoretical foundation for ideas of national and racial superiority which attended the holocaust and responses to this phenomenon by major Jewish and Christian thinkers, including Rubenstein, Buber, Fackenheim, Berkowitz, Reuther, and Wiesel.

REL 251 Viking Mythology credit: 3 Hours.

Same as CWL 251, MDVL 251, and SCAN 251. See SCAN 251.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 258 Muslims in America credit: 3 Hours.

Same as AAS 258 and LLS 258. See AAS 258.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

REL 260 Mystics and Saints in Islam credit: 3 Hours.

Examines mystical concepts and practices in Islam through the ages, through the lives and writings of important mystics and Sufi holy men and women, as well as the integration of mysticism and the Sufi Orders into Muslim society and Islamic orthodoxy. Same as SAME 260. No knowledge of Islam or foreign language is required.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

REL 269 Jewish History Since 1700 credit: 3 Hours.

Same as HIST 269. See HIST 269.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 270 Religion, Ethics, Environment credit: 3 Hours.

Introduction to various religious and philosophical perspectives on environmental ethics. Asks whether the religious traditions can provide us with any resources that can help us to deal with contemporary environmental problems. Religious and philosophical perspectives on these topics will be central to the course: attitudes to individual animals, to other species, and in general to non-human nature; the place of human beings in nature; the relative importance of human development and environmental protection; relations between rich and poor; whether we might need to change our conception of what it is to live successfully; and the concepts of stewardship and sustainability.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 283 Jewish Sacred Literature credit: 3 Hours.

Literary study of the major post-biblical sacred texts of Judaism; includes readings in translation from Mishnah, Tosefta, Talmudim, midrashim, piyyutim, and mystical treatises. Emphasizes nature, history, function, and development of literary patterns and forms and the relationships between form and content in these texts. Same as CWL 283, and ENGL 283.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

REL 284 Modern Jewish Literature credit: 3 Hours.

Same as ENGL 284 and CWL 284. See ENGL 284.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

REL 286 Introduction to Hinduism credit: 3 Hours.

Elements of Hindu thought and practice; selected topics presented in historical order and in the context of Indian cultural history (including the present).

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

REL 287 Introduction to Buddhism credit: 3 Hours.

Thematic approach to the history of Buddhism from its origin in India to its spread throughout China and Japan; explores how the doctrinal and social development of Buddhism in East Asia is related to the process of cultural adaptation. Same as EALC 287.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

REL 291 Hinduism in the United States credit: 3 Hours.

Introduction to the historical, religious, and socio-cultural aspects of Hinduism in the US. The role of Hinduism in the maintenance of the ethnic identity of Indians in the US will be examined in the context of the rituals, languages, temples, family, and other social organizations. The maintenance and/or shift of the features of traditional (Indian) Hinduism in the transplanted counterpart in the US will be examined. Same as AAS 291. Prerequisite: REL 104 or REL 286 or consent of instructor.

REL 308 Psychology of Religion and Spirituality credit: 3 Hours.

Same as PSYC 308. See PSYC 308.

REL 320 Lit Responses to the Holocaust credit: 3 Hours.

Same as CWL 320, ENGL 359, JS 320, and YDSH 320. See YDSH 320.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

REL 332 Interfaith Service and Theory credit: 3 Hours.

Students will work for a semester with a partner organization and study academic issues that pertain to interfaith studies and interfaith activities.

REL 335 Religion in Contemp America credit: 3 Hours.

Examines the religious dynamics of the twenty-first century United States. Tasks will be to map the religious landscape of contemporary America, to learn something of the history of the many traditions being practiced and lived in our communities, and then to study a series of salient issues involving people of faith; the emergence of new religions, expressions of religious intolerance, religion and politics, race and religion, and religious interpretations of economics and the market.

REL 340 Love & Sex in Hebrew Lit credit: 3 Hours.

Same as CWL 341, JS 341, and SAME 341. See CWL 341.

REL 341 Native People and Christianity credit: 3 Hours.

An interdisciplinary survey of the native religious experience, focusing on the native encounter with Christianity. Charts the cultural context for native religious history and explores native religious diversity in the contemporary period, particularly the relationship between tribal and Christian traditions in reservation and urban communities. Class discussions address the broader theoretical and practical questions raised by the intersections of religion, culture, and politics in a diverse and conflicted world, and are supplemented by audiovisual materials and guest speakers. Same as ANTH 341. Prerequisite: Sophomore standing or consent of instructor.

REL 342 Archaeology of Religion credit: 3 Hours.

Same as ANTH 340. See ANTH 340.

REL 343 Islamic Philosophy credit: 3 Hours.

Survey of major developments within Islamic philosophy from the early classical to the early modern period. Focuses on the ideas and figures that have shaped Islamic philosophy through the centuries, as well as the contexts in which those ideas were produced. Topics covered include the transmission of Greek philosophy into Arabic. Islamic Peripatetic philosophy, Illuminationism, Shi'ite philosophy, and philosophical Sufism, including the great synthesis of Mulla Sadra.

REL 344 Medieval Jewish Thought credit: 3 Hours.

Study of the distinctive religious ideas, movements, and figures of Medieval Judaism [500 CE-1700 CE]. Topics include theology, philosophy, Talmudic and Biblical exegesis, mysticism, Jewish-Christian polemics, and law. Emphasis will be placed not only on content and form, but also on historical and social context. Same as MDVL 344.

REL 345 Medieval Civilization credit: 3 Hours.

Same as HIST 345 and MDVL 345. See HIST 345.

REL 346 The Age of the Renaissance credit: 3 Hours.

Same as HIST 346 and MDVL 346. See HIST 346.

REL 347 Protestant & Catholic Refs credit: 3 Hours.

Same as HIST 347. See HIST 347.

REL 350 South Asian Goddesses credit: 3 Hours.

Introduction to the most well-known Hindu goddesses, at both the pan-Hindu and local level, and explores their mythical narratives, associated powers, iconography, and rituals of worship. Presents different methodological approaches scholars employ in the interpretation of goddess worship in South Asia and abroad. Materials are drawn from textual, historical sources as well as contemporary ethnographic research, and seek to include representative figures from different regions throughout India and the Himalayan region. Same as CWL 350 and SAME 350.

REL 390 Independent Study credit: 1 to 6 Hours.

Special topics not treated in regularly scheduled courses; designed primarily for upperclassmen. May be repeated. Prerequisite: Evidence of adequate preparation for such study; consent of staff member supervising the work.

REL 393 The World of Jewish Sepharad credit: 3 Hours.

Same as ANTH 393 and HIST 393. See ANTH 393.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

REL 401 Gender and Hinduism credit: 3 or 4 Hours.

Exploration of the traditional identities, role and expectations of Hindu women and men, as well as popular Hindu beliefs and lived practices informed by understandings of gender, from the ancient period through the present day. Further, the course assesses the way in which these normative ideologies and gendered practices are being perpetuated and/or challenged in the modern world. Sources will include traditionally authoritative texts and treatises, myths and other historical narratives, contemporary ethnographies, and film. Same as SAME 410. 3 undergraduate hours. 4 graduate hours.

REL 403 Women in Muslim Societies credit: 3 or 4 Hours.

Examination of gender ideologies and social realities affecting the lives of women in various Muslim countries. Same as ANTH 403, GLBL 403, GWS 403, HIST 434, and SAME 403. 3 undergraduate hours. 4 graduate hours. Prerequisite: A course in Islam or the Middle East, or consent of instructor.

REL 408 Islam & Politics in Mid. East credit: 3 or 4 Hours.

Examines the role of Islam in contemporary politics, the contemporary resurgence of Islam, and the articulation of Islamic approaches to the new economic order, nationalism, and the changing role of women. Same as PS 408 and SAME 408. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

REL 409 Transnational Islam, Europe-US credit: 3 or 4 Hours.

Same as ANTH 402 and ASST 402. See ANTH 402.

REL 412 Readings in Sanskrit I credit: 3 or 4 Hours.

Same as SNSK 403. See SNSK 403.

REL 413 Readings in Sanskrit II credit: 3 or 4 Hours.

Same as SNSK 404. See SNSK 404.

REL 414 Advanced Biblical Hebrew credit: 3 or 4 Hours.

In-depth study of the grammar and syntax of selected texts from the Hebrew Bible. Texts to be studied will change from year to year. Selections will cover the full range of biblical genres and styles, including prophecy, law, historical narrative, psalms, and wisdom literature. Same as HEBR 414. 3 undergraduate hours. 4 graduate hours. May be repeated for a maximum of 6 undergraduate hours or 8 graduate hours in separate terms. Prerequisite: REL 205, or demonstrated proficiency at the 205 level.

REL 415 Intro Readings of the Talmud credit: 3 Hours.

The Talmud is one of the most important works of Jewish literature. For the last millennium, Talmud study has been a central part of Jewish religious and cultural practice. This course will explain the Talmud's import and durability within Jewish culture while introducing students to the rigors of legal analysis that lie at the heart of most Talmudic passages. The course is ideal for those interested in religion, law, logic games and questions of textual interpretation. The course will study the Talmud entirely in English translation. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours.

REL 416 Readings in Rabbinic Midrash credit: 3 Hours.

Seminar on the foundational text of Judaism- the Midrashic collections (3rd c. - 8th C.E.). We will consider the distinctiveness of Midrashic form and content, and also reflect upon the central methodological issues and problems for the study of this classic corpus. 3 undergraduate hours. 3 graduate hours.

REL 420 Jewish Life-Writing credit: 3 or 4 Hours.

Same as CWL 421, HIST 436, SLAV 420, and YDSH 420. See YDSH 420.

REL 424 Philosophy of Religion credit: 3 or 4 Hours.

Same as PHIL 424. See PHIL 424.

REL 434 History of Jews in Diaspora credit: 3 or 4 Hours.

Same as HIST 433. See HIST 433.

REL 435 Revivalism and Evangelicalism credit: 3 or 4 Hours.

Examination of the history of revivalistic and evangelical Christianities in North America from the colonial period to the twenty-first century. A combination of primary texts and scholarly studies will focus on religious, social, and political legacies, and the current shape of evangelical Christianity in America. Same as HIST 486. 3 undergraduate hours. 4 graduate hours.

REL 436 Religion in America: 1900-1941 credit: 3 or 4 Hours.

An exploration of the religious lives and thoughts of Americans in the first four decades of the twentieth century and the many overlapping issues confronting American society and American religion during that time. Focuses on four themes: debates over the meaning of modernity, understandings of the relationship between religion and society, the gendering of faith, and the relationship between religion and American identity. 3 undergraduate hours. 4 graduate hours. Prerequisite: REL 235 or REL 236.

REL 437 Religion in American Cinema credit: 3 or 4 Hours.

By using films from the 1940s-2010s we will examine the changing religious dynamics of modern American society. We will also use the conceptual tools of religious studies to describe Americans' changing relationships to cinema. 3 undergraduate hours. 4 graduate hours. Prerequisite: Course work in the religious history of the United States or in film studies.

REL 440 Early Christian Thought credit: 3 or 4 Hours.

Study of major developments in early Christian thought (first four centuries) through discussion of primary texts in translation. Same as MDVL 440. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: REL 121 or REL 202, or consent of instructor.

REL 442 History of Early Judaism credit: 3 Hours.

The history of Judaism from Ezra to the rise of Islam: Hellenism and Judaism, varieties of Judaism, Palestinian Judaism and its documents, Babylonian Judaism, the rabbis, and popular Jewish culture. Same as HIST 432 and JS 442. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit in one course in religion at the 200-, 300-, or 400-level, or consent of instructor.

REL 447 Modern Catholic Thought credit: 3 or 4 Hours.

Traces the history of Catholicism in its interaction with the modern world from the sixteenth century to the present, concentrating on the uneasy relationships that Catholicism has sustained with the modern world. 3 undergraduate hours. 4 graduate hours. Prerequisite: REL 127 or consent of instructor.

REL 458 Christians and Jews 1099-1789 credit: 3 or 4 Hours.

Examines the complex relations between Christians and Jews in Europe from the high Middle Ages through the Enlightenment. Among our topics are the religious and social roots of medieval persecutions of Jews; the history of Jewish banishments; construction of myths to foment hostilities; Renaissance humanism (especially the Christian absorption of Jewish scholarship); the impact of the Christian reform movements, both Protestant and Catholic, on the status of Jews; mercantilism and the re-admission of Jews; and the emergence of a discourse of religious tolerance in the Enlightenment. Same as HIST 458. 3 undergraduate hours. 4 graduate hours.

REL 461 Indigenous Traditions credit: 3 or 4 Hours.

Interdisciplinary seminar on indigenous religious traditions, focusing especially on the study of native North American religions. 3 undergraduate hours. 4 graduate hours.

REL 462 Ecological Criticism credit: 3 or 4 Hours.

The scientific, political, and economic policy debates about global environmental crisis have tended to ignore its religious, historical, and literary dimensions. This interdisciplinary seminar in the environmental humanities redresses that omission by focusing attention on the emerging fields of religion and ecology, environmental history, and literary ecocriticism. Same as CWL 460 and ESE 462. 3 undergraduate hours. 4 graduate hours.

REL 463 Religion and Society credit: 4 Hours.

Same as ANTH 463. See ANTH 463.

REL 468 Religions of Africa credit: 3 or 4 Hours.

Same as AFST 468 and ANTH 468. See ANTH 468.

REL 472 Kierkegaard and the Self credit: 3 or 4 Hours.

Same as CWL 472, PHIL 472, and SCAN 472. See SCAN 472.

REL 478 19thC US Intel & Cultr Hist credit: 2 to 4 Hours.

Same as HIST 479. See HIST 479.

REL 479 20th Century US Culture Wars credit: 2 to 4 Hours.

Same as HIST 481. See HIST 481.

REL 480 Islamic Law credit: 3 or 4 Hours.

Introduction to Islamic legal philosophy and the historical evolution of Islamic legal and jurisprudential system. Begins by studying the origins, nature, sources and interpretive methodologies of classical Islamic law, and the main institutions for upholding this law, the madhhab, or school of law, examining its development from the formative to the post-formative periods and highlighting important controversies generated along the way. Then looks at the early encounter of Islamic law with modernity. Followed by an exploration of several contemporary topics that have served as catalysts for new tensions and alternative approaches and interpretive theories. 3 undergraduate hours. 4 graduate hours. Prerequisite: Previous coursework on Islam or consent of instructor.

REL 481 Muslim Ethics in Global Age credit: 3 or 4 Hours.

Exploration of contemporary, often revisionist Muslim ideas on a broad range of ethical issues that face societies today, such as human rights, democracy, gender equality, just war, pluralism, and bioethics. Same as SAME 481. 3 undergraduate hours. 4 graduate hours. Prerequisite: Previous coursework on Islam or the Middle East.

REL 482 Muslim-Christian Interactions credit: 3 or 4 Hours.

Explores the complexity of Muslim-Christian interactions since early Islam, including theological and philosophical exchanges, debates, polemics, interfaith dialogue, perceptions of each other, Muslim minorities in the West, and Christian minorities in the Muslim world, and the relationship of religion to culture. 3 undergraduate hours. 4 graduate hours.

REL 483 Salvation in Islamic Thought credit: 3 or 4 Hours.

Introduction to salvation in Islamic thought, with emphasis on discussions of the fate of "Others" (i.e. non-Muslims). Begins with a study of the origins and sources of this discourse, followed by an examination of evolving orientations from the formative to the post-formative periods. Important controversies generated along the way, including exclusivist-inclusivist, universalist-anti-universalist, and Sufi-anti-Sufi debates, will be explored. This is followed by an assessment of the new approaches to salvation in modern Islamic thought, with particular emphasis on the contemporary pluralist-inclusivist debate. Finally, alternative approaches to the topic of salvation, including reincarnation, will be examined. 3 undergraduate hours. 4 graduate hours. Prerequisite: Previous coursework on Islam or consent of instructor.

REL 484 Buddhist Meditation credit: 3 Hours.

Examines classical systems of Buddhist meditation and their relation to Buddhist psychology and world view. Same as EALC 484. 3 undergraduate hours. 3 graduate hours. Prerequisite: REL 287 or consent of instructor.

REL 488 History of Chinese Buddhism credit: 3 or 4 Hours.

Same as EALC 488. See EALC 488.

REL 493 Honors Senior Thesis credit: 3 Hours.

Two-term research project. 3 undergraduate hours. No graduate credit. May be repeated in separate terms for a total of 6 undergraduate hours. Prerequisite: Senior majors in religion who are eligible for graduating with distinction from the program.

REL 494 Topics in Religious Thought credit: 3 or 4 Hours.

Various topics in religious thought. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary.

REL 495 Topics in Asian Religions credit: 3 or 4 Hours.

Topics in Hinduism, Buddhism, Taoism, and other Asian religious traditions. Same as EALC 495. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: Sophomore standing or consent of instructor.

REL 496 Topics in History of Judaism credit: 3 or 4 Hours.

Examination of two or three of the most important practices, beliefs, icons, texts, myths, and spiritual encounters that have and continue to shape Judaism as a religion. Same as JS 496. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours.

REL 498 Topics in Biblical Studies credit: 3 or 4 Hours.

Detailed interpretation of selected books of the Bible. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary.

REL 503 Renaissance of the Bible credit: 4 Hours.

Explores the cultural, intellectual, and, in several key instances, political circumstances of the Bible in the Renaissance. Topics include the impact of print technology, the biblical philology of Renaissance humanism, the function of biblical studies in the reform movements (including the Catholic Reformation), the Renaissance Bible and doctrine, translations of the Bible, the politics of the English-language Bible, and the artistic presentation of the Bible.

REL 504 Genesis in History credit: 4 Hours.

Survey of Jewish and Christian cultural reception of Genesis in the ancient and medieval worlds. Examines techniques of exegesis and strategies of interpretation in the ancient world, such as allegory, narrative expansion, and retelling. Engages with foundational studies of modern scholarship on biblical reception. While focusing on the initial chapters of Genesis, we will also explore the appropriation of Abraham traditions and the Joseph story. Same as MDVL 504.

REL 510 Graduate Intro to Religion credit: 4 Hours.

Introduction for first semester graduate students to selected methods and techniques for conducting research in the area of Religion. Students will receive general guidance on strategies for conducting bibliographic research and designing research projects. Includes study of some currently salient issues and areas of inquiry in a number of disciplines pertaining to the study of religion. The course will be supervised by one professor and will offer a series of presentations on several methodologies and historical issues by experts in various fields. 4 graduate hours. No professional credit.

REL 511 Seminar in Study of Religion credit: 4 Hours.

Intensive study of select topics or issues in the study of religion. May be repeated in the same or separates terms as topics vary.

REL 514 Islamic Theology credit: 4 Hours.

Study of the language, arguments and schools of classical Islamic theology, mainly through direct study of English translations of theological texts from two different theological schools. Same as SAME 514.

REL 515 History of Jewish Theology credit: 4 Hours.

Study of Israelite and Jewish thought from the biblical to modern period. Particular attention will be paid to theological matters and to the historical, cultural and intellectual challenges that engendered a re-thinking and re-conceptualization of the Jewish faith.

REL 520 Hindu Pilgrimage, Power & Place credit: 4 Hours.

This course undertakes a critical examination of the nature and practices of Hindu pilgrims, pilgrimages, and pilgrimage sites. We will examine central beliefs and practices of lived religion in the Hindu tradition and situate Hindu pilgrimage within the broader context of pilgrimage and related discussions of power and place. Same as SAME 520. 4 graduate hours. No professional credit.

REL 535 Historiography of Religion in America credit: 4 Hours.

Immerses students in major works of recent American religious history. Written from multiple disciplinary perspectives and wrestling with the knotty problems in which religion has been interwoven, these books will give the student a solid foundation in American religious history. Same as HIST 574. 4 graduate hours. No professional credit.

REL 562 Religious Diversity credit: 4 Hours.

Intensive study of philosophical and theological responses to the phenomenon of religious diversity. Prerequisite: Graduate standing in one of the relevant fields, or consent of instructor.

REL 564 Global Religion and Politics credit: 4 Hours.

Same as SAME 564 and SOC 564. See SOC 564.

REL 567 Mahayana Buddhism credit: 4 Hours.

An investigation of Buddhist core notions as conceived from the point of view of the three Major Mahayana traditions with an examination of the ways in which these Mahayana traditions are presented in modern and early modern scholarship. At stake is the fundamental hermeneutic issue of the ways in which the "moderns" look at pre-modern thought, that is, the questions of the historical situatedness of thought. Prerequisite: At least one previous course in Buddhism or consent of instructor.

REL 568 Popular Religion in East Asia credit: 4 Hours.

Study of the history of East Asian religions through primary and secondary sources primarily focusing on Buddhism and indigenous faiths. Students will gain an understanding of the social and historical character of popular religion through East Asia. Same as EALC 567. Prerequisites: Graduate Students majoring in East Asian religions must be prepared to read some primary sources written in the original language; graduate students in the other majors are not required to read in the original language.

REL 590 Independent Study credit: 2 to 6 Hours.

Special topics not treated in regularly scheduled courses; for graduates. 2 to 6 graduate hours. No professional credit. May be repeated. Prerequisite: Evidence of adequate preparation for such study and consent of staff member supervising the work.

REL 599 Thesis Research credit: 0 to 16 Hours.

Researching and writing a thesis in consultation with a faculty adviser. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated. The M.A. program in Religion allows students to receive a maximum of 8 hours for the M.A.

Religious Studies (RLST) -- Changed to Religion (REL)

Rhetoric and Composition (RHET)

RHET Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RHET>)

Courses

RHET 100 Rhetoric Tutorial credit: 1 Hour.

Tutoring in writing skills to be scheduled by individual tutors. Open only to students placed in and registered for RHET 101 or RHET 102. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: Concurrent registration in RHET 101 or RHET 102.

RHET 101 Principles of Writing credit: 3 Hours.

Instruction in structuring academic, argumentative essays, including how to develop thesis statements and use evidence across different types of writing. This course is the first semester of a two-semester sequence (RHET 101 - RHET 102) that fulfills the campus Composition I general education requirement. Credit is not given for both RHET 101 and RHET 105. Prerequisite: Concurrent registration in RHET 100; placement in RHET 101.

This course satisfies the General Education Criteria for: Composition I

RHET 102 Principles of Research credit: 3 Hours.

Continued instruction in structuring academic, argumentative essays; concentrating on the use of primary and secondary sources as evidence in research-based arguments. Second semester of a two-semester sequence (RHET 101/100 - RHET 102/100) that fulfills the campus Composition I general education requirement. Credit is not given for both RHET 102 and RHET 105. Prerequisite: RHET 101; concurrent registration in RHET 100.

This course satisfies the General Education Criteria for: Composition I

RHET 105 Writing and Research credit: 4 Hours.

Introduction in research-based writing and the construction of academic, argumentative essays that use primary and secondary sources as evidence. This course fulfills the Campus Composition I general education requirement. Credit is not given for both RHET 105 and any of these other Comp I courses: RHET 101, RHET 102, CMN 111 or CMN 112. This course satisfies the General Education Criteria for: Composition I

RHET 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RHET 233 Adv Rhetoric & Composition credit: 3 Hours.

Instruction in developing research-based arguments of moderate complexity within a special topics format. Introduction to the use of multimodal or other non-print resources as evidence in written arguments. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for: Advanced Composition

Romance Linguistics (RMLG)

RMLG Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RMLG>)

Courses

RMLG 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RMLG 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Same as FR 462, ITAL 435, LING 462, PORT 435, and SPAN 435. See SPAN 435.

RMLG 559 Sem Romance Ling credit: 4 Hours.

Same as FR 559, ITAL 559, LING 559, PORT 559, and SPAN 557. See SPAN 557.

Rural Sociology (RSOC)

RSOC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RSOC>)

Courses

RSOC 110 Intro to Rural Society credit: 3 Hours.

Basic concepts for understanding and analyzing rural society; topics include changes in major rural institutions, impacts of technological change on rural people and communities, demographic patterns and trends, migration, rural minorities and subcultures, the city-countryside relationship, emerging controversies and conflicts in rural areas, and cross-cultural comparisons of rural life.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

RSOC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RSOC 270 Population Issues credit: 3 Hours.

Same as SOC 270. See SOC 270.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

RSOC 447 Environmental Sociology credit: 3 or 4 Hours.

Same as ENVS 447 and SOC 447. See SOC 447.

Russian (RUSS)

RUSS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/RUSS>)

Courses

RUSS 101 First-Year Russian I credit: 4 Hours.

Oral-aural practice and elements of grammar, reading, and writing. For students who have no credit in Russian.

RUSS 102 First-Year Russian II credit: 4 Hours.

Continuation of RUSS 101. Oral-aural practice and elements of grammar, reading, and writing. Prerequisite: RUSS 101.

RUSS 115 Intro to Russian Culture credit: 3 Hours.

Introduction to the culture of Russia and the USSR. Course addresses two central themes. First, the very distinctiveness of Russian culture, and the functions of that notion within Russia and for outsiders; Second, Russia as a cultural space between East and West. We will explore Russian culture through the following, the language(s); foundational narratives of collective memory going back to the medieval times; the cultural impact of colonial subjugation both by and of peoples to the East, South, and West; Russian Orthodoxy's connection with the political and cultural spheres; peak achievements in literature, music, architecture and visual arts. Same as REES 116.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

RUSS 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars. May be repeated one time.

Prerequisite: Consent of departmental honors advisor.

RUSS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

RUSS 201 Second-Year Russian I credit: 4 Hours.

Oral-aural practice, systematic functional grammar, reading, and writing.

Prerequisite: RUSS 102 or equivalent.

RUSS 202 Second-Year Russian II credit: 4 Hours.

Systematic review of the structure of Russian covered in RUSS 101, RUSS 102, and RUSS 201 through class lectures, drills, and homework exercises. Prerequisite: RUSS 201.

RUSS 219 Russian Cinema Survey credit: 3 Hours.

Survey of Russian and Soviet film, from Eisenstein to the present. Weekly film screenings. No knowledge of Russian required.

RUSS 220 Golden Age of Russian Lit credit: 3 Hours.

Survey of Russian literature in the long 19th century; romanticism, realism, nationalism, orientalism, empire; writers may include Pushkin, Gogol, Lermontov, Pavlova, Turgenev, Dostoevsky, Tolstoy, Chekhov, and others; reading and discussion in English. Same as CWL 227.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 225 Russian Lit and Revolution credit: 3 Hours.

Major works from 1900 to the present; futurism, modernism, Stalinism, post-modernism, and after; writers may include Mayakovsky, Babel, Olesha, Akhmatova, Bulgakov, Nabokov, Solzhenitsyn, Tolstaya, and others; readings and discussion in English. Same as CWL 249.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 260 Medicine & Russian Literature credit: 3 Hours.

Examines cultural significance of medicine and the figure of the physician, and understandings of illness and health, primarily in literature of Russia and the USSR from the 1860s to present. Asks what larger issues are at stake in the literary representation of medical practice by physicians and non-physicians alike in the Russian and Soviet contexts; investigates what medicine and literature offer each other, and the bearing on this of the latter's formal, aesthetic qualities. Considers how medical practice is conditioned by the broader culture, how medical discourse, knowingly or unknowingly, 'borrows' from, is conditioned by, or otherwise reciprocally involved with other greater or peripheral discursive spheres. Reads fiction by leading literary figures who were physicians (Chekhov, Bulgakov, Veresaev, and Aksyonov); fiction by "lay" authors about doctors and medical practice (such as Solzhenitsyn); memoirs by physicians (tales of training and practice, apologies, denunciations); memoirs by patients; 'real' and fictional case histories; theoretical and methodological readings.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

RUSS 261 Intro Russian-Jewish Culture credit: 3 Hours.

Introduction to the interaction of the intellectual, artistic, political, social, and religious life of the Jewish community in Russia through film, literature, art and historical record. Same as HIST 261.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

RUSS 290 Readings in Russian credit: 1 to 4 Hours.

Individual topics or projects chosen in consultation with a Slavic Department representative. May be repeated to a maximum of 8 hours. Prerequisite: RUSS 202 or equivalent proficiency.

RUSS 301 Third Year Russian I credit: 3 Hours.

Grammar review; training in writing Russian; translation from English and free composition. Prerequisite: RUSS 202 or consent of instructor.

RUSS 302 Third Year Russian II credit: 3 Hours.

Practice in intermediate-level speaking, listening, reading, and writing, based upon advanced grammar and conversation topics and upon readings from current fiction and non-fiction. Students are expected to write essays and give oral reports based on in-class assignments and outside interests. Prerequisite: RUSS 301 or consent of department.

RUSS 305 Business Russian credit: 3 Hours.

Basic tools and skills for conducting business in Russian, including introduction to Russian economy, banking, insurance, media, internet technology, advertising, law and culture, practicum in writing the c.v and business correspondence in Russian. Prerequisite: Successful completion of RUSS 301 or consent of instructor.

RUSS 320 Russian Writers credit: 3 Hours.

Focused study of the work of a single Russian writer, or the comparison of that writer with another major author, in translation. No Russian required. Same as CWL 321. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: At least one other college literature course or consent of instructor.

RUSS 322 Dostoevsky credit: 3 Hours.

Introduction to the major works of Fyodor Mikhailovich Dostoevsky. No Russian required. Same as CWL 324 and ENGL 322. May be repeated up to 6 credit hours in separate terms. Prerequisite: At least one other college literature course or consent of instructor.

RUSS 323 Tolstoy credit: 3 Hours.

Introduction to the major works of Lev Tolstoy. No Russian required. Same as CWL 323 and ENGL 323. May be repeated up to 6 credit hours in separate terms, if topics vary. Prerequisite: One other college literature course or consent of instructor.

RUSS 325 Chekhov credit: 3 Hours.

Introduction to the major works of playwright and author Anton Chekhov. Same as CWL 325 and THEA 362. Prerequisite: At least one other literature course or consent of instructor.

RUSS 335 Nabokov credit: 3 Hours.

Nabokov's Russian and American novels read in a comparative context. All works in English, no knowledge of Russian is required. Same as CWL 335. Prerequisite: At least one other college-level literature course or consent of instructor.

RUSS 401 Fourth Year Russian I credit: 3 Hours.

Practice in advanced speaking, listening, reading, and writing, based upon reading selected from current fiction and non-fiction, and covering a wide variety of styles: literary, conversational, scientific, etc. Course taught in Russian. Students are expected to write essays and give oral reports based on what they read in class and on their outside interests. 3 undergraduate hours. 3 graduate hours. Prerequisite: Three years of college Russian or consent of instructor.

RUSS 402 Fourth Year Russian II credit: 3 Hours.

Practice in advanced speaking, listening, reading, and writing, based upon reading selected from current fiction and non-fiction, and covering a wide variety of styles: literary, conversational, scientific, etc. Course taught in Russian. Students are expected to write essays and give oral reports based on what they read in class and on their outside interests. 3 undergraduate hours. 3 graduate hours. Prerequisite: RUSS 401 or consent of instructor.

RUSS 418 18th Century Literature credit: 3 or 4 Hours.

Reading of texts; historical and literary background of the period. 3 undergraduate hours. 4 graduate hours.

RUSS 424 Russian Modernism credit: 3 or 4 Hours.

Representative works of the period 1880 to 1917, with emphasis on Chekhov, Gorky, and Blok; readings for non-majors and class discussions in English. Same as CWL 457. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing or consent of instructor.

RUSS 438 Modern Russian Poetry credit: 3 or 4 Hours.

Study of major Russian poets and their works from romanticism to the present. Historical background, textual analysis and connections with Western European poetry. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 444 Problems in Romanticism credit: 3 or 4 Hours.

Study of major authors of the romantic period, and some lesser authors. Historical background, textual analysis, and connections with Western European romanticism. Same as CWL 444. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 445 Problems in Realism credit: 3 or 4 Hours.

Study of the major texts of nineteenth century Russian realism, including works by Turgenev, Goncharov, Nekrasov, Dostoevsky, and Tolstoy. Historical background, relevant intellectual currents, textual analysis, and connections with Western European realist authors. Same as CWL 445. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Consent of instructor.

RUSS 460 Russian Culture Studies credit: 3 or 4 Hours.

Role of Russian literature in the social, political, and intellectual life of Russia from the 1840s to the present. Same as CWL 440. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Junior standing.

RUSS 461 Russia and the Other credit: 3 or 4 Hours.

Interdisciplinary and comparative topics including, but not limited to: Russia and the West, Russia and the East, the Cold War, and post-Soviet cultural studies. Same as CWL 466. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: Russian course at the 200 or 300 level or consent of instructor.

RUSS 465 Russian-Jewish Culture credit: 3 or 4 Hours.

Study of Russian-Jewish cultural, social, and political life through literature and film. No Russian required. 3 undergraduate hours. 4 graduate hours. Prerequisite: One literature course in the Slavic department at the 200 or 300 level, or consent of instructor.

RUSS 466 Russian Women's Writing credit: 3 or 4 Hours.

Study of fiction and non-fiction writing by Russian women, including discussion of historical context and feminist theory. 3 undergraduate hours. 4 graduate hours. Prerequisite: One literature course in the Slavic department at the 200 or 300 level, or consent of instructor.

RUSS 474 Russian Translation credit: 3 or 4 Hours.

Theory and practice of translation in Russia from the eighteenth century to the present; "literal" versus "creative" translation; and practical work in translation into English of various Russian texts. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: RUSS 302 or equivalent.

RUSS 493 Honors Senior Thesis credit: 2 Hours.

Intended primarily for candidates for honors in Russian but open to other seniors. 2 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Senior standing.

RUSS 501 Russian for Grad Students I credit: 4 Hours.

Provides training in academic Russian for graduate students in social sciences and humanities. Designed for advanced learners of Russian who are interested in developing more specialized language skills. The content of the course will be tailored to the needs of the specific group. May be repeated to a maximum of 8 hours. Prerequisite: RUSS 402 or consent of instructor.

RUSS 502 Russian for Grad Students II credit: 4 Hours.

Continuation of Russian 501. Provides training in academic Russian for graduate students in social sciences and humanities. Designed for advanced learners of Russian who are interested in developing more specialized language skills. The content of the course will be tailored to the needs of the specific group. May be repeated to a maximum of 8 hours. Prerequisite: RUSS 501 or consent of instructor.

RUSS 511 Russian Literature 1800-1855 credit: 4 Hours.

Graduate-level study of major literary trends and developments in Russian literature from 1800-1855, from early romanticism to the emergence of a realist tradition, in criticism, drama, poetry, and prose. Prerequisite: Ability to read in Russian.

RUSS 512 Russian Literature 1855-1905 credit: 4 Hours.

Graduate-level survey of Russian literature of the second half of the nineteenth century, tracing the emergence, blossom, and decline of the great Russian realist novel, as well as the social and ideological debates of the 1850s and 1860s that were that form's most significant context. Explores the emergence and varied meanings of the term "realism" in Russian literature and criticism of the nineteenth century and will cover the rise of the short form in the 1880s and then, of Russian Decadence/Symbolism in the 1890s. Key developments in Russian drama will also be covered: Ostrovskii, Sukhovo-Kobylin, Chekhov and the Moscow Art Theater. Prerequisite: Ability to read in Russian.

RUSS 520 Russian Writers credit: 4 Hours.

Study of a Russian author's works in the original Russian, historical and philosophical contexts, current critical approaches. May be repeated to a maximum of 8 hours.

RUSS 521 Gogol credit: 4 Hours.

Study of Nikolai Gogol's works in the original Russian, historical contexts, and current critical approaches. 4 graduate hours. No professional credit.

RUSS 522 Dostoevsky credit: 4 Hours.

Study of Dostoevsky's works in the original Russian, historical and philosophical contexts, current critical approaches. May be repeated to a maximum of 8 hours.

RUSS 523 Tolstoy credit: 4 Hours.

Study of Tolstoy's works in the original Russian, of their historical and philosophical context, and of current critical approaches to Tolstoy's works. 4 graduate hours. No professional credit.

RUSS 524 Pushkin credit: 4 Hours.

Study of Alexander Pushkin's works in the original Russian, of their historical context, and of current critical approaches to Pushkin's works. 4 graduate hours. No professional credit.

RUSS 535 Nabokov credit: 4 Hours.

Study of Nabokov's Russian and American novels in the original Russian and English, read in a comparative and theoretical context. Same as CWL 535. Prerequisite: Knowledge of Russian or consent of instructor.

Russian, East European and Eurasian Studies (REES)

REES Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/REES>)

Courses

REES 115 Intro to Polish Culture credit: 3 Hours.

Same as POL 115. See POL 115.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

REES 116 Intro to Russian Culture credit: 3 Hours.

Same as RUSS 115. See RUSS 115.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

REES 200 Intro to Russia and Eurasia credit: 3 Hours.

Survey of the societies and states formerly constituted as the Soviet Union. Interdisciplinary and team-taught. Combines lectures, discussions, and films covering the history, political science, economics, sociology, and culture of the area.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

REES 201 Introduction to Eastern Europe credit: 3 Hours.

Interdisciplinary survey of Eastern Europe focusing mostly on the 20th century to the present, exploring issues of nationalism, socialism, post socialism and EU accession. Focuses on Central Europe and the Balkans, but also references the Baltic States, Belarus, Ukraine, and Russia. Students will learn about the region using perspectives and methodology from historical, economic, political, sociological and anthropological texts.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

REES 296 Special Topics credit: 3 Hours.

Topics in the interdisciplinary study of Russia, Eastern Europe, and Eurasia. Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours.

REES 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, INFO 325, LAST 325, and SAME 325. See EPS 325.

REES 390 Individual Study or Research credit: 3 Hours.

Directed reading or research on selected topics. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor supervising the work.

REES 477 Post-Communist Fiction credit: 3 or 4 Hours.

Same as SLAV 477 and CWL 477. See SLAV 477.

REES 493 Honors Senior Thesis credit: 3 Hours.

Undergraduate honors thesis. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: REES major with senior standing and 3.5 grade-point average; consent of instructor supervising the work and the REEC director.

REES 495 Senior Seminar credit: 3 Hours.

Interdisciplinary seminar normally taken in the senior year. Involving faculty in a number of disciplines, this course approaches understanding Russia, Eastern Europe, and Eurasia and the methodologies of its study through questions of identities, cultural values, and change. Taught in conjunction with REES 550. 3 undergraduate hours. No graduate credit. Prerequisite: Declared major in Russian, East European, and Eurasian Studies or consent of instructor; junior or senior standing.

REES 496 Topics in REEE Studies credit: 3 or 4 Hours.

Topics in the interdisciplinary study of Russia, Eastern Europe, and Eurasia. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 9 undergraduate hours or 12 graduate hours.

REES 550 Seminar in REEE Studies credit: 4 Hours.

Interdisciplinary seminar involving faculty in a number of disciplines. The course examines Russia, Eastern Europe, and Eurasia and the methodologies of its study through questions of identities, cultural values, and change.

REES 590 Individual Study or Research credit: 1 to 8 Hours.

Directed reading or research on selected topics for graduate students. May be repeated in the same or separate terms to a maximum of 8 graduate hours. Prerequisite: Consent of instructor supervising the work.

REES 596 Topics in REEE Studies credit: 4 Hours.

Topics in the interdisciplinary study of Russia, Eastern Europe, and Eurasia. May be repeated to a maximum of 12 graduate hours.

REES 599 Thesis Research credit: 0 to 8 Hours.

Designed to meet the thesis requirement for the M.A. in Russian, East European, and Eurasian Studies; taken under supervision of a faculty member in the Russian, East European, and Eurasian Center. Approved for S/U grading only. May be repeated to a maximum of 8 hours. Prerequisite: Enrollment in the M.A. program in REEES and consent of the Director of the Russian, East European, and Eurasian Center.

S. Asian & Middle Eastern (SAME)

SAME Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SAME>)

Courses

SAME 150 Lang&Culture of Arab World credit: 3 Hours.

Same as ARAB 150. See ARAB 150.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West

SAME 152 The New Middle East credit: 3 Hours.

Same as PS 152 and SOC 152. See PS 152.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SAME 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Special topics in Middle Eastern or South Asian studies; content is variable. May be repeated in the same or separate terms if topics vary.

SAME 208 Cultures & Literatures of South Asia credit: 3 Hours.

Same as ASST 208, CWL 208 and REL 208. See REL 208.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 211 War & Peace in Israeli Lit credit: 3 Hours.

Same as CWL 211 and JS 211. See CWL 211.

SAME 213 Intro to Islam - ACP credit: 4 Hours.

Same as REL 213. See REL 213.

This course satisfies the General Education Criteria for:
Advanced Composition
Humanities - Hist Phil
Cultural Studies - Non-West

SAME 214 Introduction to Islam credit: 3 Hours.

Same as REL 214. See REL 214.

This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Non-West

SAME 223 The Qur'an (Koran) credit: 3 Hours.

Same as CWL 223, REL 223. See REL 223.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 260 Mystics and Saints in Islam credit: 3 Hours.

Same as REL 260. See REL 260.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Non-West

SAME 325 Social Media and Global Change credit: 3 Hours.

Same as EPS 325, AFST 325, ASST 325, EURO 325, INFO 325, LAST 325, and REES 325. See EPS 325.

SAME 341 Love & Sex in Hebrew Lit credit: 3 Hours.

Same as CWL 341, JS 341 and REL 340. See CWL 341.

SAME 350 South Asian Goddesses credit: 3 Hours.

Same as CWL 350 and REL 350. See REL 350.

SAME 403 Women in Muslim Societies credit: 3 or 4 Hours.

Same as ANTH 403, GLOB 403, GWS 403, HIST 434, and REL 403. See REL 403.

SAME 408 Islam & Politics in Mid. East credit: 3 or 4 Hours.

Same as PS 408 and REL 408. See REL 408.

SAME 410 Gender and Hinduism credit: 3 or 4 Hours.

Same as REL 401. See REL 401.

SAME 454 Topics in Israeli Lit & Culture credit: 3 or 4 Hours.

Same as CWL 454 and JS 454. See CWL 454.

SAME 481 Muslim Ethics in Global Age credit: 3 or 4 Hours.

Same as REL 481. See REL 481.

SAME 490 Special Topics credit: 3 or 4 Hours.

Study of selected topics in Middle Eastern studies; content is variable. Check Class Schedule for specific topics each semester. 3 undergraduate hours. 4 graduate hour. May be repeated in separate terms as topics vary to a maximum of 6 undergraduate hours or 12 graduate hours.

SAME 514 Islamic Theology credit: 4 Hours.

Same as REL 514. See REL 514.

SAME 520 Hindu Pilgrimage, Power & Place credit: 4 Hours.

Same as REL 520. See REL 520.

SAME 564 Global Religion and Politics credit: 4 Hours.

Same as REL 564 and SOC 564. See SOC 564.

SAME 590 Independent Study credit: 0 to 4 Hours.

Directed reading or research on selected topics for graduate students. 0 to 4 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms up to 8 hours. Prerequisite: Graduate standing and consent of instructor supervising the work.

Sanskrit (SNSK)

SNSK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SNSK>)

Courses

SNSK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

SNSK 201 Elementary Sanskrit I credit: 4 Hours.
Introduction to Sanskrit, treating in full the grammar of the language as preparation for reading.

SNSK 202 Elementary Sanskrit II credit: 4 Hours.
Continuation of SNSK 201. Prerequisite: SNSK 201.

SNSK 403 Readings in Sanskrit I credit: 3 or 4 Hours.
Introduction to the reading of Sanskrit texts. Same as REL 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: SNSK 202.

SNSK 404 Readings in Sanskrit II credit: 3 or 4 Hours.
Readings in Sanskrit texts. Topics may vary according to students' needs; they may include religious texts, classical literature, or a general survey of texts. Same as REL 413. 3 undergraduate hours. 4 graduate hours. May be repeated if topics vary. Prerequisite: SNSK 403 and consent of instructor.

Scandinavian (SCAN)

SCAN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SCAN>)

Courses

SCAN 101 Beginning Scandinavian I credit: 4 Hours.
First course in the Scandinavian language sequence (usually Swedish). Instruction is by immersion, emphasis is on basic skills: reading, writing, speaking, and aural comprehension.

SCAN 102 Beginning Scandinavian II credit: 4 Hours.
Second course in the Scandinavian language sequence (usually Swedish). Instruction is by immersion, emphasis is on further developing basic skills: reading, writing, speaking, and aural comprehension. Prerequisite: SCAN 101 or consent of instructor.

SCAN 103 Intermediate Scandinavian I credit: 4 Hours.
Third course in the Scandinavian language sequence (usually Swedish). Emphasis is on conversational skills, discussion techniques and aural comprehension through the study of authentic texts, television and films, with emphasis on learning about contemporary issues in Sweden, including its relationship to the European Union. Instruction is by immersion. Prerequisite: SCAN 102 or consent of instructor.

SCAN 104 Intermediate Scandinavian II credit: 4 Hours.
Fourth course in the Scandinavian language sequence (usually Swedish). Emphasis is on close reading, translation and analysis of authentic texts, such as novels and drama in the target language. Instruction is by immersion. Prerequisite: SCAN 103 or consent of instructor.

SCAN 110 Intensive Intermediate Scan credit: 4 Hours.
Intensive course in a Scandinavian language (usually Swedish) that emphasizes development of reading and writing skills. Focus of class discussions and activities is the study of authentic texts, audio and/or visual media. Instruction is by immersion. May be repeated in the same or separate term up to 8 hours. Prerequisite: SCAN 102 or equivalent or consent of instructor.

SCAN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

SCAN 215 Madness, Myth, and Murder credit: 3 Hours.
Focuses on the achievements of major Scandinavian writers of prose fiction, from 1850 to today. Explores topics of madness, myth, and murder in literature. All reading, discussion, and writing in English. Same as CWL 215.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts

SCAN 225 Vikings to Volvos: Scandinavia credit: 3 Hours.
An introduction to the history, literature, and culture of Scandinavia and the Nordic region, from the Viking age until the modern era (700s-present). Includes discussion of Denmark, Norway, Sweden, Finland, Iceland, Faroe Islands, Svalbard, and Greenland. All readings in English. Same as HIST 254.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SCAN 240 Arctic Narratives credit: 3 Hours.
Study of the Arctic, its peoples and cultures, as imagined in literature, art, history, media and film. This course makes cross-cultural comparisons with accounts by indigenous people and Scandinavian, American, and European visitors to or settlers in to the Arctic. This course includes emphasis on environmental, colonial, and social aspects from theoretical and historical perspectives. Same as CWL 282, EURO 240. See SCAN 240.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SCAN 251 Viking Mythology credit: 3 Hours.
Studies pre-Christian beliefs of the Germanic peoples as reflected primarily in medieval Icelandic prose and poetry (in translation). Same as CWL 251, MDVL 251, and REL 251.
This course satisfies the General Education Criteria for:
Humanities - Hist Phil
Cultural Studies - Western

SCAN 252 Viking Sagas in Translation credit: 3 Hours.
Studies Old Norse-Icelandic literature: kings' sagas, family sagas, mythical-heroic sagas, and romances. Texts and lectures in English. Same as CWL 252 and MDVL 252.
This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

SCAN 305 Old Norse - Icelandic I credit: 3 Hours.
Provides a solid proficiency in reading texts in Old Norse, the language of the Viking sagas and mythology. Prerequisite: Any SCAN course or knowledge or one other foreign language.

SCAN 306 Old Norse - Icelandic II credit: 3 Hours.
Assumes general competence in reading Old Norse. Readings and exploration of a wide assortment of essential text in the original language. Prerequisite: SCAN 305 or consent of instructor.

SCAN 376 Children and Youth Literature credit: 3 Hours.

Explores the understanding of childhood and youth in Scandinavia, with comparative focus on the US and the UK through children's literature and classic accounts of childhood in fiction, film, and related media. Will investigate how childhood is construed in books self-described as children's literature as well as in adult-audience fiction and memoirs; and how representations of childhood correlate with evolving ideas about family formation, child-rearing, the welfare state, and education in twentieth- and twenty-first century Scandinavia. This is put in comparative context with British and/or US children's literature. Same as CWL 376, EURO 376, and GWS 376. Credit is not given for both SCAN 376 and SCAN 576.

SCAN 386 Arctic Environmt & Society credit: 6 Hours.

Same as ESE 386 and GLBL 386. See GLBL 386.

SCAN 463 Modern Scandinavian Drama credit: 3 or 4 Hours.

Thematic and conceptual study of the Scandinavian dramatic tradition, from the late-nineteenth century classics of Henrik Ibsen and August Strindberg, to mid-century intermediality in works by Ingmar Bergman, and to hyperrealism, postmodernism, and digital performativity by contemporary playwrights. Interpretive contexts include text-image studies, performativity, socio-cultural aspects of the Nordic region, theatre and production history, and gender and sexuality studies. Same as CWL 463 and THEA 483. 3 undergraduate hours. 4 graduate hours. Prerequisite: One college-level literature or theatre course, or consent of instructor.

SCAN 470 Imagining the Welfare State credit: 3 or 4 Hours.

Investigate conceptions of the Nordic and West-European welfare state from the early twentieth-century to today from critical interpretive, historical, and cultural studies perspectives. Building on close analysis of influential works in literature, film, arts, and architecture from primarily Denmark, Sweden, and Norway, the course will address historical factors and characteristics of the socio-cultural imaginary surrounding the rise and, some argue, subsequent dismantling of the Nordic welfare state. Same as CWL 470 and EURO 470. 3 undergraduate hours. 4 graduate hours. Prerequisite: At least one course in literature, film, or the arts; or consent of the instructor.

SCAN 472 Kierkegaard and the Self credit: 3 or 4 Hours.

Soren Kierkegaard is an early author who wrestled with the concept of the individual self and championed subjective experience as a counterbalance to objective rationalism. Students in this seminar-style course will gain extensive familiarity with Kierkegaard's major works, as well as how they relate to two currents in 19th century society, existentialism and pietism. These works will be evaluated within their particular Nordic literary context, through critical analysis of related novels, plays and films by Andersen, Ibsen, Bremer, Strindberg, Lagerlof, Blixen, and Bergman (readings in English translation). Same as CWL 472, PHIL 472, and REL 472. 3 undergraduate hours. 4 graduate hours.

SCAN 490 Green Screen: Film and Nature credit: 3 or 4 Hours.

Provides a thorough examination of documentary and feature film in relation to the natural environment, sustainability studies, ecocriticism, and landscape representation especially in the Scandinavian film tradition. Incorporates theory, film culture and production analysis, and thematic interpretation. Films by Victor Sjostrom, Ingmar Bergman, Mai Zetterling, Lars von Trier, Susanne Bier, Jan Troell, and others. Same as EURO 489 and MACS 490. 3 undergraduate hours. 4 graduate hours.

SCAN 492 Scandinavian Cinema credit: 3 or 4 Hours.

Covers major directors, traditions, genres, themes, and production and distribution contexts of Scandinavian cinema and media industries. Addressing early cinema, fiction feature, documentary, shorts, experimental, and new and emergent artistic forms, the course will provide students with an in depth understanding of the rich culture of Scandinavian cinema since its inception. Same as MACS 492. 3 undergraduate hours. 4 graduate hours.

SCAN 493 Honors Senior Thesis credit: 2 to 4 Hours.

2 to 4 undergraduate hours. No graduate credit. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; consent of instructor.

SCAN 494 Topics in Scan Languages credit: 1 to 4 Hours.

Advanced Scandinavian languages instruction. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms to a maximum of 9 undergraduate or 9 graduate hours if topics vary. Prerequisite: SCAN 104 or equivalent as approved by instructor.

SCAN 496 Special Topics in Scan Studies credit: 1 to 4 Hours.

Individual study in selected topics, such as individual authors, literary movements, periods, genres, or themes, and Scandinavian culture. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated. Prerequisite: Consent of instructor.

SCAN 505 Old Norse-Icelandic I credit: 4 Hours.

Grammar and selected readings. Same as MDVL 505. Offered in alternate years.

SCAN 506 Old Norse-Icelandic II credit: 4 Hours.

Readings; selections from the Elder Edda and the sagas. Same as MDVL 506. Offered in alternate years. Prerequisite: SCAN 505.

SCAN 576 Children and Youth Literature credit: 4 Hours.

Explores the understanding and youth in Scandinavia, with comparative focus on the US and the UK, through children's literature and classic accounts of childhood in fiction, film and related media. Will investigate how childhood is construed in books self-described as children's literature as well as in adult-audience fiction and memoirs; and how representations of childhood correlate with evolving ideas about family formation, child-rearing, the welfare state, and education in twentieth- and twenty-first century Scandinavia. This is put in comparative context with British and/or US children's literature and society. Same as CWL 586, EURO 576, and GWS 576. 4 graduate hours. No professional credit.

SCAN 593 Research in Special Topics credit: 1 to 8 Hours.

Research seminar or research topic. Content varies in consultation with instructor. May be repeated in separate terms to a maximum of 8 hours.

Second Language Studies (SLS)

SLS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SLS>)

Courses

SLS 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, ITAL 460, PORT 460, and SPAN 460. See EIL 460.

SLS 580 Classroom Lang Acquisition credit: 4 Hours.

Same as EIL 580, FR 580, GER 580, ITAL 580, PORT 580, and SPAN 580. See SPAN 580.

Slavic (SLAV)

SLAV Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SLAV>)

Courses

SLAV 117 Russ & E Euro Science Fiction credit: 3 Hours.

Survey of the science fiction writing of Russia and the countries of Eastern Europe since 1750, with particular emphasis on the post-World War II period. The role of the Science Fiction tradition in the respective national cultures. The influence on Russian and East European Science Fiction of Anglo-American Science Fiction. All readings are in English. Same as CWL 117.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

SLAV 120 Russian & E Euro Folktales credit: 3 Hours.

Introduction to Russian and East European folktales, focusing on folk beliefs, fairy tales, and folk narratives in Slavic languages from a comparative perspective, with an emphasis on methods of analysis and the role of gender.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

SLAV 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

SLAV 277 Slavic Literature Survey credit: 3 Hours.

Examines masterpieces of Czech, Polish, and Yugoslav literatures from medieval times to the present in English translation. Representative works are by Capek, Kundera, Mickiewicz, Milosz, Andric and others. Attention given to the European context and national traditions. Same as CWL 277. Prerequisite: One course in Slavic literature.

SLAV 399 Advanced Undergraduate Open Seminar credit: 1 to 5 Hours.

Topics will vary. May be repeated, if topics vary.

SLAV 417 11th-17thC Russ Lit & Lang credit: 3 or 4 Hours.

Historical grammar, origin, and development of the East Slavic/Russian literary language, survey of literary genres of Old Russian Literature. 3 undergraduate hours. 4 graduate hours. Credit is not given for both SLAV 417 and RUSS 517. Prerequisite: Graduate standing; for undergraduates, completion of or placement beyond RUSS 301-RUSS 302; or, consent of instructor.

SLAV 418 Language&Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, PS 418, and SPAN 418. See FR 418.

SLAV 419 Russian & East European Film credit: 3 or 4 Hours.

Study and analysis of major film makers, genres, trends, and theories, including the 1920's Soviet avant garde and the Polish and Czech "New Wave" since 1953; lectures, discussions, screenings, term paper. No reading knowledge of Russian required, except for majors in Slavic Languages and Literatures. Same as MACS 419. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: RUSS 219; or a college level course REES or in CINE; or consent of instructor.

SLAV 420 Jewish Life-Writing credit: 3 or 4 Hours.

Same as CWL 421, HIST 436, REL 420, and YDSH 420. See YDSH 420.

SLAV 430 History of Translation credit: 3 or 4 Hours.

Study of the historical development of translation ideas and practices in Europe and in particular cases across major global regions. Reading and analysis of key texts in the development of translation theory and case studies of practices and roles played by translation in different periods and geographical regions. Same as CLCV 430, CWL 430, ENGL 486, GER 405, SPAN 436, and TRST 431. 3 undergraduate hours. 4 graduate hours.

SLAV 452 Slavic Cultural Studies credit: 3 or 4 Hours.

Selected topics in the literatures of Russia and Eastern Europe.

Topics covered will range from in-depth studies of specific authors, time periods, and thematic discussions of specific genre and literary traditions. Readings in English unless specified. Same as CWL 453.

3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours in same term; or 9 undergraduate hours or 12 graduate hours in separate terms.

Prerequisite: Two years of literature, preferably Russian or East European; or consent of instructor.

SLAV 477 Post-Communist Fiction credit: 3 or 4 Hours.

Survey of the central and east European novel in the postcommunist period. Explores how fiction has responded to and creatively figured the period of the so-called "transition" to capitalism and the continuities and discontinuities in literary traditions in these societies, as well as the relevance of theories of postmodernism and postmodern literary analysis to these literatures. Same as CWL 477 and REES 477. 3 undergraduate hours. 4 graduate hours. Prerequisite: Two courses in Slavic literature including one at the 300-level or consent of the instructor.

SLAV 480 Intro to Slavic Linguistics credit: 3 or 4 Hours.

The development of Common Slavic from Indo-European and its relationship to contemporary Slavic languages. Same as LING 480. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Knowledge of a Slavic language.

SLAV 505 Old Church Slavonic credit: 4 Hours.

Analysis of grammar and reading of texts. Prerequisite: Knowledge of a Slavic language.

SLAV 525 Problems in Slavic Literature credit: 4 Hours.

Selected subjects in Russian and Slavic prose, poetry, drama, and literary criticism. Topics vary. May be repeated to a maximum of 12 hours.

SLAV 576 Methods in Slavic Grad Study credit: 4 Hours.

Comparative, interdisciplinary methods and theoretical issues crucial to studies in Slavic literature, history, and culture. Theoretical bookshelf followed by specific case studies from Slavic. Same as CWL 576. May be repeated to a maximum of 8 hours as topics vary.

SLAV 577 Slavic Languages Pedagogy Seminar credit: 2 Hours.

Seminar for graduate students who are currently teaching (or preparing to teach) languages in the Department of Slavic Languages and Literatures. The seminar will help participants develop expertise in language pedagogy by discussing both theoretical and practical aspects of teaching and learning and by adopting a hands-on approach to communicative language teaching through micro-teaching, classroom presentations, discussion, self-reflection, and peer-reviewing. 2 graduate hours. No professional credit. May be repeated to a maximum of 4 graduate hours if topics vary. Prerequisite: Enrollment restricted to Department of Slavic Languages and Literatures Graduate Students.

SLAV 591 Individual Topics credit: 1 to 8 Hours.

May be repeated. Prerequisite: Graduate standing with a major or minor in Russian; consent of department.

SLAV 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Social Work (SOCW)

SOCW Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SOCW>)

Courses

SOCW 101 SOCW Orientation Seminar credit: 2 Hours.

Informational orientation seminar for Social Work majors to enhance their understanding of college life and social work as a profession.

SOCW 199 Undergraduate Open Seminar credit: 1 to 4 Hours.

Approved for letter and S/U grading. May be repeated.

SOCW 200 Introduction to Social Work credit: 3 Hours.

Broad survey of the field of social work; introduction to social services, social welfare organizations, major social problems and target population groups, and the methods used in working with individuals, groups, and communities; includes the range of personnel and skills in social work agencies, and the means of education and training for social work professionals.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOCW 225 Intro Stat for Social Work credit: 3 Hours.

Introduction of basic concepts in statistics with emphasis on the application of statistical methods in social work research. Topics include: descriptive statistics, probability theory and distributions, point and interval estimation, hypothesis testing, central tendency, variability, independence, contrasts, correlation and regression, non-parametrics, concepts of levels of measurements, and statistical vs. practical significance. Priority will be given to Social Work majors. Credit is not given for SOCW 225 if credit for a college level introductory statistics course has already been earned.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

SOCW 240 Death & Dying credit: 3 Hours.

This course will focus on various aspects of death and dying. Content will examine different types of death, impact of death throughout the lifespan, cultural beliefs and practices regarding death and dying, grief, healing after loss, legal and ethical issues related to death, and the role of social workers at the end of life. Students will be encouraged to examine their own thoughts, values, feeling, and beliefs about death and dying.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOCW 297 Asian Families in America credit: 3 Hours.

Offers a comparative analysis of Asian families as they cope and adapt to American society. Examines: 1) how families from four major Asian-American groups (Chinese, Indian, Japanese and Korean) function in American society; 2) how these families compare to families in their country of origin; and 3) how these families are similar to or different from the 'typical American' family. Includes visits to Asian cultural institutions and with Asian families. Same as AAS 297 and HDFS 221.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - US Minority

SOCW 298 Social Work Experiential Learning Fees credit: 0 Hours.

This is a shell course to assess fees to support the cost of providing student learning experiences in social work practice settings. Additional fees may apply. See Class Schedule. Approved for S/U grading only. Prerequisite: The SOCW Admissions and Records Officer will manually add this course to student schedules.

SOCW 299 Study Abroad credit: 0 to 18 Hours.

Lectures, seminars, and practical work in an approved study-abroad program in Social Work appropriate to the student's course of study. Approved for letter and S/U grading.

SOCW 300 Diversity: Identities & Issues credit: 3 Hours.

This introductory course explores multiple dimensions of diversity in a pluralistic and increasingly globalized society. Using a social work strengths perspective as well as historical, constructivist, and critical conceptual frameworks; the course examines issues of identity, culture, privilege stigma, prejudice, and discrimination. The social construction and implications of race, class, gender, sexual orientation, and other dimensions of difference is examined at individual, interpersonal, and systems levels. Students are expected to use the course material to explore their personal values, biases, family backgrounds, culture, and formative experiences in order to deepen their self-awareness and develop interpersonal skills in bridging differences. Finally, students apply learning from the course to identify characteristics of effective social work and other health and human service provision among people culturally different themselves; and to identify opportunities for change contributing to prejudice reduction and cross-cultural acceptance at home, work and in society.

This course satisfies the General Education Criteria for:
Advanced Composition
Cultural Studies - US Minority

SOCW 310 UG Research Assistance credit: 0 to 3 Hours.

Assist departmental faculty in on-going research. Topics and nature of assistance vary. Capstone paper required. Approved for Letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Majors only.

SOCW 315 Social Work Services for Older Adults credit: 3 Hours.

Focus on the aging process, special needs of older adults, and the role of social work in addressing these needs. All levels of social work intervention are considered, direct practice with older persons and their families, service delivery systems in local communities, and state and national policies. Special attention is given to the needs of caregivers, person-centered care, diverse vulnerable populations and resources for older adults to age in place.

SOCW 321 Social Entre & Social Change credit: 3 Hours.

Intended for undergraduates who have an interest in creating programs and products that have social values for communities. Features social entrepreneurship as an approach to social development and will consider its application and related change strategies to a wide array of social problems. Social entrepreneurship has emerged as a change approach that features the application of entrepreneurial practices to social ventures. Social entrepreneurship is similar to business entrepreneurship in its emphasis on selected program development and management principles and processes, but social entrepreneurs have the primary goal of creating social value in communities rather than personal or shareholder wealth. The initial part of the class will emphasize instructing students in broad concepts and principles related to entrepreneurship, while the latter portion of the course will feature students working on teams to design social projects.

SOCW 325 International Development with Grassroots Organizations credit: 3 Hours.

This course engages students to think critically about international aid and development by cultivating an awareness of moral and ethical dilemmas that often go unconsidered by young professionals. It intends to help students develop greater cultural awareness and humility by recognizing differences in equity and global social, economic, and political structures. The course is a second eight-week offering and uses a blended learning approach with asynchronous online content combined with in-person classroom educational activities. Students apply the knowledge learned through the course by working directly with an international grassroots social organization during a 4-8 week immersion experience abroad. Course is an 8 week pre-departure training is required. Students complete a service learning placement in summer with an international grassroots organization.

SOCW 330 International Perspectives credit: 3 to 6 Hours.

This course provides cross-cultural learning experiences within the context of international community-based service learning. Students will explore human service delivery through direct involvement with international social service institutions. This cultural immersion course is a collaborative partnership between the University of Illinois School of Social Work and selected international universities. Countries visited, varies by semester. May be repeated in separate terms up to 12 undergrad hours if topics vary.

SOCW 335 Cities and Immigrants credit: 3 Hours.

Same as UP 335. See UP 335.

SOCW 350 Health Promotion Practicum credit: 3 Hours.

Same as CHLH 340. See CHLH 340.

SOCW 360 Social Work and the Military credit: 3 Hours.

This course provides an overview of military social work practice including: military culture, issues and needs of soldiers and their families, ethical considerations, and the roll of social workers. Prerequisite: For majors only.

SOCW 380 Current Topics in Social Work credit: 3 to 6 Hours.

Presents and analyzes special topics related to current social work practice, policy and research. Topics vary; see Class Schedule for current offering. May be repeated in the same or separate terms.

SOCW 400 Generalist SW Practice Methods credit: 4 Hours.

Foundation methods course that is a prerequisite for all advanced methods courses. Overview of generalist social work practice and intervention with individuals, groups, organizations and communities; introduction to core concepts, value base and ethical principles of the profession. Emphasis is given to the bio-ecological framework, person-in-environment and systems theory. Skills in developing beginning professional relationships are addressed via a skills lab component. Students begin the process of professional self-awareness to begin to identify how the personal values and beliefs they hold impact upon their interactions. 4 undergraduate hours. 4 graduate hours. Prerequisite: Admission to MSW program.

SOCW 401 Practice I credit: 4 Hours.

Overview of generalist social work practice with individuals, families, groups, organizations, and communities. Designed to introduce core concepts, values, and ethical principles of the profession as well as to provide basic skills, and knowledge related to generalist social work practice with a broad array of client systems. Emphasis is give to the biological-psychological-social-spiritual framework, person-in-environment, strengths perspective, and system theory. Skills in developing beginning professional relationships, which are characterized by mutuality, collaboration, empowerment, and client self determination within the problem-solving process are addressed. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 200.

SOCW 402 Practice II credit: 3 Hours.

Provides students with culturally responsive, micro-level skills development for working with and on behalf of individuals, families, and groups. Builds on the basic helping skills learned in SOCW 401 and offers further practice on interviewing skills, more emphasis on ethical decision-making, assessment, and intervention, evaluation applied to individuals, families, and groups. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 403 Practice III credit: 3 Hours.

Provides knowledge and skills about the theory and practice of planned change in communities and organizations using a generalist model of social work practice. Builds on the foundation knowledge and skills gained in SOCW 401 with emphasis on assessment, planning, intervention, and evaluation skills for macro-level practice. 3 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 410 Social Welfare Pol and Svcs credit: 3 or 4 Hours.

Examination of social welfare within a historical context, addressing the economic, political, social and ideological influences that have shaped the social welfare system and programs. Critical study of the income maintenance system in the United States as a response to the problems of inequality of opportunity and income, poverty, and income security; consideration of alternative approaches with discussion of the social worker's role in the system. 3 undergraduate hours. 4 graduate hours.

SOCW 412 Hispanics in the U.S. credit: 3 or 4 Hours.

Hispanics constitute a growing population in the United States. The size and heterogeneity of Hispanics raises complex issues in crafting public policy and in designing and delivering social services. This course offers an extensive portrait of Hispanics in the United States. Students will explore questions and demographic characteristics, language and religious practices, education, criminal justice, neighborhood and economic restructuring, immigration, social service systems, and community action in the context of creating an effective public policy agenda. Same as LLS 412. 3 or 4 undergraduate hours. 3 or 4 graduate hours.

SOCW 416 Child Welfare Issues & Trends credit: 3 or 4 Hours.

This course examines theoretical and programmatic aspects for child welfare practice. Emphasis is placed on the roles and functions of child welfare workers, including engagement, assessment, intervention and permanency planning. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOCW major.

SOCW 417 Dementia Care for Older Adults credit: 3 or 4 Hours.

This course will equip students with a body of knowledge to supervise, participate in, and facilitate care for persons with dementia throughout the lifespan. Upon completion of the course, students will be eligible for certification as approved dementia trained practitioners. The course will introduce and develop social work practice skills on all levels and choices of dementia care interventions and assessments. Special attention is given to practice skills for working with vulnerable populations and their caregivers through service learning site opportunities and assignments. The course uses an integrated health and person-center care approach with special attention to multi-cultural backgrounds and new family lifestyles related to dementia care. 3 undergraduate hours. 4 graduate hours. Prerequisite: Prior completion of SOCW 315 or other Introduction to Aging course is strongly recommended. BSW majors and MSW students only.

SOCW 418 Independent Study credit: 1 to 4 Hours.

Independent study of a topic of special interest in the field of social work. 1 to 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

SOCW 420 Subst Use in Social Context credit: 3 Hours.

Introduces students to the problem of substance abuse and its impact on society. Examines the physiological, psychological, social, and cultural aspects of substance abuse. At the individual and familial levels, the course examines the causes, development, prevention, and treatment of substance abuse. At the societal level, the course examines public policy efforts to regular and control substance use from both historical and contemporary perspective. Implications for social and economic justice are also examined. 3 undergraduate hours. No graduate credit.

SOCW 427 Social Work Research Methods credit: 3 or 4 Hours.

Basic principles of social science research and importance for social work practice: overview of research principles including the stages of a research project, design of research; quantitative and qualitative methodologies, design of questionnaires, methods of data collection and preparation of reports. Introduction to various research designs such as the survey, program evaluation, single subject design, quasi-experiments, and experimental design. Enrollment preference given to students in the MSW program. 3 undergraduate hours. 4 graduate hours.

SOCW 436 Intl SW & Development credit: 3 or 4 Hours.

This online course introduces students to policy and practice issues associated with international social work. It emphasizes ethical dilemmas, with the goal of sensitizing students to the importance of culturally sensitive practice for marginalized populations in global contexts. Weekly online discussion sessions use the Blackboard Online Platform. Students must have high speed internet connection and headset with microphone for course interaction. 3 undergraduate hours. 4 graduate hours.

SOCW 451 HBSE I: Human Development credit: 3 or 4 Hours.

Examination of the major theories that inform social work's understanding of human behavior in a variety of social contexts. A bio-ecological systems framework, together with a developmental approach in understanding the ways in which individuals, families, groups, organizations, institutions, and communities interact, is presented. Issues of gender, race, ethnicity, socioeconomic status, disability and sexual orientation are introduced so students can gain understanding of how these components affect and influence development across the lifespan. Enrollment preference given to students in the MSW program. 3 undergraduate hours. 4 graduate hours.

SOCW 455 Social Work with Women credit: 3 or 4 Hours.

Focuses on women and now cultural belief systems related to gender are instantiated through the differential treatment of females and males in our education, mental health, social welfare and health care systems; and the consequences of such practices through the lifespan. Includes consideration of policies and practices that support women emphasizing issues of special concern to women of color, lesbians, older women, impoverished women and disabled women. Same as GWS 454. 3 undergraduate hours. 4 graduate hours.

SOCW 457 Health Planning credit: 3 Hours.

Same as CHLH 457. See CHLH 457.

SOCW 461 Professional Practice Seminar I credit: 4 Hours.

The goal of this course is to begin the process of integrating all the foundation knowledge of generalist social work that students have learned and begin applying it to real life situations. Students will complete a portfolio and a service learning experience that will help them being to make the connection between the core competencies, theories and applications to real life experiences. During this course students will begin the process of being matched with the agency where they will serve their internship during the last semester of their senior year. 4 undergraduate hours. No graduate credit. Prerequisite: SOCW 401.

SOCW 470 Field Practicum & Professional Seminar II credit: 15 Hours.

This course is a supervised field practice experience and seminar where students apply knowledge and skills in social work engagement, assessment, planning and interventions to individuals, groups, families, organizations, and communities. Students are expected to promote sustainable social change through planned problem solving and empowerment to enhance the well-being of others. The practicum consists of 32 hours/week for 16 weeks. 15 undergraduate hours. No graduate credit. May be repeated; instructor approval required. Prerequisite: SOCW 461. SOCW majors only.

SOCW 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as CHLH 473, LLS 473, and SOC 473. See LLS 473.

SOCW 475 Undergraduate Research Abroad credit: 1 to 4 Hours.

Students assist in research under faculty supervision at a location outside of the United States. Topics and type of assistance vary. 1 to 4 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work (who will have examined the proposed research plan); and approval of department. Not available to freshman.

SOCW 480 UG Research Project credit: 0 to 3 Hours.

Conduct research study under the supervision of a departmental faculty member. Topics and nature of assistance vary. Capstone paper required. 0 to 3 undergraduate hours. No graduate credit. Approved for letter and S/U grading. May be repeated in separate terms up to 6 hours. Prerequisite: Evidence of adequate preparation for such study; consent of faculty member supervising the work; and approval of the department head. Majors only. Not available to freshman and sophomores.

SOCW 500 SW Practice with Indiv and Fam credit: 4 Hours.

Systematically and critically examines the theory, procedures, and techniques of selected practice models within four main approaches to social work: cognitive-behavioral, systemic (family and ecological systems; crisis intervention), task-centered, and radical-structural (structural; feminist). Uses selected criteria to analyze and assess those models, examines outcome research, and identifies current practice issues. Prerequisite: SOCW 400.

SOCW 501 SW Practice with Groups credit: 4 Hours.

Social work practice theory in social group work through comparative study of various practice approaches and research about those approaches, including the use of group work method in contemporary social work practice, practice principles, and the use of group process as applied in the student's area of specialization. Looks at group work for children, adolescents, and adults considering developmental and environmental issues; also includes investigation of practice strategies and models of group therapy and task group leadership across diverse populations. Prerequisite: SOCW 400.

SOCW 502 Brief Motivational Interventions for Substance Use credit: 4 Hours.

This course prepares social workers to deliver brief interventions that build motivation for change among individuals that use substances. Students participate in hands-on skill development activities for two empirically supported treatments, Screening Brief Intervention and Referral to Treatment (SBIRT) and Motivational Interviewing. Students are expected to reach beginning competency in delivering these two clinical models. 4 graduate hours. No professional credit. Prerequisite: SOCW 400. MSW: Social Work - UIUC.

SOCW 503 Trauma Informed Social Work with Children and Adolescents credit: 4 Hours.

This course uses a case study and inquiry based approach to foster student learning of the core concepts of trauma (theory and foundational knowledge) and evidence-based practice interventions effective in treating children, youth, and families that experience trauma. Cases discussed include children, youth, and families exposed to traumatic events (i.e. abuse, neglect, domestic violence, community violence and natural disasters). Strength-based practice interventions that build on existing child and family strengths that enhance growth and resiliency after trauma are studied. Prerequisite: SOCW 400.

SOCW 504 SUD Treatment in S W credit: 4 Hours.

Introduces selected counseling approaches for substance use disorders. Begins with an overview of the causes of substance use disorders, assessment, diagnosis, and treatment planning. Focuses on treatment theories and techniques applied to counseling substance abusers. Selected theories include 12 Step approaches, cognitive and behavioral theories, family systems theory, harm reduction, and motivational interviewing. Special attention is devoted to apply substance abuse treatment models with diverse populations. Prerequisite: SOCW 400.

SOCW 505 Behav and Cogn Methods for SW credit: 4 Hours.

Students are introduced to brief behavioral and cognitive methods for treating a wide range of human problems, crises, and mental disorders. Content includes: (1) conceptualizing and assessing client problems; (2) identifying appropriate treatment goals; (3) developing comprehensive and differential treatment plans; (4) conducting brief interventions; and (5) evaluating client outcomes using research, consultation, and supervision. Prerequisite: SOCW 400.

SOCW 506 SW Practice with Child/Adol credit: 4 Hours.

Examination and critical evaluation of selected methods/approaches of intervention; research on their effectiveness and application to specific problems of children and adolescents that come to the attention of social workers and other helping professionals; attention given to remediation and prevention. The course provides opportunities for students to develop skills through participation in a service learning project. Prerequisite: SOCW 400.

SOCW 507 School Social Work Practice credit: 4 Hours.

Examination of the design and delivery of school social work interventions with special emphasis given to students with physical/mental disabilities and vulnerable populations. Course content provides a foundation for the development of a comprehensive and in-depth understanding of an ecological systems approach to social work practice based upon a foundation of professional values and ethics. Prerequisite: SOCW 400.

SOCW 508 Family Therapy Seminar credit: 4 Hours.

Advanced seminar providing in-depth exposure to the principles, values, ethics, issues and practice of family therapy in social work. Focuses on family therapy process, the practitioner role, issues in assessment, intervention and evaluation; how discrimination and oppression impact intervention strategies; skills that advance social and economic justice; presentation of cases; use of supervision and consultation, and family therapy with diverse populations. Combines lecture/discussion with taped observations of noted family therapists and participation in a family therapy practicum. Prerequisite: SOCW 400.

SOCW 509 Adv Clin Assess & Interviewing credit: 4 Hours.

Advanced practice class designed to enhance students' understanding of clinical assessment and interviewing methods. Includes methods for therapeutically intervening with clients who are highly distressed, angry or agitated, resistant or involuntarily mandated for treatment, experiencing severe symptoms, or who have unique and complex problems. Clinical interviewing skills taught in this class will build upon knowledge and skills acquired in previous direct practice classes. Prerequisite: SOCW 400 and SOCW 552.

SOCW 513 Delivery of Health Care credit: 4 Hours.

Delivery of health care in the United States is examined from a multidisciplinary perspective including social, cultural, political, economic, ethical and legal issues. Health care services are described in relation to various definitions of health, health status and access to care. Current problems and issues in health care including government responsibility and source of authority, policy development and analysis, proposals for reforms, and financing and cost containment are discussed and analyzed. Prerequisite: Admission to MSW program or consent of instructor.

SOCW 514 Mental Health Pol and Svcs credit: 4 Hours.

Examination of comprehensive community mental health services as they evolve from definitions of the problems and changes in federal and state social policy; the concept of normalization and its criteria for program evaluation; and changing roles of mental health professionals, paraprofessionals, and consumers in policy making and service delivery. Presents the history of mental health policy and services in the U.S.; current policies and activities of the mental health delivery system are critically analyzed. Prerequisite: SOCW 410.

SOCW 515 Integrated Health Care Policy and Services credit: 4 Hours.

Integrated Health Care Policy and Services is examined from a multidisciplinary perspective including social, cultural, political, economic, ethical and legal issues. Integrated health care services are described in relation to various definitions of health and mental health conditions and access to care. Current problems and issues in integrated health care including government responsibility and source of authority, policy development and analysis, proposals for reforms, and financing and cost containment are discussed and analyzed. 4 graduate hours. No professional credit. Prerequisite: Admission to MSW program or consent of instructor. Restricted to those in the MSW and iMSW program.

SOCW 516 Child, Youth and Family Svcs credit: 4 Hours.

Examines a range of direct service and public policy issues that social workers encounter when working with vulnerable children, adolescents, and families. Focuses particular attention on the families involved with child protection. Addresses the following questions: What factors help explain the etiology of violence and neglect in the family home? Once vulnerable families are identified and become involved with social service agencies, what interventions are most effective with regard to decreasing risks and strengthening protective factors? How can social service systems best prepare vulnerable adolescent for the transition to adulthood? Prerequisite: SOCW 410.

SOCW 519 Public School Policy/Services credit: 4 Hours.

Presents content on children with physical and mental disabilities, educational policies related to vulnerable populations, and federal and state legislation, with particular emphasis given to the Individuals with Disabilities Act (IDEA). The following topics are highlighted: eligibility requirements, general characteristics of the disabling conditions, education as a continuum from early childhood to adulthood, school finance, and current educational issues. Content is presented pertaining to meeting the needs of exceptional children, students with other special needs, and their families in public schools and the community. Prerequisite: SOCW 410.

SOCW 520 Social Welfare Planning credit: 4 Hours.

Introduces students to the theory and practice of social welfare planning. The course is designed to help students apply concepts and methods to their specific social work fields of interest. Content includes a review of policy analysis, needs assessment, establishing goals and objectives, program design, budgeting, management information systems, and program evaluation. Prerequisite: Admission to MSW program or consent of instructor.

SOCW 521 Leadership and Social Change credit: 4 Hours.

Introduces MSW students to a broad range of strategies for creating social change. Several overarching concepts that are useful in undertaking a wide range of social change efforts are introduced. These concepts are applied to different change strategies. This includes attention to the role of leadership in social change, as the quality of leadership is critical to the success of most social change efforts. The importance of policy or social entrepreneurs in creating social change will also be examined. These entrepreneurs play critical roles by both identifying and implementing new ideas and by diffusing them on a wider scale after initial experimentation. Finally, social workers often tend to be uninformed about sound business practices as they engage in social change efforts, yet knowledge of basic business concepts can be critical to the success or failure of a social venture. Therefore, the course addresses issues such as opportunity recognition and risk assessment, sustainability and scalability of projects, and attention to both fiscal management and outcome accountability. Prerequisite: SOCW 400 or by consent of instructor for non Social Work majors.

SOCW 522 SW Practice with Communities credit: 4 Hours.

Examines principles and methods that characterize identifiable approaches used in community organization practice at neighborhood, community, state, and other levels. This course is an in-depth study of how citizens can organize. Questions discussed include: What institutions aid communities in their organizing and self-improvement efforts? What circumstances encourage the erosion of civil society, civic involvement, and community institutions? What role should the social worker and the human service or social service agency play in organizing communities? Prerequisite: SOCW 400.

SOCW 525 Supervision/Staff Development credit: 4 Hours.

Course focuses on the acquisition of the essential knowledge and skills needed to work with people to achieve desired client outcomes. Includes management and organizational theories, and research and theory regarding the practice of supervision. Addresses understanding of the agency context and purposes, interpersonal insights and skills, the importance of procedural and technical expertise, communication skills, mastery of the functions of management and leadership ability. Examines supervisory process in terms of interpersonal sensitivity and interaction skills including influence techniques. Prerequisite: Admission to MSW program or consent of instructor.

SOCW 526 Managing Human Service Orgs credit: 4 Hours.

Focus on the design, administration and management of social programs from a social work perspective. Content includes: principles and process of administration and management, history of social welfare administration and how this relates to the design of current programs, review of administration Organizational and leadership theories, policy formulation, agency structure, staff organization, budgeting and evaluation of management practice. Prerequisite: SOCW 400 or by consent of instructor for non Social Work majors.

SOCW 531 Field Practicum and Integrative Seminar I credit: 8 to 12 Hours.

This course is comprised of a field practicum and integrative seminar. The field practicum is educationally directed and supervised by an approved field instructor. The seminar component assists students with the integration of knowledge, skills, values and attitudes of social work practice acquired in the classroom with the hands-on practice experience in the field practicum setting. Learning experiences emphasize the application of knowledge and practice in the areas of ethical and professional behavior, diversity and difference, human rights and social, economic and environmental justice, research informed practice, policy practice, and engagement, assessment, intervention and evaluation with individuals, families, groups, organizations and communities. 8 to 12 graduate hours. No professional credit. May be repeated in separate terms.

SOCW 532 Practice Evaluation credit: 4 Hours.

Examines program evaluation and quality management in the social work setting. Focuses on evaluation of social work practice within service delivery organizations. Students learn to define practice problems; operationalize goals and objectives; develop hypotheses; describe and analyze interventions; critique organizational practices; utilize outcome evaluation measurements in relation to policy and practices, and review and summarize literature. Students are expected to describe, analyze, and evaluate core elements of an agency's delivery system. Prerequisite: SOCW 531; concurrent registration in SOCW 569.

SOCW 533 Field Practicum III credit: 4 to 6 Hours.

This course is for students completing a part-time field practicum and is the final semester of the practicum experience. Learning is directed at the development and demonstration of advanced competency skills. The field practicum is educationally directed and supervised by an approved field instructor. The advanced learning experiences emphasize the application of knowledge and practice in the areas of ethical and professional behavior, diversity and difference, human rights and social, economic and environmental justice, research informed practice, policy practice, and engagement, assessment, intervention and evaluation with individuals, families, groups, organizations and communities. 4 to 6 graduate hours. No professional credit. May be repeated in separate terms. Prerequisite: Successful completion of SOCW 532. Restricted to Master of Social Work students.

SOCW 535 Local Policy & Immigration credit: 4 Hours.

Same as LA 535 and UP 535. See UP 535.

SOCW 541 Clinical Research Seminar credit: 4 Hours.

Develops skills for assessing effectiveness of social work interventions using research methods. The course assumes students have had prior courses in research methods and statistical analysis. Building on these courses, this course will focus on the use of research methods in examining important aspects of social work interventions. Students will also develop skills necessary to evaluate social work research practice and practice evidence, as well as skills in grant writing and data analysis. Prerequisite: SOCW 427 or equivalent.

SOCW 542 Program Evaluation credit: 4 Hours.

An advanced research course that develops skills for evaluating social service programs. The course assumes students have had prior courses in research methods and statistical analysis. This course provides an understanding of theoretical concepts, techniques, and research findings for evaluating a specific program, its implementation, and its effectiveness. It systematically analyzes program evaluation models and critically examines application of these models in the context of social work practice and social welfare policy. Prerequisite: SOCW 427 and a college level statistics course.

SOCW 552 HBSE II: Mental Disorders credit: 4 Hours.

Interrelationship of biological, emotional, learning and social aspects of mental disorders, and implications for the patient/client, family, and community. Focus on diagnostic assessment and biopsychosocial treatment methods including psychosocial treatment methods, medications, and social work interventions. Students also learn to recognize the potential for bias that can result when assessments are applied across cultural, ethnic, racial, socioeconomic, gender and other groups. Prerequisite: SOCW 451.

SOCW 553 SW Practice in Healthcare Settings credit: 4 Hours.

Examines the impact of illness and disability on individuals, their families, and the larger community. The physical, psychological, sociological, educational, vocational. And financial aspects of the most common health conditions are discussed. Emphasis is placed on conceptualizing an effective model of social work practice in medical and rehabilitative settings. Prerequisite: Admission to MSW program or consent of instructor.

SOCW 554 Social Ent in Diverse Society credit: 4 Hours.

Examines issues raised by race, ethnicity, and class in the context of a diverse American society so that students may critically analyze the complexity these bring to the creation and implementation of public policy, service delivery, as well as governance and politics. Emphasizes both the processes of critical analysis and principles of social entrepreneurship as important vehicles to bring about sustainable change. Effective social policies and interventions in a diverse society are characterized by a demonstrable reduction of social tensions at the community level as well as increased access to social goods such as adequate housing, safe communities, efficient transportation, affordable health care, quality education, and other public goods and services. Same as HDFS 541 and LLS 554. 4 graduate hours. No professional credit. Prerequisite: SOCW 451 or consent of instructor for non Social Work majors.

SOCW 561 Special Studies in Soc Work I credit: 2 to 8 Hours.

Independent or group study in areas of special interest; application of social work principles to special problems or settings. May be repeated in the same or subsequent terms as topics vary. Prerequisite: Consent of instructor.

SOCW 562 Special Studies in Soc Work II credit: 2 to 8 Hours.

Independent or group study in areas of special interest; application of social work principles to special problems or settings. Prerequisite: Consent of instructor.

SOCW 568 Field Instruction I credit: 8 Hours.

Field Instruction I is the first term of a two-term consecutive (minimum 31-week) field placement. The field practicum is educationally directed and supervised by an approved agency-based field instructor and provides an opportunity to integrate classroom theories, concepts and principles into practice experiences for the development of social work practice skills. Approved for S/U grading only. Prerequisite: Consent of instructor.

SOCW 569 Field Instruction II credit: 8 Hours.

Field Instruction II is the second term of a two-term consecutive (minimum 31-week) field placement. Field Instruction II provides a supervised in-depth practice experience in a specialization area of child welfare, community mental health, health care, or school social work. The goal of this practicum is to prepare students for self-directed professional social work practice. Students continue to apply theories and concepts from course work to develop advanced level skills in direct practice with clients and client systems and/or policy, planning and administration. Approved for S/U grading only. Prerequisite: SOCW 568.

SOCW 570 Childhood Obesity I credit: 3 Hours.

Same as CHLH 530, FSHN 530, HDFS 551, KIN 530, NUTR 530. See NUTR 530.

SOCW 571 Childhood Obesity II credit: 4 Hours.

Same as CHLH 531, FSHN 531, HDFS 552, KIN 531, NUTR 531. See NUTR 531.

SOCW 575 Social Work Teaching Seminar credit: 4 Hours.

Doctoral seminar on social work education and the pedagogy of college teaching. Topics include history of social work education, competencies for social work education, course development, principles of active learning, use of diverse instructional methods for teaching and assessing learning, and the scholarship of teaching and learning. The course has a required practicum component where students receive structured mentoring in some aspect of teaching in a social work class.

SOCW 576 Teaching Practicum credit: 2 Hours.

This course is designed to provide doctoral students with supervised, hands-on teaching training and experience with a faculty member after they complete the required Social Work Teaching Seminar. The primary objective of the teaching practicum is to strengthen the students' teaching ability and experiences for their entry into the job market. The purpose is for students to be involved in as many aspects of the teaching process as possible (e.g. syllabus development, class preparation, classroom time, office hours, assignment review/grading, meetings with faculty supervisor and any other relevant activities). Approved for S/U grading only. Prerequisite: SOCW 575.

SOCW 579 Social Work Practice Theories credit: 4 Hours.

Presents theories for social work interventions with individuals, families, groups, and communities and organizations; critically analyzes different theoretical frameworks for such interventions; and examines the conceptual links between theory, process, outcome, and evaluations. This course is intended for students in the Ph.D. program in Social Work.

SOCW 580 Advanced Child Welfare credit: 4 Hours.

Examines laws, scientific concepts, ethical dilemmas, and new practice directions with respect to protecting children, preserving families, regulating foster care, achieving family permanency, and assisting foster youth in transitioning to independence. Review of legislative, court, and administrative frameworks for promoting these outcomes at the city, state, and federal levels. The course analyzes and critiques historical and contemporary social science, public policy, community organization, and legal advocacy perspectives on child protection and child welfare. Contemporary topics and issues are discussed and debated. Prerequisite: SOCW 516 or consent of instructor.

SOCW 581 Gender Relations & Intl Dev credit: 4 Hours.

Same as GWS 512 and WGGP 581. See WGGP 581.

SOCW 584 Policy Practice and Advocacy credit: 4 Hours.

Examines approaches for analyzing social policy development, implementation and advocacy in the United States; and development of skills to become effective policy practitioners. Involves ability to formulate viable policy options as well as skills in advocating for adoption of desired policies. Content includes knowledge about the political processes associated with policy development, the technologies needed to develop policies, communication skills need for policy advocacy, and knowledge in a specialized area. Course builds on policy material presented in SOCW 410. Prerequisite: SOCW 410 or consent of MSW Program Director.

SOCW 585 National Social Welfare Policy credit: 4 Hours.

This seminar focuses on social policy development, implementation, evaluation, and research. The class will analyze theories of governmental policy intervention, both from substantive and procedural standpoints. Because the social policy arena is heavily politicized, political factors affecting policy development and implementation will be stressed. In addition, policy implementation discussions will attend both to program administration and intergovernmental relations issues. The growing importance of globalization in social policy development also will receive attention, as will selected issues in the evaluation of social policy interventions. 4 graduate hours. No professional hours.

SOCW 589 Social Work and the Law credit: 4 Hours.

Legal procedures and issues of special relevance to social work practice; includes legal provisions related to poverty, family development and crises, racial and ethnic minorities, institutionalized persons, crime and delinquency, legal authority of social agencies, and regulation of the profession. Prerequisite: Admission to the MSW program or consent of instructor.

SOCW 593 Applied Qualitative Research credit: 4 Hours.

Provides a doctoral level overview of contemporary qualitative research with an emphasis on applications. Through readings, discussions, and assignments students will be introduced to: the history and philosophical underpinnings of qualitative research; research designs, methods and analysis used in qualitative research; criteria for rigor in qualitative research; the application of qualitative research to addressing contemporary social issues; technical and professional issues including the use of computer programs in qualitative research and grant writing. Students will begin to elaborate their own research interests through critical reading, discussion and various applied and written assignments. Prerequisite: Admission to Ph.D. program.

SOCW 594 Individual Research credit: 4 Hours.

Course is designed to enhance the research skills of Doctoral students in social work through research collaboration with a faculty member. May be repeated to a maximum of 8 hours. Prerequisite: SOCW 593.

SOCW 595 Quantitative Research Designs credit: 4 Hours.

Provides a doctoral level overview of quantitative designs and conceptual issues in social work research. It presents a framework for structuring the statistical analysis and systematic evaluation of the efficacy and effectiveness of social interventions in achieving desired outcomes for diverse populations. Although the purpose is not to emphasize statistical training, the course will reinforce the learning of basic concepts, mathematical foundations, and assumptions underlying advanced applications of statistical description and causal inference. Prerequisite: Admission to the Ph.D. program.

SOCW 599 Dissertation Research credit: 0 to 16 Hours.

Research and writing of doctoral thesis in social work. Approved for S/U grading only. May be repeated.

Sociology (SOC)

SOC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SOC>)

Courses

SOC 100 Introduction to Sociology credit: 4 Hours.

Examination of how societies grow and change; reciprocal effects of economic, political, community, familial, and scientific institutions on each other and on individual life changes; and social conflict, problems of bureaucratic growth and planned and unplanned social change.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 101 Sociology of Gender credit: 3 Hours.

An exploration of current questions of gender and their applications to students today. The course will focus primarily on the United States emphasizing individual, interactional, and institutional aspects of the social world. Topics for study include sociological research on femininities, masculinities, gendered bodies, socialization, work, family, politics, sport, and sexualities.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 108 Religion & Society in West I credit: 3 Hours.

Same as ANTH 108, JS 108, PHIL 108, and REL 108. See REL 108.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

SOC 109 Religion & Society in West II credit: 3 Hours.

Same as ANTH 109, PHIL 109, and REL 109. See REL 109.

This course satisfies the General Education Criteria for:

Humanities - Hist Phil

Cultural Studies - Western

SOC 122 Africa in World Perspective credit: 3 Hours.

Examination of Africa in the context of the world-economy, with particular attention placed upon enduring cultural and material relationships with Europe and North America.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

SOC 130 Intro Gender & Women's Studies credit: 3 Hours.

Same as GWS 100 and HDF5 140. See GWS 100.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 152 The New Middle East credit: 3 Hours.

Same as PS 152 and SAME 152. See PS 152.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

SOC 160 Global Ineq and Social Change credit: 3 Hours.

Introduces sociological concepts of poverty, inequality, and social change within a global context. Themes explored include basic food security, poverty and hunger; population and resource distribution; foreign aid and development institutions; and social policies and movements for change. Course approach is historical and transnational, and typically includes case studies from Africa, Asia, Latin America, and the United States.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

SOC 161 Introduction to Poverty credit: 3 Hours.

Introduction to sociological research about the views, experiences, causes, and consequences of poverty in both advanced and developing countries. One objective is to set the facts straight about who experiences poverty and makes use of the welfare system in the United States. A second purpose is to make sense of the intractable and much more extreme forms of poverty observed across the global South.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

SOC 162 Intro to Intl Health Policy credit: 3 Hours.

Introduces students to international health policy. Students will learn about data sources, basic analytical techniques, and theoretical frameworks for understanding international health policy. From a sociological perspective, students will explore why health issues are essential components to discussion of globalization, immigration, and migration. Students also will learn how health policy and foreign policy decisions in the developed world influence health policy and health care delivery in the developing world.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

SOC 163 Social Problems credit: 3 Hours.

A study of social problems in the United States necessarily entails a discussion of global issues. To that end, this course will examine many contemporary social issues such as crime, war and terrorism, the environment, inequality, poverty, discrimination, the economic recession, and others, through a global framework. Many of the topics we will cover could motivate an entire semester's study in their own right; indeed, some scholars devote their entire careers to but one of these topics. However, this breadth allows us to think broadly about the issues that are identified as social problems and the ways in which individuals and groups attempt to resolve those problems; both processes are revealing about the time and society in which we live. One of the main objectives of this class is to learn about how sociologists examine social problems through analysis and research. Alongside that process, you will improve your critical thinking skills and become a better/more informed consumer of information.

SOC 179 Social Organization credit: 3 Hours.

Beginning with an examination of various examples of organizing, from street gangs to industrial corporations and modern universities, this course will discuss common patterns in organizational phenomena.

Basic conceptual frameworks will be provided in the context of contemporary and local problems, illustrating the core issues.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 196 Issues in Sociology credit: 3 Hours.

Origin of problems; consequences of ameliorative strategies. Typical topics include crime, mental illness, drug use, suicide, sexual behavior, violence, and intergroup conflict. May be repeated as topics vary.

SOC 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

SOC 200 Intro to Sociological Theory credit: 3 Hours.

Analysis of such classical theorists as Marx, Weber, Durkheim, and Mead and contemporary theorists. Prerequisite: Sophomore standing.

SOC 201 Race, Gender & Power credit: 3 Hours.

Same as GWS 201. See GWS 201.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

SOC 202 Sexualities credit: 3 Hours.

Same as GWS 202. See GWS 202.

This course satisfies the General Education Criteria for:

Cultural Studies - Western

SOC 221 Mexican & Latin Am Migration credit: 3 Hours.

Same as LLS 220. See LLS 220.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 222 Introduction to Modern Africa credit: 3 Hours.

Same as AFST 222, ANTH 222, and PS 242. See AFST 222.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

SOC 223 Black Women Contemp US Society credit: 3 Hours.

Same as AFRO 226 and GWS 226. See AFRO 226.

SOC 224 Asian Am Historical Sociology credit: 3 Hours.

Same as AAS 224. See AAS 224.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

SOC 225 Race and Ethnicity credit: 3 Hours.

Sociological and social-psychological analysis of minority groups; illustrative material drawn from representative racial, ethnic, and status groups. Prerequisite: SOC 100, SOC 101, OR SOC 163.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - US Minority

SOC 226 Political Sociology credit: 3 Hours.

Study of power relations within and between the state, bureaucracy, community, social classes, and elites in the United States and other countries.

SOC 227 Latina/Latinos in the Contemporary United States credit: 3 Hours.

Examines the incorporation of the major Latina/Latino subgroups into United States society, surveys the major theoretical approaches that have been used in the social sciences to explain majority-Latino relations, and provides an empirical overview of how major social institutions affect the daily lives of Latina/Latinos. Same as LLS 227. Prerequisite: One of the following: LLS 100, SOC 100, SOC 101, SOC 163, or consent of instructor.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

SOC 249 Sport & Modern Society credit: 3 Hours.

Same as KIN 249. See KIN 249.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 255 Queer Lives, Queer Politics credit: 3 Hours.

Same as GWS 255. See GWS 255.

SOC 261 Gender in a Transnational Perspective credit: 3 Hours.

Examines how gender inequality is structured on a transnational level. Emphasis will be placed on the interactive relationship among various countries, and how globalization promotes racial, ethnic, sexual, and national hierarchies among women, in both newly and advanced industrialized countries. Same as GWS 261. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 267 Pan Africanism credit: 3 Hours.

Same as AFRO 243, AFST 243, and PS 243. See PS 243.

This course satisfies the General Education Criteria for:
Cultural Studies - Non-West
Social Beh Sci - Soc Sci

SOC 269 Food, Culture, and Society credit: 3 Hours.

Same as ANTH 209. See ANTH 209.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 270 Population Issues credit: 3 Hours.

Examines the current world population situation; the historical and current patterns of birth, death, migration, marriage, contraception, and abortion; and the world food and energy resources, crowding, and problems of overpopulation. Same as RSOC 270.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 273 Social Perspectives on the Family credit: 3 Hours.

Examines the societal forces shaping aspects of stable and changing family relations in the U. S. and other countries; focuses on social-structural factors affecting marriage, divorce, co-habitation, child-bearing, the division of work and authority, and other features of life. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

SOC 274 Introduction to Medical Sociology credit: 3 Hours.

Sociology of health and illness behavior and the social structure of systems which deliver health care services; includes social constraints on illness, the illness role, medical organizations and professions, and the application of the illness model to deviant forms of behavior. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 275 Criminology credit: 3 Hours.

Nature and extent of crime; past and present theories of crime causation; criminal behavior in the United States and abroad, and its relation to personal, structural and cultural conditions; the nature of the criminal justice system and the influences of the exercise of discretion among actors in the criminal justice system. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163 or equivalent.

SOC 278 Mapping Latina/o Inequalities credit: 3 Hours.

Same as LLS 278. See LLS 278.

SOC 280 Intro to Social Statistics credit: 4 Hours.

First course in social statistics for students without mathematics beyond the high school level; topics include the role of statistics in social science inquiry, measures of central tendency and dispersion, simple correlation techniques, contingency analysis, and introduction to statistical inference; includes the statistical analysis of social science data using personal computers. Same as GEOG 280. Credit is not given for SOC 280 if credit for a college level introductory statistics course has been earned.

This course satisfies the General Education Criteria for:
Quantitative Reasoning I

SOC 287 Environment and Society credit: 3 Hours.

Same as ESE 287, GEOG 287, PS 273 and NRES 287. See NRES 287.

This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci
Cultural Studies - Western

SOC 300 Attitude Theory and Change credit: 3 Hours.

Same as MACS 352 and PSYC 352. See PSYC 352.

SOC 310 Sociology of Deviance credit: 3 Hours.

Study of traits, conditions, actions, and behaviors that violate social norms and elicit negative societal reactions. Explores social, cultural and individual factors in the etiology of deviance; the establishment and maintenance of deviant categories; the motivations behind deviant behavior; the identification as deviant of individuals and of particular segments of society, by formal and informal means; the effects of institutionalization and social control upon the deviant; and the efforts of deviants to eradicate the label society has placed upon them. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 320 Queer Theory credit: 3 Hours.

Same as GWS 370. See GWS 370.

SOC 321 Gender & Latina/o Migration credit: 3 Hours.

Same as LLS 320 and GWS 320. See LLS 320.

SOC 322 Gender, Relationships & Society credit: 3 Hours.

Same as GWS 340 and HDFS 340. See HDFS 340.

SOC 325 Black Men and Masculinities credit: 3 Hours.

Same as AFRO 342. See AFRO 342.

SOC 328 Asian Americans & Inequalities credit: 3 Hours.

An examination of various forms of social inequality between Asian Americans and other groups as well as among Asian Americans, including those based on race, gender, class, citizenship and sexuality. Same as AAS 328. Prerequisite: SOC 100 and/or AAS 100 are recommended.

SOC 345 Digital & Gender Cultures credit: 3 Hours.

Same as GWS 345, INFO 345, and MACS 345. See GWS 345.

SOC 350 Technology and Society credit: 3 Hours.

Examines the social and cultural origins of modern technology and technological innovation; the effects of technology and its change on society. Topics include the impact of technology on beliefs and values, accommodation and resistance to change, and technology and the Third World.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 351 Social Aspects of Media credit: 3 Hours.

Same as MACS 351. See MACS 351.

SOC 355 Race and Mixed Race credit: 3 Hours.

Same as AAS 355 and LLS 355. See LLS 355.

SOC 364 Impacts of Globalization credit: 3 Hours.

Introduces sociological theory and research on globalization, in debate with the literature on modernization, world-systems, and development/underdevelopment. Explores recent economic, political, and cultural change at macro-sociological level. Themes include: global governance and world society, global diffusion of American culture, global capitalism, and new forms of social resistance. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

SOC 365 Contemporary Korean Society credit: 3 Hours.

Same as EALC 365. See EALC 365.

This course satisfies the General Education Criteria for:

Cultural Studies - Non-West

Social Beh Sci - Soc Sci

SOC 366 Postsocialism Eastern Europe credit: 3 Hours.

Examines the sociological realities of state socialism and postsocialism in Eastern Europe and the former Soviet Union. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, HIST 142, PS 100, or any REES course.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

SOC 367 Globalization Dynamics Debates credit: 3 Hours.

Study of the multidimensional character of globalization. Discussion of key processes of globalization and areas of consensus and controversy in the literature, including major current controversies such as are we headed for a global monoculture; what is the relationship between globalization and neoliberal capitalism; which trend is more significant, globalization or empire? Discussions on scenarios and policy options of global futures.

SOC 373 Social Stratification credit: 3 Hours.

Inequities in power, prestige, income, privilege, and lifestyles in the United States and other countries; class and status as determinants of group interests, ideologies, and interaction; and effects of social change and mobility. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SOC 374 Immigrants in the U.S. credit: 3 Hours.

The change in origin country composition of U.S. immigrants changed dramatically post-1965 from what it was in the early twentieth century and this shift has generated much public and policy concern over the 'new' immigrants and their prospects for economic mobility and integration. Since immigration shows no signs of slowing down, its causes and consequences remain some of the most important topics of the 21st century. Some of the questions considered in this course include: Why do immigrants come to the U.S.; Is the average human capital level of immigrants declining?; Are the new immigrants assimilating into U.S. society and what does that mean? Also examines the economic impact of immigration and considers appropriate policy recommendations such as whether the U.S. should adopt a skill-based point system to regulate immigration. Prerequisite: One of the following: SOC 100, SOC 101, or SOC 163.

SOC 375 Criminal Justice System credit: 3 Hours.

Exploration of the actors, institutions, and processes that make up the criminal justice system. We review sociological and other social scientific research on topics including the police, prosecutors, the courtroom work-group, forensic evidence, juries, sentencing, and the impact of mass incarceration. Grades are based on exams, research exercises, and ethnographic observations of criminal courtrooms. Prerequisite: SOC 275 is recommended.

SOC 378 Law and Society credit: 3 Hours.

Examination of law and legal institutions sociologically. We begin with an introduction to theoretical perspectives on the problem of order, illustrated by juxtaposing formal law with other means of achieving order. Next, we consider law and legal systems in action, including relations between law and the economy, stratification, culture, ideology and social change. Finally, we investigate the relationship between law's aims and principles, and law's real-world implementation.

SOC 380 Social Research Methods credit: 4 Hours.

Introduction to the foundations of social research and to the major types of research methods employed in sociology. Provides exposure to the major tools and terminology of social research, including the use of computers in sociology. Topics include: research design, finding and using sociology literature, measurement, sampling, survey research, field methods, use of available data, quantitative data analysis and presentation, and computer resources for research. Prerequisite: SOC 280 and one of the following: SOC 100, SOC 101, or SOC 163. This course satisfies the General Education Criteria for: Quantitative Reasoning II

SOC 382 Social Psych Methods Lab credit: 4 Hours.

Same as PSYC 332. See PSYC 332.

SOC 387 Race, Gender and the Body credit: 3 Hours.

Same as LLS 387. See LLS 387.

SOC 390 Individual Study credit: 1 to 6 Hours.

Individual study or research project. May be repeated. Prerequisite: Six hours of sociology; written consent of instructor on form available in the Sociology Department Office.

SOC 392 Chicanas&Latinas: Self&Society credit: 3 Hours.

Same as GWS 392 and LLS 392. See LLS 392.

This course satisfies the General Education Criteria for:

Advanced Composition

SOC 396 Topics in Sociology credit: 3 Hours.

Explores topics not covered in regularly scheduled Sociology courses. See Class Schedule for topics. May be repeated if topics vary. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

SOC 400 Internships credit: 0 to 3 Hours.

Selected internship opportunities in which student and faculty member develop a program of study and research related to internship. Consult departmental undergraduate advisor. 0 to 3 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; and SOC 100 or SOC 101 or SOC 163; and six additional hours in Sociology or acceptance of faculty member and Director of Undergraduate Studies.

SOC 410 Labor and the European Union credit: 4 Hours.

Same as EURO 410 and LER 410. See LER 410.

SOC 420 Sociology of Education credit: 2 to 4 Hours.

Same as EPS 420. See EPS 420.

SOC 421 Racial and Ethnic Families credit: 2 to 4 Hours.

Same as AFRO 421, EPS 421, and HDFS 424. See EPS 421.

SOC 422 European Working Class History credit: 2 to 4 Hours.

Same as HIST 450 and LER 450. See HIST 450.

SOC 426 Race, Educational Policy, and Sociology credit: 3 or 4 Hours.

Examination of the origins and development of sociology as a discipline, as related to the sociology of education, and the reproduction of social and racial inequality. The course focuses on four issues: the production of racial inequality in social scientific knowledge, the role that social science plays in reproducing societal patterns of race, class, and gender inequality, the development of sociology and education in the United States and Africa, and the development of American social science and the reproduction of global inequality. Same as EPS 422. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 100 or SOC 101 or SOC 163 or consent of instructor.

SOC 447 Environmental Sociology credit: 3 or 4 Hours.

Examination of historical and modern consequences of environmental alteration and pollution and resource limitations on human populations in the context of various social change theories. Explores the environmental movement, population explosion, the "limits to growth debate," and the impacts of environmental change on food production, land, and water quality. Same as ENVS 447 and RSOC 447. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: SOC 380 or equivalent; and one of the following: SOC 100, SOC 101, SOC 163, RSOC 110, or equivalent; or consent of instructor.

SOC 450 Senior Capstone Seminar credit: 3 Hours.

Over the course of the semester, students will conceive and execute an original sociological research project, using their knowledge of the sociological literature developed in substantive courses and their skills in data collection and analysis developed in methods courses. In parallel, students will explore professional opportunities in sociology and engage in professional development activities, including exploring opportunities for graduate education and learning skills in job search, and resume, c.v., personal statement and cover letter development. 3 undergraduate hours. No graduate credit. Prerequisite: One of the following: SOC 100, SOC 101 or SOC 163; and SOC 380. For Sociology majors only.

SOC 451 Climate & Social Vulnerability credit: 3 or 4 Hours.

Same as ATMS 446 and GEOG 496. See GEOG 496.

SOC 464 Comm in Env Social Movements credit: 3 Hours.

Same as AGCM 430, ENVS 430, and NRES 430. See AGCM 430.

SOC 470 Social Movements credit: 2 to 4 Hours.

Origins and development of groups in promoting and resisting change, resource mobilization, strategies and tactics, individual and social consequences. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of anthropology, social geography, political science, or sociology.

SOC 471 Collective Action & Revolution credit: 3 or 4 Hours.

Contemporary theory and research on the life course of social gatherings ranging from small scale and local to nationwide collective actions by people in pursuit of social and political change. Discusses the logic of practice in political, religious and street crowds; collective action of disperse people; and broad-based revolutionary mobilizations. Cases include pre-modern and modern movements from the western and non-western societies. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 200, or equivalent, or consent of instructor.

SOC 472 Urban Communities & Public Pol credit: 3 or 4 Hours.

Same as AFRO 481 and UP 481. See AFRO 481.

SOC 473 Immigration, Health & Society credit: 3 or 4 Hours.

Same as CHLH 473, LLS 473, and SOCW 473. See LLS 473.

SOC 474 Population Trends and Patterns credit: 3 or 4 Hours.

Introduction to contemporary demographic patterns and their historical development; transition theory and other models of demographic change; components of population growth and distribution; and trends and differentials in mortality and fertility. 3 undergraduate hours. 4 graduate hours.

SOC 476 Organization of Health Care credit: 2 to 4 Hours.

Same as CHLH 456. See CHLH 456.

SOC 477 Sociology of Law credit: 2 to 4 Hours.

Social origins and consequences of law and legal process, emphasizing problems of legal change and structure and function of legal sanctions. Law and law-like phenomena in primitive and modern societies. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of anthropology, social geography, political science, or sociology. This course satisfies the General Education Criteria for: Advanced Composition

SOC 478 Geography of Health Care credit: 3 or 4 Hours.

Same as GEOG 438. See GEOG 438.

SOC 480 Methods of Field Research credit: 2 to 4 Hours.

Instruction, training, and supervised practice in methods of field research as a basic tool of sociology; emphasis on the role of the field researcher as participant, observer, and interviewer in various kinds of research settings, and on approaches to and applications of field data. 3 undergraduate hours. 2 or 4 graduate hours. Prerequisite: SOC 380 or consent of instructor.

SOC 481 Survey Research credit: 3 or 4 Hours.

Principles and applications of social science survey research methods; class project designing and conducting a sample survey; training and experience in analysis of survey data; sampling, questionnaire construction, interviewing and data reduction, and file management; and direct use of the computer in survey data analysis. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 380 or consent of instructor.

SOC 483 Middle Eastern Societies & Cultures credit: 3 Hours.

Overview of the contemporary Middle East from social, political, and cultural perspectives. Explores how the internal dynamics together with the forces of globalization shape the societies of the Middle East today. Topics include social structure, political dynamics, family, gender, urban life Islam, social and religious movements. 3 undergraduate hours. 3 graduate hours. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or six hours of Anthropology, Social Geography, Politics, or Sociology.

SOC 484 African Urbanization credit: 3 or 4 Hours.

Examines the causes and consequences of African urbanization in historical perspective. The course will engage with various academic theories of urbanization and seek to situate the numerous topics and readings among ongoing debates. However, its substantive focus will be devoted entirely to Africa. Same as AFST 484. 3 undergraduate hours. 4 graduate hours.

SOC 485 Intermediate Social Statistics credit: 3 or 4 Hours.

Intermediate course in the theory and application of statistical methods to social science data. Coverage includes overviews of measurement issues, the logic of hypothesis testing and estimation, the general linear model, one-way analysis of variance, correlation and regression. The core of the course is multiple regression analysis and its extensions. Topics include dummy variable analysis, statistical interaction, model assumptions and violations, non-linear and logistic regression, and an introduction to path analysis. Emphasis on the application of statistical computing packages (e. g. SPSS) and the substantive interpretation of results. 3 undergraduate hours. 4 graduate hours. Credit is not given for both SOC 485 and another course with a primary focus on applied multiple regression analysis such as ECON 203, STAT 420, or PSYC 406. Graduate students must incorporate research literature involving statistical analysis from their discipline into their assignments and class discussions. Prerequisite: SOC 280 or equivalent.

SOC 488 Demographic Methods credit: 3 or 4 Hours.

Introduction to statistical and mathematical procedures in population analysis; the gathering, processing, and evaluating of registration and census data; the life table model; and procedures of mortality and fertility analysis and population projections. 3 undergraduate hours. 4 graduate hours. Prerequisite: SOC 380 or consent of instructor. This course satisfies the General Education Criteria for: Quantitative Reasoning II

SOC 490 Advanced Independent Study credit: 3 Hours.

3 undergraduate hours. No graduate credit. May be repeated. Prerequisite: Open only to seniors in the sociology major who have an overall GPA of 3.25 or higher and therefore may be eligible for departmental distinction; obtain written consent of instructor on form available in the Sociology Department Office.

SOC 493 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, NRES 494, UP 493. See GEOG 493.

SOC 495 Senior Honors Seminar credit: 3 Hours.

Intensive scrutiny of current literature on one selected topic. Critical reading and discussion followed by writing essays and research proposals. Subject will shift yearly. There may be community work as an aspect of this course; consult the Class Schedule for details. 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: For sociology majors only. Student must have at least 3.5 grade-point average in sociology courses and consent of instructor.

SOC 496 Advanced Topics in Sociology credit: 3 Hours.

Explores topics not covered in regularly scheduled Sociology courses. See Class Schedule for topics. 3 undergraduate hours. No graduate credit. May be repeated if topics vary. Prerequisite: One of the following: SOC 100, SOC 101, SOC 163, or consent of instructor.

SOC 500 Classical Sociological Theory credit: 4 Hours.

Analysis of major classical sociological theorists of the nineteenth and early twentieth centuries, stressing the social, historical, and philosophic foundations of sociological theory; primary emphasis on Marx, Durkheim, and Weber. Prerequisite: SOC 200 or equivalent.

SOC 501 Contemp Sociological Theory credit: 4 Hours.

Major theorists and schools of thought since World War I with emphasis on the contemporary period; includes functionalism, exchange theory, conflict theory, symbolic interaction, and phenomenology. Prerequisite: SOC 500 or equivalent.

SOC 505 Seminars in Sociology credit: 1 Hour.

Provides Sociology graduate students the opportunity to attend and discuss presentations in department and campus seminars. Approved for S/U grading only. May be repeated to a maximum of 4 hours in separate terms. Prerequisite: Graduate standing in Sociology and consent of the Director of Graduate Studies.

SOC 510 Professionalization Seminar credit: 2 Hours.

Introduction to the graduate program in Sociology and to graduate study in the discipline of Sociology. Approved for S/U grading only. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Graduate standing in Sociology and consent of the Director of Graduate Studies.

SOC 521 Sociology of Race and Racism credit: 4 Hours.

Examination of the social construction of race and racism, in various cultural contexts and historical moments and in relation to various groups and research problems.

SOC 532 Access to Justice credit: 4 Hours.

Explores contemporary issues related to the ability of the public to access "justice". The course examines different perspectives on what justice is, the barriers to obtaining justice through the formal legal system, and the potential solutions to overcoming these barriers. Course readings emphasize empirical research.

SOC 560 Globalization Dynamics Debates credit: 4 Hours.

An advanced study of the multidimensional character of globalization. Discussion of key processes of globalization and areas of consensus and controversy in the literature and examination of the premises of major approaches to globalization in social science and fundamental analytical questions and policy dilemmas that globalization presents. Discussions on scenarios and policy options of global futures.

SOC 561 Development Theories credit: 4 Hours.

Discussion of major trends in development thinking and policy, and development theories from the classics in political economy through modernization theory, dependency, alternative development, neoliberalism, human development and post-development. Addresses ongoing challenges and debates such as globalization and democratization, and trends in social science, such as discourse analysis. Enables participants to assess development theories in a historical context and from the viewpoint of sociology of development knowledge.

SOC 562 Sem in Transnational Studies credit: 4 Hours.

Intensive study of a selected area in transnational sociology, e.g., diasporas, global political economy, global environmental studies, transnational racial stratification, etc. May be repeated in the same or separate terms to a maximum of 8 hours as topics vary. Prerequisite: Consent of instructor.

SOC 564 Global Religion and Politics credit: 4 Hours.

Explores the reasons behind the world-wide rise of religion as a key player in the public sphere, and the implications for politics in the contemporary world. The major religions of the world are considered, but with a focus on the Islamic revival and Muslim societies. Students will learn about the secularization debate, religious revivals and globalization, global fundamentalisms, religion and democracy, and post-secular and post-Islamist societies. Same as REL 564 and SAME 564.

SOC 565 Megacities of Global South credit: 4 Hours.

Exploration of the dynamics of urban life in the megacities of the Global South. Studies the ways in which the global, social, and economic restructuring is affecting urban space and people and how urban inhabitants respond to these merging circumstances. Focuses on the way in which politics is articulated in the megacities of the Global South. The course discusses cases from the Middle East, Latin America, Africa and South Asia. Prerequisite: Consent of the instructor.

SOC 571 Demography and Human Ecology credit: 4 Hours.

Classic and contemporary issues and perspectives in demography and human ecology, emphasizing the relationship between demographic phenomena and social life and on the ecological approach to social organization; demographic change, analytic methods in demography, fertility, mortality, and migration; new research developments. Prerequisite: Consent of instructor.

SOC 572 Community In American Society credit: 4 Hours.

Same as HDFS 533 and UP 533. See HDFS 533.

SOC 575 Founds of Organizational Behav credit: 4 Hours.

Same as BADM 510, PS 514, and PSYC 553. See BADM 510.

SOC 576 Survey Methods in Mkt Res credit: 4 Hours.

Same as BADM 531. See BADM 531.

SOC 578 Ethnography Urban Communities credit: 4 Hours.

Same as AFRO 552, HDFS 543, and UP 578. See AFRO 552.

SOC 579 Categorical Data in Ed/Psyc credit: 4 Hours.

Same as EPSY 589 and PSYC 589. See EPSY 589.

SOC 580 Advanced Interpretive Methods credit: 4 Hours.

Analysis of social interaction based on the social psychology of C. H. Cooley, G. H. Mead, and W. I. Thomas; presentation of problems of theory, concepts, and method. Same as MDIA 580. Prerequisite: 4 hours graduate credit in sociology.

SOC 581 Survey Research Methods I credit: 4 Hours.

Advanced course in the design of social surveys and collection of social survey data; covers stages from questionnaire construction to preparing data for statistical analysis; issues in survey design involving cross-national, longitudinal and multi-group research. Prerequisite: SOC 485 or equivalent.

SOC 582 Survey Research Methods II credit: 4 Hours.

Laboratory course in survey research methods to provide students with advanced training and experience in problem formulation and computerized data analysis using statistical packages, e.g., SPSS; under staff guidance, a student will select a topic and write a professional-level paper. Three to ten hours of laboratory time per week.

SOC 583 Qualitative Research Methods credit: 4 Hours.

Introduction to field and qualitative methods in social science research, in terms of both the practical issues of conducting this type of research and the conceptual debates in the field. Methods include interviewing, participant observation, unobtrusive observation, historical/archival methods, and global ethnography. May be repeated as topics vary.

SOC 584 Multivar Anlys in Psych and Ed credit: 4 Hours.

Same as EPSY 584 and PSYC 594. See PSYC 594.

SOC 586 Adv Social Statistics I credit: 4 Hours.

Examines social science applications of the general linear model and its extensions; topics include: model specification; ordinary and generalized least squares; multicollinearity; selection of predictors; interaction of variables and non-linear regression; panel and time-series data; measurement error; path analysis; recursive and non-recursive structural equation models. Applies statistical computing packages (e.g., SPSS) to social science data. Credit is not given for both SOC 586 and PSYC 406. Prerequisite: SOC 485 or equivalent.

SOC 587 Adv Social Statistics II credit: 4 Hours.

Examines social science applications of discrete and continuous multivariate analysis; topics include: analysis of categorical data (loglinear modelling, probit analysis, etc.); geometric interpretation of matrices; factor analysis and index construction; canonical analysis; discriminant analysis; unobserved variables and structural equation models; issues in model specification and estimation. Applies statistical computing programs such as ECTA and LISREL to social science data. Credit is not given for both SOC 587 and PSYC 407. Prerequisite: SOC 586 or equivalent.

SOC 588 Covar Struct and Factor Models credit: 4 Hours.

Same as EPSY 588, PSYC 588, and STAT 588. See PSYC 588.

SOC 589 Psych Scaling Multidimen Meth credit: 4 Hours.

Same as PSYC 509. See PSYC 509.

SOC 590 Individual Topics in Sociology credit: 1 to 8 Hours.

Supervised individual investigation or study of a topic not covered by regular courses; topic selected by the student and the proposed plan of study must be approved by the adviser and the staff member who supervises the work. Approved for letter and S/U grading. May be repeated.

SOC 596 Recent Developments in Soc credit: 4 Hours.

Intensive study of selected topics based on contemporary works of major importance in the development of sociological theory. May be repeated if topics vary.

SOC 597 Readings in Sociology credit: 2 to 12 Hours.

Individual guidance in intensive readings in the literature of one or more subdivisions of the field of sociology, selected in consultation with the student's advisor, in preparation for the specialization examination. Approved for S/U grading only. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Graduate standing in Sociology and consent of advisor.

SOC 598 Thesis Proposal credit: 2 to 12 Hours.

Individual guidance in designing a doctoral research project and writing a thesis proposal. Focuses on developing a cogent theoretical framework, articulating significance of the project, identifying appropriate research methods, and considering ethical issues. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 12 hours. Prerequisite: Graduate standing in Sociology and consent of advisor.

SOC 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: SOC 598.

Spanish (SPAN)

SPAN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SPAN>)

Courses

SPAN 101 Elementary Spanish I credit: 4 Hours.

Intensive course for beginner students of Spanish. Students will develop basic listening, speaking, reading and writing skills in Spanish to a novice high level, based on the proficiency scale stipulated by the American Council for the Teaching of Foreign Languages (ACTFL) and to provide them with an introduction to the various cultures of the Spanish-speaking world and Hispanics in the United States.

SPAN 102 Elementary Spanish II credit: 4 Hours.

Continuation of SPAN 101. Students continue developing basic listening, speaking, reading and writing skills in Spanish to an intermediate low level, based on the ACTFL proficiency and provides introduction to the various cultures of the Spanish-speaking world and Hispanics in the United States. Credit is not given for both SPAN 102 and SPAN 122. Prerequisite: SPAN 101 or equivalent.

SPAN 122 Intensive Elementary Spanish credit: 4 Hours.

Intensive beginning Spanish, equivalent to the first two semesters, for students with little or no experience in Spanish or whose skills need refreshing. This is considered a second level course for purposes of fulfilling the University General Education Language requirement. Prerequisite: None or assignment by placement exam. Students who have the equivalent of four or more years credit in Spanish at the secondary level will not receive credit for SPAN 122.

SPAN 130 Intermediate Spanish credit: 4 Hours.

Continued development of reading, writing and conversational skills. This is considered a third level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 130 and SPAN 103. Prerequisite: SPAN 122 or equivalent placement score.

SPAN 141 Introduction to Spanish Grammar credit: 4 Hours.

Introduction to the major structures of Spanish, from a linguistic perspective and will develop students' formal knowledge of Spanish grammar. This is considered a fourth level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 141 and SPAN 142. Prerequisite: SPAN 130 (previously numbered 103), equivalent course, or placement score.

SPAN 142 Spanish in the Professions credit: 4 Hours.

Introduction to Spanish in business, law, medical, education & social service fields, with a focus on the importance of bilingualism in the U.S., strategies for lifelong learning, and culture considerations. The development of functional use of Spanish within the professional context is the major focus of the course. This is considered a fourth level course for purposes of fulfilling the University General Education Language requirement. Credit is not given for both SPAN 141 and SPAN 142. Prerequisite: SPAN 130 (formerly numbered 103), equivalent course, or placement score.

SPAN 191 Freshman Honors Tutorial credit: 1 to 3 Hours.

Study of selected topics on an individually arranged basis. Open only to honors majors or to Cohn Scholars and associates. May be repeated to a maximum of 3 hours. Prerequisite: Consent of departmental honors adviser in Spanish.

SPAN 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for both letter and S/U grading. May be repeated.

SPAN 200 Readings in Hispanic Texts credit: 3 Hours.

Readings and discussion in Spanish of a variety of texts by leading Hispanic and Hispanic-American writers covering genres and themes; designed to emphasize reading, discussion, and enjoyment rather than literary criticism. Open to non-Spanish majors. Credit may be received by Advanced Placement "Language" or "Literature" examination. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 202 Spanish for Business credit: 3 Hours.

Introduction to vocabulary of Hispanic commerce; composition of business letters and similar texts. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 204 Advanced Spanish Grammar in Context credit: 3 Hours.

Overview of Spanish grammar, with emphasis on major challenges and areas of contrast with English. The overall goal of the course is to help students gain a greater understanding of some key aspects of Spanish grammar, which will lead to greater accuracy in their written and oral production. Prerequisite: SPAN 141 or equivalent.

SPAN 208 Oral Spanish credit: 3 Hours.

Practice in speaking Spanish. Prerequisite: SPAN 141, SPAN 142, or equivalent. To be taken concurrently with or subsequent to SPAN 204.

SPAN 228 Spanish Composition credit: 3 Hours.

Basic composition course; problems of written Spanish and principles of Spanish stylistic patterns; weekly written exercises. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 232 Spanish in the Community credit: 3 Hours.

Introduction to Spanish-speaking communities in the Champaign-Urbana area, focusing on issues of particular interest to the local Hispanic community, developing contextualized oral proficiency, and facilitating student civic engagement. Active student reflection is structured throughout the course. Meets two hours a week in class and two hours a week in community-based service work. In their interactions with community members and organizations students both learn from and contribute to the community. Prerequisite: SPAN 141, SPAN 142, or equivalent.

SPAN 240 Latina/o Popular Culture credit: 3 Hours.

Same as ENGL 224 and LLS 240. See LLS 240.

SPAN 242 Intro to Latina/o Literature credit: 3 Hours.

Same as ENGL 225 and LLS 242. See LLS 242.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

SPAN 246 Gender & Sexuality in Latina/o Literature credit: 3 Hours.

Examination of questions of gender, sexuality, and identity in contemporary Latina/Latino culture through a discussion of novels, performance pieces, essays and films. Spanish majors must complete writing assignments in Spanish. Same as LLS 246.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - US Minority

SPAN 250 Introduction to Literary Analysis credit: 3 Hours.

An introduction to literary analysis and interpretation. Emphasis will be placed upon close reading and critical analysis of texts representing different genres and periods in Spain and Spanish America. Prerequisite: SPAN 228.

SPAN 252 Introduction to Hispanic Linguistics credit: 3 Hours.

Introduction to Spanish phonology, morphology, syntax, and at least one of the following areas: issues in Spanish semantics and pragmatics, variation in Spanish, Spanish in the U.S., history of Spanish, or acquisition of Spanish. Prerequisite: SPAN 228 or consent of instructor.

SPAN 254 Introduction to Cultural Analysis credit: 3 Hours.

Introduction to the analysis of culture as concept, practice and representation, including consideration of the debates that the idea of culture has provoked in different contexts. Provides analytical and methodological tools to discuss a full range of cultural forms. Special emphasis on issues of culture and representation, as well as on the notion of cultural difference(s). The theoretical and critical texts studies will represent diverse geographical and cultural locations. Examples and discussion will emphasize cultural issues in the context of Spain, Latin America and U.S. Latinas/os. Prerequisite: SPAN 228.

SPAN 295 Topics in Literature and Cultural Studies credit: 3 Hours.

Selected topics in Spanish, Latin American and/or Latina/o literature and cultural studies. Specific topics may vary depending on the instructor. Course taught in Spanish. May be repeated in the same or separate terms to a maximum of 6 hours if topics vary. Prerequisite: SPAN 228.

SPAN 299 Study Abroad credit: 0 to 18 Hours.

Non-advanced level course in Spanish language, literature, history, culture, and/or civilization completed in a Study Abroad program in Spain or Latin America. May be repeated in the same term to a maximum of 18 hours. May be repeated in separate terms to a maximum of 36 hours. Prerequisite: SPAN 141, SPAN 142 or equivalent.

SPAN 303 The Sounds of Spanish credit: 3 Hours.

Practical, introductory course to Spanish phonetics, stressing practice in pronunciation. May be offered as intensive eight-week course. Prerequisite: SPAN 228 or consent of instructor.

SPAN 305 The Structure of Spanish credit: 3 Hours.

An in-depth investigation of the structure of Spanish, with a secondary focus on syntactic variation, especially structural differences with English. Introduces concepts and techniques essential for syntactic analysis and description. Taught in Spanish. Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 307 Bilingualism credit: 3 Hours.

Introduction to the fundamental issues in the study of bilingualism as an individual and social phenomenon, with special emphasis on Spanish bilingual communities in the United States, Spain and Latin America. Taught in Spanish. Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 308 Spanish in the United States credit: 3 Hours.

Descriptive and critical overview of the linguistic practices of the different Spanish-speaking communities in the U.S. The main objective of the course is to develop critical and linguistic awareness about the relationship among language, individual, and society. Special emphasis on historical migration patterns and settlements, characteristics of Spanish in contact with English, and language use and attitude patterns. Same as LLS 308. Prerequisite: SPAN 228 or consent of instructor.

SPAN 309 Varieties of Spoken Spanish credit: 3 Hours.

Relationship between language, individual and society in the context of the spread of Spanish in the world, concentrating on Spanish varieties spoken in Spain and Latin America, including the United States, but will also give an overview of Spanish in Africa (Equatorial Guinea, Morocco), and other parts of the world (Israel, Turkey, the Philippines). Prerequisite: SPAN 252 or consent of instructor. May be taken concurrently with SPAN 252.

SPAN 310 Premodern Spanish Literatures & Cultures credit: 3 Hours.

A critical analysis of selected texts and authors representative of the Medieval and Early Modern periods in the context of Iberian cultures. Particular emphasis on the relationship between cultural practices and the construction of national identities prior to 1700, as well as on the plurality of cultures that shaped what is now Spain. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 312 Modern Spanish Literatures & Cultures credit: 3 Hours.

Critical analysis of selected texts and periods representative of Spain's literary production from the 18th century to the present, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 314 Latin American Literatures & Cultures to 1800 credit: 3 Hours.

Critical analysis of selected texts and periods representatives of Latin American literary and cultural production from Pre-Columbian until 1800, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 316 Latin American Literatures & Cultures from 1800 credit: 3 Hours.

Critical analysis of selected texts and periods representative of Latin American literary and cultural production from 1800 to present, with special attention paid to broader literary and cultural contexts. Specific sections may emphasize critical topics such as gender, ideology, literary form, nationalisms, race, and sexuality, among others. Prerequisite: SPAN 228.

SPAN 318 Spanish Cultural Studies I credit: 3 Hours.

A critical analysis of historical events, institutions, artistic production, symbols and values representative of Spanish (Iberian) cultures. Particular emphasis on the relationship between specific cultural practices and/or values and the construction of national identities prior to 1700. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 320 Spanish Cultural Studies II credit: 3 Hours.

Critical analysis of selected historical events, artistic production, debates, symbols and values representative of Spanish (Iberian) cultures in the modern and contemporary periods. Particular emphasis on the relationship between cultural practices and national identities, as well as on contextualized analysis of different types of cultural phenomena. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 324 Latin America Cultural Studies I credit: 3 Hours.

Examination of the complexities, ramifications and ambiguities of the cultural encounters, processes and expressions which took place in Latin America between different racial and ethnic groups from Pre-Columbian times to the 1800. Particular emphasis will be placed on the critical analysis of major cultural events, periods and issues that influenced the formation of identities in these territories. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: SPAN 228.

SPAN 326 Latin America Cultural Studies II credit: 3 Hours.

Panoramic view of Latin American cultures since the end of the colonial period (roughly 1820) to the present. Examination of the major debates, authors and cultural issues that shaped those cultures or that were shaped by them. Specific themes may vary by semester, and may include the following: slavery, colonialism and neocolonialism, revolution, mestizaje, gender, the state, and modernization. Analysis will include diverse cultural phenomena, as well as consideration of cultural perspectives and practices. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: SPAN 228.

SPAN 332 Spanish and Entrepreneurship credit: 3 Hours.

Entrepreneurship means more than starting a business. This course emphasizes social entrepreneurship, in which the basic process of entrepreneurship-opportunity recognition, resource gathering and value creation is used to address social issues, not to create profits. Students do community-based learning in non-profits serving the local Spanish-speaking community, thereby building their language skills, acquiring cultural knowledge and gaining hands-on experience with social entrepreneurship (theory and practice). Each week class meets two hours in class and two hours in community-based service work. Prerequisite: SPAN 228.

SPAN 395 Advanced Topics in Literature & Cultural Studies credit: 3 Hours.

Selected topics in Spanish, Latin American and/or Latina/o literatures and cultural studies. Specific topics may vary. May be repeated in separate terms to a maximum of 6 hours, if topics vary. Prerequisite: Two 300-level courses in Spanish/Latin American literature or cultural studies.

SPAN 399 Advanced Study Abroad credit: 0 to 18 Hours.

Advanced level course in Spanish language, literature, history, culture, and/or civilization completed in a Study Abroad program taking place in Spain and Latin America. Approved for Letter and S/U grading. May be repeated to a maximum of 36 hours. Prerequisite: SPAN 228. May be taken concurrently with SPAN 228.

SPAN 410 Spanish/English Translation credit: 3 or 4 Hours.

Review of current translation theory and analysis and practice of the translation from Spanish to English (and vice versa) of a variety of text types, ranging from short literary texts to everyday commercial discourse such as that found on product labels. Emphasis on linguistic and cultural aspects of literary discourses as well as non-literary texts. Conducted in Spanish. Same as TRST 412. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 250, SPAN 252, and SPAN 254; or consent of instructor.

SPAN 418 Language & Minorities in Europe credit: 3 or 4 Hours.

Same as FR 418, GER 418, ITAL 418, LING 418, PS 418, and SLAV 418. See FR 418.

SPAN 430 Spanish Phonology credit: 3 or 4 Hours.

Systematic introduction to the sound structures of Spanish, concentrating on recent contributions of theoretical linguistics to the understanding of the phonology of Spanish in its standard and selected dialectal varieties. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 252 or SPAN 303 or consent of instructor.

SPAN 431 Spanish Morphology credit: 3 or 4 Hours.

Introductory course to basic concepts of morphological structure and word formation from a functional perspective. The course centers around the specific morphological characteristics of Spanish, considering historical and dialectal variation. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 305 or equivalent; or consent of instructor.

SPAN 432 Spanish Syntax credit: 3 or 4 Hours.

Systematic introduction to the foundations of Spanish syntax based on standard and more recent treatments of Spanish and syntactic theory. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 305 or consent of instructor.

SPAN 433 Spanish Sociolinguistics credit: 3 or 4 Hours.

Introduction to the sociolinguistic variation (social, historical, and dialectal) of Spanish-speaking communities, and to the basic theoretical and methodological concepts of sociolinguistic research. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 307 or SPAN 309; or consent of instructor.

SPAN 434 History of the Spanish Language credit: 3 or 4 Hours.

Study of the historical evolution of the Spanish language, from its origins in Latin to its spread and development in Spain and Latin America, considering also the influence of other languages on Spanish. Both internal history (changes in phonology, morphology, syntax and lexicon) and external history are examined. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 252 or equivalent introduction to Spanish or General Linguistics or consent of instructor.

SPAN 435 Introduction to Romance Linguistics credit: 3 or 4 Hours.

Comparative and historical analysis of the Romance languages. Same as FR 462, ITAL 435, LING 462, PORT 435, and RMLG 435. 3 undergraduate hours. 4 graduate hours. Prerequisite: Four semesters of a Romance language or Latin, or equivalent; LING 100, SPAN 252, FR 416, or equivalent; or consent of instructor.

SPAN 436 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, ENGL 486, GER 405, SLAV 430, and TRST 431. See SLAV 430.

SPAN 437 The Acquisition of Spanish credit: 3 or 4 Hours.

Examination of the acquisition of Spanish by monolinguals, bilinguals, and second language learners. After a general introduction to theories of language acquisition, the focus of the course is on empirical investigations of the acquisition of the phonology, lexicon, morphology and syntax of Spanish by each to the learner groups listed above. Taught in Spanish. 3 undergraduate hours. 4 graduate hours. Prerequisite: SPAN 303 and SPAN 305 or equivalent, or consent of instructor.

SPAN 442 Latina Literature credit: 3 or 4 Hours.

Same as LLS 442 and GWS 445. See LLS 442.

SPAN 460 Principles of Language Testing credit: 3 or 4 Hours.

Same as EIL 460, EPSY 487, FR 460, GER 460, ITAL 460, PORT 460, and SLS 460. See EIL 460.

SPAN 461 Medieval Spanish Studies credit: 3 or 4 Hours.

An introduction to major works and writers before 1500 with special attention to their political and cultural contexts. 3 undergraduate hours. 4 graduate hours. May be repeated as topics vary, to a maximum of 6 undergraduate hours or 8 graduate hours. Prerequisite: SPAN 310 and SPAN 318.

SPAN 462 Early Modern Spanish Studies credit: 3 or 4 Hours.

Study of the major authors and texts of the early modern period (Renaissance and Baroque) with particular attention to the cultural and political contexts of sixteenth and seventeenth century Span. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 310 and SPAN 318.

SPAN 463 18-19thC Spanish Studies credit: 3 or 4 Hours.

Selected literary and non-literary texts published in Spain during the 18th and 19th centuries. Focus on analysis of literary and other manifestations of major cultural movements and artistic currents and preoccupations. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 464 Spanish Studies 1898-1960 credit: 3 or 4 Hours.

Selected literary and non-literary texts published in Spain between 1898-1960. Focus on analysis of literary and other manifestations of major cultural movements and artistic currents and preoccupations. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours as topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 465 20th-21stC Spanish Studies credit: 3 or 4 Hours.

Examines the cultural production of 20th and 21st century Spain, with emphasis on major works, critical movements and debates. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 312 and SPAN 320.

SPAN 466 Colonial Span Amer Studies credit: 3 or 4 Hours.

In-depth study of colonial Spanish American discursive and cultural production from Pre-Hispanic times to the eighteenth century. Emphasis is placed upon the intellectual and cultural climate from which these texts emerged. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 314 and SPAN 324.

SPAN 467 19thC Sp American Studies credit: 3 or 4 Hours.

Provides a panoramic view of literary and cultural production in Spanish America between 1810 and 1900. Special attention paid to the emergence of "national literatures" within specific historical and political contexts. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 316 and SPAN 326.

SPAN 468 20th-21stC Span Am Studies credit: 3 or 4 Hours.

Examines major works, critical movements and/or theoretical issues in the 20th and 21st century Spanish American literary and cultural studies. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 8 graduate hours if topic varies. Prerequisite: SPAN 316 and SPAN 326.

SPAN 477 Span Grammar Comm Lang Tchg credit: 3 Hours.

Survey of major Spanish syntactic and morphological patterns with particular emphasis on the acquisition of Spanish grammar by non-native speakers. Students will develop a sensitivity for appropriate teaching of Spanish grammar. 3 undergraduate hours. No graduate credit. Required for teacher education. Prerequisite: SPAN 475 or consent of instructor.

SPAN 489 Theoretical Foundations of SLA credit: 3 or 4 Hours.

Same as FR 481, GER 489, ITAL 489, LING 489, and PORT 489. See LING 489.

SPAN 490 Advanced Readings in Spanish credit: 0 to 3 Hours.

Directed reading course intended to develop an advanced student's interest in a special area of Hispanic linguistics or literature (author, genre, period, group of works, etc.). Topics to be chosen in consultation with an advisor. Only topics not covered in regular offerings will be considered. 0 to 3 undergraduate hours. No graduate credit. May be repeated if topics vary. Prerequisite: SPAN 252 for linguistics topics; and any two of SPAN 310, SPAN 312, SPAN 314, or SPAN 316 for literature topics.

SPAN 491 Topics for Honors Students credit: 1 to 3 Hours.

For candidates for honors in Spanish; intensive study of topics in Hispanic literature or linguistics. 1 to 3 undergraduate hours. No graduate credit. May be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor and of departmental honors advisor.

SPAN 528 Sem 20thC Spanish Lit credit: 4 Hours.

Investigation of literary problems presented by the Spanish novel, drama, poetry and/or essay since 1900. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: SPAN 465 or equivalent.

SPAN 535 Sem Spanish-American Lit credit: 4 Hours.

Special problems in methodology and research; includes other prose fiction. Same as CWL 562. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: A related 400-level course in Spanish American Studies or consent of instructor.

SPAN 540 Sem History of Ideas credit: 4 Hours.

Major topics in Hispanic intellectual history; sample topics include El ensayo como genero instrumental de las ideas: El peso de la identidad cultural, Corrientes ideologicas coloniales, and Idealismo y realismo. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: A related 400- or 500-level course in Spanish or Spanish American Studies or consent of instructor.

SPAN 557 Sem Romance Ling credit: 4 Hours.

Selected topics in comparative Romance linguistics. Same as FR 559, ITAL 559, LING 559, PORT 559, and RMLG 559. May be repeated if topics vary. Prerequisite: SPAN 435 and consent of instructor.

SPAN 558 Sem Spanish Synchronic Ling credit: 4 Hours.

Selected topics of Spanish phonology, syntax and sociolinguistics in the light of present-day linguistic theory. May be repeated to a maximum of 16 hours if topics vary. Prerequisite: Graduate standing in Spanish or consent of instructor.

SPAN 559 Sem Spanish Diachronic Ling credit: 4 Hours.

Selected topics on the development of Spanish and its dialects in the light of present-day historical methods. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Consent of instructor.

SPAN 571 Proseminar For Lang Tchg credit: 4 Hours.

In-depth exploration of fundamental concepts in foreign language teaching; designed for departmental Teaching Assistants; topics include classroom discourse, teaching approaches, reading, listening, writing, and principles of language testing. Same as PORT 571. 4 graduate hours. No professional credit. Prerequisite: Teaching assistantship in the Department of Spanish and Portuguese or consent of instructor.

SPAN 572 Theory and Literary Criticism credit: 4 Hours.

Presentation of major critical theories for the analysis of literary and cultural texts since the mid-20th century. Hispanic, Luso-Braslian, and U.S. Latina/o critical theory will be studied. Students will demonstrate their understanding of these theories by critically engaging texts written in Spanish, Portuguese, or the foreign language of their specialization. Same as PORT 572. 4 graduate hours. No professional credit. Prerequisite: Graduate standing in the Department of Spanish and Portuguese or consent of instructor.

SPAN 573 Professional/Academic Writing credit: 4 Hours.

Examination and analysis of prevailing models of U.S. academic writing within the Humanities in the light of the varieties of rhetorical traditions across cultures and languages; discussion of current debates regarding academic writing. Development of critical awareness of the foundations of rhetorical structure in English, and comparison of those structures to those of other languages in which students will also be writing professionally. Examination of the academic publication process. Students will apply these discussions as they work on revising an existing scholarly paper for eventual publication. Same as GER 553, ITAL 573 and PORT 573. Prerequisite: Graduate standing.

SPAN 580 Classroom Lang Acquisition credit: 4 Hours.

Provides for an introduction to the context, process(es), and product of classroom language acquisition; emphasis is placed upon research, research findings, and implications of research. Same as EIL 580, FR 580, GER 580, ITAL 580, PORT 580, and SLS 580. Prerequisite: HUM 471 or equivalent, or consent of instructor.

SPAN 584 Theories in SLA credit: 4 Hours.

Course introduces doctoral students to current mainstream theories (e.g., linguistic, psycholinguistic, cognitive, and social) used in SLA research. Emphasis is on gaining fundamental understanding of how theories work in SLA, how to evaluate them, and what they attempt to explain. Same as CI 584, EALC 584, EPSY 563, FR 584, GER 584, ITAL 584, LING 584, and PORT 584. Prerequisite: EIL 489 or equivalent or consent of instructor.

SPAN 588 Sem Second Lang Learn credit: 4 Hours.

Treats specific topics in second language learning that are of current research and/or theoretical interest. Topics vary from term to term. Same as EALC 588, FR 588, GER 588, ITAL 588, LING 588, and PORT 588. May be repeated to a maximum of 16 hours if topics vary. Prerequisite: SPAN 580 or equivalent or consent of instructor.

SPAN 590 Topics in Hispanic Studies credit: 4 Hours.

Topical studies of Hispanic literature or linguistics beyond the scope of regular offerings at the 400- or 500-level. May be repeated to a maximum of 12 hours if topics vary. Prerequisite: Corresponding introductory course at the 400-level, or consent of instructor.

SPAN 595 Special Topics in Spanish credit: 1 to 4 Hours.

Independent study/research under the direction of a faculty member. May or may not fulfill requirements for a particular degree program in SIP. Consult Graduate Advisor. Approved for letter and S/U grading. May be repeated to a maximum of 8 hours.

SPAN 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Special Education (SPED)

SPED Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SPED>)

Courses

SPED 117 The Culture of Disability credit: 3 Hours.

The purpose of this course is to provide an introduction to the culture of disability across the lifespan. The impact of disabilities on an individual across the lifespan will be explored, and the unique culture that is created by having a disability will be addressed. The historical basis for the disability movement and special education will be addressed, including legislation and litigation that has had a significant impact on the field. Students also will learn about the characteristics of individuals with diverse abilities as well as current trends in educational services. This course satisfies the General Education Criteria for: Humanities - Hist Phil

SPED 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Additional fees may apply. See Class Schedule. May be repeated.

SPED 312 Introduction to Educational Technology credit: 2 or 3 Hours.

This course provides preservice teachers with the foundation for growth in technology integration through professional preparation, student teaching, and licensure. Major areas covered include the use of productivity tools, effective integration of the internet, and enhancing instruction through the use of multimedia. Additional topics include learning theories, professional development, evaluation, and technology use across multiple disciplines. Special equipment needed includes a USB-Flash Drive and SCD-R disks.

SPED 317 Characteristics & Eligibility credit: 3 Hours.

The purpose of this course is to provide an introduction to issues associated with the identification and characteristics of students with disabilities, eligibility for special education, and placement to meet students' educational needs. Prerequisite: SPED 117 and admission into the teacher education program in special education.

SPED 322 Intro Intellectual Disability credit: 3 Hours.

Study of the history and current status of the social, emotional, physical, and learning characteristics and problems of persons with an intellectual disability; identification and diagnosis; available services and provisions; and educational programs and lifelong processes of adaptation for these individuals and their families. Same as PSYC 322 and REHB 322. Prerequisite: PSYC 100 or SPED 117; or equivalent. This course satisfies the General Education Criteria for: Social Beh Sci - Beh Sci

SPED 391 Thesis credit: 2 Hours.

Prerequisite: Senior standing.

SPED 395 Independent Study credit: 2 Hours.

Study of problems not considered in other courses; designed for students who excel in self-direction and intellectual curiosity. Prerequisite: Upperclassman; upper five percent of class in grade-point average; demonstrated writing competence, research potential, scholarly attitude, and interest as attested to by instructors; consent of adviser and staff member who supervises the work.

SPED 405 Gen Educator's Role in SPED credit: 3 Hours.

Examination of issues in educating students with special needs: service delivery models, roles of teachers and related service providers, student assessment, curriculum individualization, instructional strategies, management of problem behaviors, and program evaluation. 3 undergraduate hours. 3 graduate hours. Prerequisite: Must be registered in teacher licensure program.

SPED 413 New Media & Learner Differences credit: 4 Hours.

An investigation of the dimensions of learner diversity: material (class, locale), corporeal (age, race, sex and sexuality, and physical and mental characteristics) and symbolic (culture, language, gender, family, affinity and persona). Examines social-cultural theories of difference, as well as considering alternative responses to these differences in educational settings - ranging from broad, institutional responses to specific pedagogical responses within classes of students. No undergraduate credit. 4 graduate hours. Prerequisite: Acceptance into the Master of Education with an emphasis on New Learning and New Literacies program.

SPED 414 Assessment in ECSE credit: 3 Hours.

Practice in designing and applying assessment devices and procedures and in using them to make educational decisions for children with special needs, birth through kindergarten age. 3 undergraduate hours. No graduate credit. Prerequisite: Credit or concurrent registration in SPED 524 or consent of instructor.

SPED 416 Perspectives on Gifted Edu credit: 3 or 4 Hours.

Consideration of persons in society exhibiting gifted behavior; who they are, their physical, psychological, social, and educational characteristics, and society's needs and provisions for them. The major portion of the course is devoted to the consideration and evaluation of instructional and administrative adjustments that should be made for the gifted in the educational structure. 3 undergraduate hours. 3 or 4 graduate hours.

SPED 424 Foundations of Assessment credit: 3 Hours.

Course focuses on the theoretical and practical considerations in the psychological and educational assessment of individuals with disabilities. An emphasis will be placed on understanding the technical and practical aspects of current assessment procedures and their application to the education of children and youth with disabilities. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 426 Collaboration and Teaming credit: 3 or 4 Hours.

Course is designed to provide participants with the information needed for effective collaboration and interactive teaming. Participants will learn effective models of collaboration and consultation, team member roles and responsibilities, collaborative practices for participating on teams, and strategies for securing appropriate resources for students with disabilities. Emphasis is placed on skills necessary for working collaboratively with parents, teachers, and other service providers. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Requires concurrent enrollment in SPED 524 or EDPR 420, or consent of instructor.

SPED 431 Assistive Tech & Phys Disab credit: 2 Hours.

Course focuses on specialized health care needs, policies, and procedures for working with students with disabilities. An overview is provided of methods for accommodating students including task or environmental modifications, assistive technology, and adaptive equipment options. 2 undergraduate hours. 2 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 432 Multiple Disabilities credit: 3 Hours.

Focuses upon the physical and educational characteristics of individuals with multiple disabilities, particularly those with physical disabilities and other health and sensory impairments; covers educational curricula, teaching methods, and other educational considerations such as working with parents, medical personnel, and support staff, and educational adaptations. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 435 Behavior Analysis in SPED credit: 3 Hours.

Remediation of behavior problems of exceptional students and adults using applied behavior analysis techniques; includes defining, observing, recording, charting, and evaluating behavior change and application of behavioral procedures to remediate behavior problems in the classroom. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education or consent of instructor.

SPED 436 Systematic Instruction in SPED credit: 4 Hours.

Elements of data-based instruction emphasizing educational planning for individuals with special needs; includes task and developmental analysis, writing instructional programs, and individualization of instruction. Covers infancy to young adults; mild to severe disabilities. 4 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in SPED 435, or consent of instructor.

SPED 437 Curriculum for Severe Disab credit: 4 Hours.

Curriculum design, development, and adaptation for students with moderate and severe disabilities; includes the following basic curriculum areas: domestic/home living, self-care, socialization, community living, leisure and recreation, and functional academics; a focus is on providing instruction in these areas in inclusive educational settings; and an emphasis throughout the course is on the evaluation of curriculum and program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 436.

SPED 438 Collaborating with Families credit: 3 or 4 Hours.

The impact of children with special needs on their families; models for the study of family systems are applied to understanding families of children with special needs; emphasis on planning family-focused interventions and exploring strategies for working with parents in a variety of settings. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: Practicum experience or consent of instructor.

SPED 440 Instructional Strategies I credit: 4 Hours.

Course is designed to provide participants with information on effective instructional practices for working with students with disabilities. Participants are provided with information on generic strategies and principles of learning, instructional formats and strategies for informal assessment. Throughout this course emphasis is placed on methods and strategies for instructing individuals and groups of students. Important consideration is given to legal and ethical issues and an understanding of diverse needs in instructional design and delivery. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 317 and SPED 517 or consent of instructor.

SPED 441 Instructional Strategies II credit: 4 Hours.

Course focuses the design of instruction based on diverse student characteristics, student performance data, curriculum goals, and the community context. Emphasis is placed on application of techniques and strategies to facilitate learning and on evaluating assessment information to modify methods, materials, or environments to enhance student success. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 440 and concurrent enrollment in SPED 524 or EDPR 250, or consent of instructor.

SPED 444 Career Development and Transition credit: 1 or 3 Hours.

Course focuses on developing transition plans and activities that prepare students with disabilities for adulthood, including post school employment, independent living, and postsecondary education. Particular emphasis is placed on career development including determining job interests, career exploration, work experiences prior to graduation, job development, and job placement. 1 or 3 undergraduate hours. 1 or 3 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 446 Curriculum Development I credit: 4 Hours.

Principles and practices for teaching students with disabilities. Topics include models of curriculum development, procedures for identifying curriculum priorities across content areas, and relationships between curriculum and instructional settings. Emphasis is on development of inclusive educational programs that are outcome-driven and on evaluation of program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 447 Curriculum Development II credit: 4 Hours.

Course focus is on ensuring access for students with disabilities to the general education curriculum in English language arts, mathematics, science and social studies by considering the interaction among content area knowledge, pedagogical knowledge, and evidence-based practice. Construction of curriculum in academic content areas with a scope and sequence tailored to individual student characteristics in an area of emphasis. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 446 and admission to the Department of Special Education, or consent of instructor.

SPED 448 Curriculum Development III credit: 4 Hours.

Review and application of curriculum development and adaptation principles and strategies to life skill domain areas. Curriculum areas addressed include domestic/home-living, leisure and recreation, community living, and vocational programs and job preparation. Emphasis on designing instruction to address life skill curriculum needs in inclusive educational programs and on critically evaluating curriculum and program effectiveness. 4 undergraduate hours. 4 graduate hours. Prerequisite: SPED 446 and admission to the Department of Special Education, or consent of instructor.

SPED 450 Introduction to ECSE credit: 2 Hours.

Overview of the history, trends, and issues of the field of Early Childhood Special Education (ECSE) with particular attention to federal and state policy, service system models, and professional roles and ethics. Emphasis is on current research, theory, and practice. 2 undergraduate hours. 2 graduate hours. Prerequisite: Junior standing.

SPED 460 Communication and Phys Disab credit: 4 Hours.

Focuses upon issues and intervention strategies that can impact the communication skills of persons with moderate or severe intellectual and/or physical disabilities. Specific assessment and intervention strategies are discussed as they relate to both verbal and augmentative communication. 4 undergraduate hours. 4 graduate hours.

SPED 461 AAC and Literacy credit: 2 or 3 Hours.

Course focuses on issues and strategies for teaching communication and literacy to individuals with significant intellectual or physical disabilities. Specific assessment and intervention strategies are discussed as they relate to alternative and augmentative communication (AAC) and the development of beginning literacy skills. 2 or 3 undergraduate hours. 2 or 3 graduate hours. Prerequisite: Concurrent enrollment or prior completion of SPED 440, and admission to the Department of Special Education, or consent of instructor.

SPED 465 Curriculum and Methods in ECSE credit: 3 Hours.

Introduction to the field of early childhood special education, including its history and major issues; instructional methods used in teaching and facilitating development in young children with disabilities are covered in depth. 3 undergraduate hours. 3 graduate hours. Prerequisite: Concurrent registration in SPED 524 or consent of instructor.

SPED 470 Learning Environments I credit: 3 Hours.

Course is designed to provide participants with an introduction to theories and interventions related to school climate and classroom management. Course will focus on using positive behavioral supports to create an effective classroom and school climate. 3 undergraduate hours. 3 graduate hours. Prerequisite: Admission to the Department of Special Education, or consent of instructor.

SPED 471 Learning Environments II credit: 3 Hours.

Course is designed to provide participants with specific information on intervention and evaluation strategies related to designing and managing effective learning environments and to becoming a discriminating consumer of the professional literature related to behavior interventions. 3 undergraduate hours. 3 graduate hours. Prerequisite: SPED 470, and admission to the Department of Special Education, or consent of instructor.

SPED 488 Ethics & Prof. Behavior credit: 3 Hours.

Designed to introduce students to ethical issues and challenges that teacher educators and other professionals, including Board Certified Behavior Analysts, may encounter in practice. The topics to be covered all revolve around ethical conduct in practice and research, as well as the decision-making foundations for resolving ethical issues. Students will obtain knowledge and skills through readings, discussion and various case scenarios, reflections, and discussion of the concepts of issues addressed in the reading and assignments. 3 undergraduate hours. 3 graduate hours. Prerequisite: Graduate standing. Undergraduate Seniors (with permission).

SPED 510 Legal Aspects of Disabilities credit: 4 Hours.

Study of the legal rights of individuals with disabilities and their families, with emphasis on educational aspects; inter-relationship of constitutional, statute, administrative and case law at the federal, state and local levels. Case study simulations and mock due process hearings are included.

SPED 513 Intro to Diversity & Equity credit: 4 Hours.

This course, geared to education non-majors, offers an introduction to ways of thinking about educational theories, concepts, and practices as they relate to philosophical discussions surrounding social justice, especially as pertaining to race, class, gender and disability. Broadens students' reflective understanding of the development of educational institutions and practices and, through an emphasis on class discussion, promotes a critical and analytical approach to thinking about the evaluating these institutions and practices. Same as EPS 576. Prerequisite: Acceptance into the Master of Education with an emphasis on Diversity and Equity in Education.

SPED 514 Equity Issues in Spec Educatio credit: 4 Hours.

A graduate-level overview of issues in equity and access for students with disabilities. Historical and legal foundations are reviewed, but the course focus is issues related to characteristics of individuals with disabilities, challenges in instructional service delivery, including of students with special needs in the general curriculum, and transition of students with disabilities to independent living. Participants reflect on issues in light of their own experiences. Prerequisite: Acceptance into the Master of Education with an emphasis on Diversity and Equity in Education Program or instructor approval.

SPED 517 Disability Issues in SPED credit: 4 Hours.

Overview of special education at the graduate level. Focus is placed on issues related to: assessment, identification, and characteristics across all disability areas. The greatest emphasis is placed on strategies for including students with disabilities in the general curriculum. Historical and legal perspectives that provide the foundation for special education are discussed.

SPED 520 Psycho-Social Aspects credit: 4 Hours.

Same as REHB 520. See REHB 520.

SPED 521 Admin & Supervision in SPED credit: 4 Hours.

Examination of administrative and supervisory practices in educating children with disabilities and gifted children in public and private schools; application of administrative theory to special education programs. Designed for graduate students in education administration or special education preparing to direct special education programs. 4 graduate hours. No professional credit. Prerequisite: SPED 517 or consent of instructor.

SPED 524 Supervised Prac in SPED credit: 1 to 8 Hours.

Supervised practice in one or more settings in which students with mild to severe disabilities are served; practicum settings may include day, residential, special, and regular schools which serve students with disabilities. Additional fees may apply. See Class Schedule. Approved for S/U grading only. May be repeated in same or subsequent terms to a maximum of 8 hours. Prerequisite: Admission to the graduate program in special education; consent of supervising faculty member.

SPED 526 Collaborative Leaders in SPED credit: 4 Hours.

Course provides special educators and other professionals with skills and strategies to assume a leader/change agent role in their schools. Participants focus on effective leadership, collaborative practices, and innovative programs in special education that create unique learning environments, ultimately impacting all stakeholders (student with and without disabilities, teachers, families). Course readings, lectures, and activities address how leaders in the field affect change in special education through grant writing, professional development, and the implementation and evaluation of innovative programs and practices. 4 graduate hours. No professional credit. Prerequisite: SPED 426 or equivalent.

SPED 538 Interdisciplinary Teaming credit: 4 Hours.

Study of roles and functions of teams in early intervention and special education service delivery; considers models of team process within and between service settings; explores dynamics of interaction on teams, including approaches to decision-making, communication, and conflict resolution; examines professional roles and tasks of team members in the intervention process.

SPED 545 Transition and Voc Planning credit: 3 Hours.

Provides an orientation to transition planning and vocational training as integrated components of secondary-level education curriculum. Topics include transition planning practices and participants, vocational assessment methods, supported employment concepts and issues, and vocational training strategies and programs Same as REHB 545.

SPED 550 Methods of Educational Inquiry credit: 4 Hours.

Same as CI 550, EPOL 550, and EPSY 573. See CI 550.

SPED 556 Prob and Trends in SPED credit: 4 to 8 Hours.

Introduction to significant problems, points of view, and trends in the field concerned; explores significant research related to organization, content, and techniques in the field in question. Students are encouraged to design/propose/conduct special studies in approved areas.

SPED 565 Atypical Development: B to 6 credit: 2 or 4 Hours.

Examines characteristics of children with major biological risk conditions and disabilities, birth - six, with a focus on the impact of these conditions on development; briefly examines interventions used by a variety of professionals in addressing specific developmental needs of children with a variety of disabilities Prerequisite: EPSY 236 or equivalent.

SPED 566 Leadership in ECSE credit: 4 Hours.

Program issues and research on the efficacy of various program models for young children with special needs from infancy to six; implications for program organization variables such as space, personnel roles, and curriculum Prerequisite: SPED 465 and concurrent enrollment in SPED 524, or consent of instructor.

SPED 583 Single Case Experimentl Design credit: 4 Hours.

Study of the analysis of behavior in one or a few subjects using advanced time series designs; includes making accurate and reliable assessment of objective behaviors and designing experiments that feature interpretable comparisons among interventions and credible generalizability to subjects, settings, and time periods other than those specifically studied. Classic and current exemplars of these designs are studied and critiqued in depth. Same as EPSY 583.

SPED 585 Individual Differences: B to 6 credit: 4 Hours.

Examines major developmental themes in young children from birth to six. Emphasizes individual differences resulting from environmental and biological factors that influence development, including those resulting from disabilities. Focuses on integration among multiple domains of development. Prerequisite: Graduate standing or consent of instructor.

SPED 590 Seminar for Advanced Students credit: 0 to 8 Hours.

Seminar in the education of individuals with special needs; open only to persons who have been admitted for graduate study. Additional fees may apply. See Class Schedule. Approved for letter and S/U grading.

SPED 591 Field Study and Thesis Seminar credit: 1 to 8 Hours.

Planning field studies and thesis problems by graduate students; students present their studies at each of four stages: (1) the inception, delimitation, tentative design stage; (2) the proposed design stage; (3) the revised design stage; and (4) the final design stage. Students are expected to analyze all presentations critically. May be repeated up to 8 hours. Prerequisite: Admission to graduate studies in Special Education or consent of instructor.

SPED 592 Concepts and Issues in SPED I credit: 4 Hours.

Roles and competencies for special education leadership positions; includes literature critique, and preparation and presentation of a major review paper in an area of research interest. Prerequisite: Admission to doctoral studies in Special Education or consent of instructor.

SPED 593 Concepts and Issues in SPED II credit: 4 Hours.

Seminar in current concepts and issues relating to all children with special needs; introduction to grant proposal writing; and introduction to journal reviewing; requires critical review of key readings and preparation of a literature review of a topic of current research in special education. Prerequisite: SPED 592 or consent of instructor.

SPED 595 Independent Study credit: 1 to 4 Hours.

Self-directive, independent study, that is, develops the individual's ability as an independent student and enables the student to pursue needed study in a field in which appropriate courses are not being offered during a given term. May be repeated with approval. Prerequisite: Approval of study outline by advisor and the department head prior to enrollment.

SPED 599 Thesis Research credit: 0 to 16 Hours.

Individual direction of research and thesis writing. Approved for S/U grading only. May be repeated.

Speech and Hearing Science (SHS)

SHS Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SHS>)

Courses

SHS 111 Living-Learning ASL Part 1 credit: 2 Hours.

An introductory course in American Sign Language (ASL); no previous knowledge or skills are needed. It is offered through the Living in Residence Program at Allen Hall. The focus is on the acquisition of beginning-level vocabulary items and grammar of ASL. ASL is a non-Indo-European language that uses the visual/manual rather than spoken/auditory modality. Students develop a core vocabulary and basic grammar to enable you to communicate using ASL. The Deaf Community, like other cultural groups, defines a population that shares both a language and pattern of transmission of beliefs and values. The course provides an introduction to the culture, traditions, and values of the Deaf Community.

SHS 112 Living-Learning ASL Part 2 credit: 2 Hours.

The second part of an introductory course in American Sign Language (ASL); some knowledge of and skills in ASL are required. It is offered through the Living in Residence Program at Allen Hall. The focus is on the continued acquisition of beginning-level vocabulary items and grammar of ASL. ASL is a non-Indo-European languages that uses the visual/manual rather than spoken/auditory modality. Students develop core vocabulary and grammar to enable you to communicate using ASL. The Deaf Community, like other cultural groups, defines a population that shares both a language and pattern of transmission of beliefs and values. The course provides further information of the culture, traditions, and values of the Deaf Community.

SHS 120 Child, Comm, & Lang Ability credit: 3 Hours.

Provides an introduction to the study of the human communication and language capacity and includes an overview of three areas of inquiry: language science, language development in children, and language disability in children.

This course satisfies the General Education Criteria for:
Social Beh Sci - Beh Sci

SHS 121 American Sign Language I credit: 4 Hours.

This is an introductory course in American Sign Language (ASL). No prior experience with the language is necessary. Students will learn vocabulary, elementary-level grammatical structures, and elements of U.S. Deaf Culture in order to engage in entry-level conversations in ASL. Basic social and communication skills associated with the use of ASL will be emphasized. This course is part of a sequence of courses that will fulfill the foreign language requirement for UIUC undergraduate students. Approved for Letter and S/U grading.

SHS 150 Hearing Processes & Disorders credit: 3 Hours.

An introduction to basic and clinical aspects of audition and their relevance to communication processes and communication disabilities from biological, humanistic, and technological perspectives. Communication processes and development are explored within historical, behavioral, and scientific frameworks. Hearing disabilities are described according to prevention etiology, manifestation, evaluation and treatment. The effects of disability on individuals and families across the lifespan are also addressed.

SHS 170 Intro Hum Comm Sys & Disorders credit: 3 Hours.

Examines broad perspectives of theories and information regarding normal and abnormal communication: how speech and language develop, how people hear, how they produce speech and what can go wrong; addresses the impact of speech and hearing science on society, culture, and modern technologies.

SHS 191 Freshmen Seminar credit: 0 to 9 Hours.

Special experimental seminar or independent study course intended to cover topics not treated by regular course offerings; open to undergraduates at any level. Requests for activation of this course may be made by students or by faculty and should be directed to the head of the academic department concerned. Although credit toward graduation is normally granted, credit toward satisfying specific college or departmental requirements is contingent upon approval by the appropriate college or departmental committee. Approved for S/U grading only.

SHS 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated, if topics vary.

SHS 200 General Phonetics credit: 3 Hours.

Basic principles of phonetic study; includes observation and representation of pronunciation, ear training, and practice in transcription.

SHS 221 American Sign Language II credit: 4 Hours.

This intermediate course in American Sign Language (ASL) is part of a sequence to fulfill the foreign language requirement. Students must have successfully completed SHS 121 or should be able to demonstrate advanced beginner ASL skills. Students will continue to learn vocabulary items and intermediate-level grammatical structures in order to improve conversation skills. As compared to SHS 121, a greater focus is placed on ASL constructions involving the complex use of space (e.g., verb inflections, so-called "classifiers", and constructed action). Same as LING 221. Approved for letter and S/U grading. Prerequisite: SHS 121 or equivalent language skills.

SHS 222 Language & Culture of Deaf Communities credit: 3 Hours.

Students will learn about culture and how it is manifested in various subgroups of society with a particular focus on the culture and language of Deaf people in the United States. Themes include: the linguistics of American Sign Language, aspects of social unity for Deaf people, common experiences of Deaf individuals, the educational system and Deaf students, and current issues that affect the Deaf community. For those students requiring 4 semesters of language other than English credit (LAS or BUS), SHS 222 can be used as the fourth course in the American Sign Language sequence that includes SHS 121, 221, and 321 to fulfill that requirement but cannot also then be used for Gen Ed requirements. Same as EPSY 222.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci
Cultural Studies - US Minority

SHS 231 Lang Diff Dis: American Persp credit: 3 Hours.

Same as AFRO 231. See AFRO 231.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

SHS 240 Intro Sound & Hearing Science credit: 3 Hours.

Acoustics, anatomy, and physiology of the auditory system; psychophysical methods; and a consideration of auditory theories and mechanics.

SHS 270 Comm Disability in the Media credit: 4 Hours.

Introduction to the study of human communication disability across the lifespan as depicted in the media and includes an overview of three areas of inquiry: behavioral/psychosocial impact of communication disability, ethical decisions in rehabilitation interventions, and disability rights.

This course satisfies the General Education Criteria for:

Advanced Composition

Social Beh Sci - Soc Sci

SHS 271 Communication and Aging credit: 3 Hours.

Course introduces social and physical issues of communication and aging, with particular emphasis on intergenerational interactions and on the physical disabilities of aging (e.g., hearing loss, Parkinson's disease, strokes, dementia). Discourse analysis techniques are used to integrate the social and physical aspects of aging and communication that are discussed in class.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

SHS 280 Communication Neuroscience credit: 3 Hours.

This course provides an overview of neuroscience with emphasis on human communication, moving from general concepts in neuroanatomy and neurophysiology to the specifics of the neuroscience of hearing, speech and language.

SHS 291 Research Lab Experience in SHS credit: 1 to 3 Hours.

Supervised participation in research laboratory and scholarly activities, usually as an assistant to an investigator. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 6 hours.

SHS 300 Anat & Physiol Spch Mechanism credit: 4 Hours.

Introduction to the anatomic and physiologic characteristics of the normal speech mechanism. Same as LING 300.

SHS 301 General Speech Science credit: 4 Hours.

Consideration of the physiology of the speaking act, and the acoustical and perceptual aspects of speech. Same as LING 303.

SHS 320 Development of Spoken Language credit: 3 Hours.

Study of the correlates of language development from the prelinguistic period to adulthood.

SHS 321 American Sign Language III credit: 4 Hours.

This advanced-intermediate course in American Sign Language (ASL) is part of a sequence to fulfill the foreign language requirement. Students must have successfully completed SHS 221 or should be able to demonstrate intermediate ASL conversation skills. Students will learn technical vocabulary items and complex elements of ASL narratives. In this course, students will focus on the fluid use of ASL across various registers and situations. Special emphasis will be placed on receptive fluency of complex constructions in ASL. Same as LING 321. Approved for letter and S/U grading. Prerequisite: SHS 221 or equivalent language skills.

SHS 352 Hearing Health and Society credit: 3 Hours.

An analysis of how hearing loss influences behavior of individuals and interactions among individuals within larger social/societal groups across the lifespan. Considers issues associated with early detection of hearing loss and promoting hearing conservation in different environments. Approaches to promoting behaviors that enhance communication in the presence of hearing loss will be explored. Philosophical, policy, and cultural controversies for defining hearing loss as a disability will be examined. Each of these topics will be considered within the interplay between the individual person, culture, age, disability, educational environment, community, and social/family interactions.

SHS 370 Civic Engagement in Wellness credit: 3 Hours.

Same as AHS 365, CHLH 365, KIN 365, and RST 365. See KIN 365.

SHS 375 Comm Partners & Health credit: 3 Hours.

Combines a community-based volunteer experience with class-based readings/discussion to introduce students to the study of communication in context. Students will use learning journals to document their volunteer experiences, describe the characteristics of conversational interactions they observe, and reflect on their own skills as flexible communication partners with people of various backgrounds and abilities and in a variety of clinical and professional settings. Includes a one-hour weekly discussion section (taught by SHS faculty/instructional staff) and three-four hour weekly community volunteer experiences (supervised by volunteer site employees). Same as AHS 375 and KIN 375. May be repeated in separate terms to a maximum of 6 hours.

SHS 380 Comm Competence and Disorders credit: 3 Hours.

This course explores ways of defining and documenting communicative competence for individuals with communication disorders in everyday interactions. It introduces students to theories of communication-in-context and methods of discourse analysis. Students will critically review research on discourse of individuals with communication disorders across the lifespan and discuss its relevance to clinical practice. Prerequisite: Minimum sophomore standing or consent of instructor.

SHS 383 Special Topics credit: 3 or 4 Hours.

Lecture course in topics of current interest in speech and hearing science; specific subject matter announced in the Class Schedule. May be repeated if topics vary.

SHS 385 Evidence-Based Practice in Communication Sciences and Disorders credit: 3 Hours.

This course is designed to examine how the field of Speech and Hearing Science creates knowledge or evidence to support the assessment and intervention for individuals with communication disorders. Students will gain an introductory understanding of clinical research methodology and become familiar with the process of selecting evidence-based practices. Prerequisite: Sophomore standing or consent of instructor.

SHS 390 Individual Study credit: 2 to 4 Hours.

Individual investigation of special problems. May be repeated to a maximum of 6 hours. Prerequisite: Ten hours of speech and hearing science, and written approval by the faculty members who will supervise the student's work.

SHS 395 Honors Individual Study credit: 2 Hours.

Individual study leading either to a thesis or to departmental honors. May be repeated to a maximum of 4 hours. Prerequisite: Senior standing; a cumulative grade point of 3.5 or consent of the head of the department.

SHS 410 Stuttering: Theory & Practice credit: 3 or 4 Hours.

Study of the theoretical and research literature concerning the causes, diagnosis, and treatment of stuttering and an analysis of clinical procedures in stuttering therapy. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS Program or consent of instructor. For graduate credit, students must have graduate level status in SHS Program or consent of instructor. Additional work involved.

SHS 411 Normal and Disordered Voice credit: 3 or 4 Hours.

Study of the biomechanics of normal and disordered voice production with application to both clinical and pedagogical voice training and care. 3 undergraduate hours. 4 graduate hours. Additional work is involved for 4 credit hours.

SHS 427 Language and the Brain credit: 3 or 4 Hours.

How the human brain supports production and comprehension of language. Topics covered include: neuroanatomy of language; neuroimaging of language; language disorders; brain lateralization for language; bilingualism and the brain; sign language and the brain. Same as LING 427 and PSYC 427. 3 undergraduate hours. 4 graduate hours. Prerequisite: One of PSYC 210, PSYC 224, PSYC 248, LING 225, SHS 170, or consent of instructor.

SHS 430 Devel & Disorders Phonol Artic credit: 3 or 4 Hours.

Survey of basic knowledge concerning normal and deviant phonological development, and principles for applying this knowledge to the assessment and remediation of phonological disorders. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS Program or consent of instructor. Additional work is involved for 3 hours. For graduate credit, students must have graduate level status in the SHS Program or consent of instructor. Additional work involved for 4 hours.

SHS 431 Lang Disorders Preschool Child credit: 3 or 4 Hours.

Advanced study of early language milestones, processes, and theories; examination of the nature and character of disordered language acquisition in preschool children, and evaluation of current theory and intervention research in the area. 3 undergraduate hours. 4 graduate hours. Prerequisite: For undergraduate credit, students must have senior level status in the SHS program or consent of instructor. For graduate credit, students must have graduate level status in the SHS Program or consent of instructor. Additional work involved for 4 hours credit.

SHS 450 Intro Audiol & Hear Disorders credit: 4 Hours.

Review of the history of audiology as a profession; study of symptoms, causes, and treatment of hearing losses; and principles and application of basic audiometry. 4 undergraduate hours. 4 graduate hours. Prerequisite: Consent of Instructor.

SHS 451 Aural Rehab Children to Adults credit: 2 to 4 Hours.

Principles and methods of clinical and classroom retraining of the hard-of-hearing; includes lip reading, auditory training, speech disorders and conservation, and counseling. 2 to 4 undergraduate hours. 2 to 4 graduate hours. Prerequisite: Consent of instructor.

SHS 470 Neural Bases Spch Lang credit: 4 Hours.

Advanced study of neuroanatomy and neurophysiology with emphasis on current research pertaining to nervous system structures and functions important for speech and language. Critical analyses of current theories of the function of neural mechanisms utilized in speech and language. 4 undergraduate hours. 4 graduate hours. Prerequisite: SHS 300 and SHS 301, or equivalent, or consent of instructor.

SHS 473 Augmentative & Alt Comm credit: 2 to 4 Hours.

Introduces students to the field of augmentative and alternative communication (AAC), to the range of assistive technologies, and to diagnostic and treatment approaches used by speech-language pathologists. Focuses on the communicative needs of adults and children with acquired communication disorders in a variety of settings (e.g., hospital, school, home, work). 2 to 4 undergraduate hours. 2 to 4 graduate hours. Prerequisite: For undergraduate credit, 2 or 3 hours, students must have senior level status in the SHS Program, or consent of instructor. Additional work is involved for 3 hours. For graduate credit, 2 to 4 hours, students must have graduate level status in the SHS Program, or consent of instructor. Additional work involved for 4 hours.

SHS 475 Prepracticum in SHS credit: 1 to 2 Hours.

A mentoring experience in which students will be paired with clinical instructors in SHS and provided opportunities to observe clinical speech-language pathology and audiology sessions in a variety of settings. Prepracticum is designed to provide students: 1) initial opportunities to integrate course work with clinical practice; 2) supported experiences in documentation/data collection skills used in clinical settings; and 3) supervised observation hours required by the American Speech-Language and Hearing Association (ASHA) for certification as a Speech-Language Pathologist or Audiologist. 1 to 2 undergraduate hours. No graduate credit. Approved for S/U grading only. May be repeated in the same or separate terms to a maximum of 2 hours.

SHS 477 Beginning Practicum in SHS credit: 1 to 3 Hours.

Mentored experience in which students are paired with a clinical instructor in SHS and provided opportunities to assist in the ongoing management of clinical cases in a variety of settings. The beginning practicum is designed for students with less than a year of supervised clinical experience (i.e. 100 or fewer contact hours as defined by the American Speech-Language Hearing Assoc.-ASHA). Working with the clinical team, the beginning practicum will provide students with: 1) supported opportunities to assist in all aspects of clinical practice (e.g., diagnosis, intervention, documentation, team meetings/planning); 2) opportunities to obtain supervised contact hours required by ASHA for certification in Speech-Language Pathology or Audiology. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated in same term to a maximum of 3 undergraduate or 4 graduate hours. May be repeated in separate terms to a maximum of 3 undergraduate or 6 graduate hours. Prerequisite: For students pursuing clinical preparation in speech-language pathology and/or audiology.

SHS 500 Exper Phon I Spch Physiol credit: 4 Hours.

Theoretical consideration of speech as motor behavior, special reference to physiological investigations of normal respiration, phonation, and supralaryngeal articulation; and survey of the experimental literature in articulatory phonetics. Same as LING 575. Prerequisite: Consent of instructor.

SHS 501 Exper Phon II Spch Acous Perc credit: 4 Hours.

Theoretical consideration of speech as an acoustical phenomenon; special reference to acoustical investigations of the laryngeal source and radiated speech signal; and survey of the experimental literature in acoustic phonetics and speech perception. Same as LING 576. Prerequisite: Consent of instructor.

SHS 510 Advanced Seminar in Stuttering credit: 4 Hours.

Advanced study of stuttering disorders; topics vary, but emphasis is placed on research, measurement, evaluation, and methods. Prerequisite: SHS 410 or consent of instructor.

SHS 511 Assessment and Management of Voice Disorders credit: 4 Hours.

Study of the anatomy, pathophysiology, etiology, acoustics, and perception of abnormal voice production, including foundational skills for assessment, differential diagnosis, and management of voice disorders. 4 graduate hours. No professional credit. Prerequisite: SHS 300, SHS 301, SHS 411 or equivalent or consent of instructor.

SHS 512 Orofacial Anomalies credit: 2 to 4 Hours.

Evaluation of current theories and intervention research associated with cleft palate and orofacial anomalies. Advanced study and critical analysis of speech, dental, and surgical treatment procedures. Prerequisite: SHS 300, SHS 301 or equivalent or consent of instructor.

SHS 513 Assessment and Management of Dysphagia credit: 4 Hours.
Study of the anatomy, physiology, and pathophysiology of the oral and pharyngeal stages of swallowing and critical review of the research literature pertaining to methods for diagnosis and treatment of dysphagia. Prerequisite: SHS 300 or equivalent and SHS 470, or consent of instructor.

SHS 514 Motor Speech Disorders credit: 4 Hours.
Study of the etiology and symptomatology of pediatric and adult speech problems resulting from neurological impairment, and critical review of the research literature pertaining to methods for assessment and treatment of these disorders. Prerequisite: SHS 300 or equivalent and SHS 470, or consent of instructor.

SHS 520 Language Science credit: 4 Hours.
Study of recent research and theory in neurolinguistics, psycholinguistics, and sociolinguistics. Intensive examination of data collection and analysis procedures in language acquisition, and interpretation of research results relative to different age groups. Implications for clinical practice and clinical research in language disorders are addressed. Prerequisite: SHS 320 or equivalent, or consent of instructor.

SHS 532 Lang Disorders Schl-Age Child credit: 2 to 4 Hours.
Advanced study of the nature of language impairments and language/learning disabilities found in the school-age population, and ramifications for academic success and social development; critical review of theoretical models and empirical evidence of language learning in older children; evaluation of research in the diagnosis and treatment of language impairments in older children. Prerequisite: SHS 320 or equivalent, or consent of instructor.

SHS 533 Advanced Language Diagnostics credit: 2 to 4 Hours.
Advanced study of the diagnosis of language disorders in children from infancy through adolescence; particular emphasis on critical evaluation of current methods in assessment, the development of problem-solving skills, and the application of computer technology in language analysis. Prerequisite: SHS 520 or equivalent, or consent of instructor.

SHS 534 Aphasia and Related Disorders credit: 2 to 4 Hours.
Advanced study of the communication disorders resulting from neurological impairments in adults: critical analysis of the research literature, examination of current theories regarding aphasia and related disorders; evaluation of existing paradigms of diagnosis and intervention. Prerequisite: SHS 470 or consent of instructor.

SHS 540 Psychoacoustics credit: 4 Hours.
Advanced study of physical nature of sound and its measurement; theory and practice of psychophysics, including the various aspects of psychoacoustics (sensitivity, masking, loudness, pitch, binaural hearing, speech perception) and the nonlinear nature of the auditory system. Prerequisite: SHS 240 or equivalent.

SHS 541 Clinical Auditory Anat & Phys credit: 4 Hours.
The objective of the course is for students to gain an understanding of the structure and function of the peripheral and central auditory system from a clinically oriented perspective. Clinically relevant topics on the pathophysiology of the auditory system will be presented. Prerequisite: SHS 240, SHS 450 or equivalent, or consent of instructor.

SHS 550 Assess Audition & Aud Disorder credit: 4 Hours.
Study of technical and clinical aspects of audiological assessment and auditory disorders; critical analysis of clinical and experimental literature; laboratory experience in audiological assessment techniques. Prerequisite: SHS 240, SHS 450, or equivalent, or consent of instructor.

SHS 551 Electrophys Indices Audition credit: 4 or 5 Hours.
Study of technical and clinical aspects of electrophysiologic measures of audition; critical analysis of clinical and experimental literature; laboratory experience in electrophysiologic techniques. 4 or 5 graduate hours. No professional credit. Prerequisite: SHS 550 or consent of instructor.

SHS 552 Diag Hear Impair Infants Child credit: 4 Hours.
Study of the major etiologies underlying hearing impairments encountered in the pediatric population, program models for infants and young children at risk for hearing impairment, behavioral and physiologic issues in assessment and evaluation of residual hearing, and selection of hearing aids and other sensory prosthetic devices. Prerequisite: SHS 550.

SHS 553 Hearing Aids and Amplification credit: 4 Hours.
Study of technical and clinical aspects of personal hearing aids and amplification devices; survey of clinical and experimental literature; laboratory experience in electroacoustic and real-ear measurement, earmold impressions and modification procedures, and solving fitting problems. Prerequisite: SHS 550.

SHS 554 Advanced Audiological Assess credit: 4 Hours.
Seminar on current research in advanced audiology, with emphasis on experimental and clinical protocols involving electrophysiologic and behavioral measures in areas including newborn auditory screening using evoked potentials, intraoperative and intensive care unit monitoring, brain-mapping, event-related potentials, central auditory assessment, and computerized assessment of balance function. Prerequisite: SHS 551 or equivalent, or consent of instructor.

SHS 555 Comm Lang Probs Hear Impaired credit: 4 Hours.
Advanced course in the problems and procedures involved in the acquisition of language and communication by persons with severe hearing impairment, particularly those with profound prelingual deafness; emphasis on research and measurement in the development of speech, speechreading, residual hearing, reading, written language, and manual communication, including finger spelling and the language of signs; and stress on the applications of recent approaches in linguistics and psycholinguistics to language development. Prerequisite: Consent of instructor.

SHS 556 Sens Prosth Devices Hear Loss credit: 4 Hours.
Seminar on current research in signal processing approaches and experimental protocols for the development and fitting of hearing aids, tactile aids, cochlear implants, and assistive listening devices. Prerequisite: SHS 553 or consent of instructor.

SHS 557 Adv Clin Prac Aud Assess Rehab credit: 1 to 8 Hours.
Supervised assessment and management of patients. Includes audiological evaluation techniques; treatment counseling; hearing aid selection, evaluation, and dispensing; and aural rehabilitation therapy. External placement in a variety of sites is available as well as in the departmental Audiology Clinic. May be repeated with approval. Prerequisite: Graduate standing, plus SHS 240, SHS 450, SHS 451, or equivalent coursework and consent of instructor.

SHS 558 Tinnitus credit: 2 Hours.
This advanced seminar on tinnitus covers the types of tinnitus, pathophysiology of chronic subjective/sensorineural tinnitus, latest research involving both animal and human studies, assessment of tinnitus, and management of tinnitus. It examines the complexity of tinnitus, its consequences for individuals and societies, and how health-care providers, specifically audiologists, may mitigate its impact. 2 graduate hours. No professional credit. Prerequisite: SHS 541 or consent of instructor. Graduate student status in Speech and Hearing Science or consent of instructor.

SHS 560 Audiological Assessment Lab credit: 2 Hours.

Clinical laboratory experience in audiological assessment including the evaluation, identification, diagnosis and treatment of hearing loss. Patient counseling and case history intake skills are addressed. Prerequisite: SHS 550 or concurrent enrollment in SHS 550.

SHS 561 Medical Audiology credit: 4 Hours.

Students will gain in-depth knowledge of the etiology, prevention, identification, diagnosis, and management of auditory disorders, with focus on pathophysiology, ototoxicity, and genetic influences. 4 graduate hours. No professional credit. Prerequisite: SHS 541 and SHS 550 or consent of instructor. Graduate students only.

SHS 563 Amplification Lab credit: 2 Hours.

Clinical laboratory experience in the selection, testing, fitting and maintenance of current technology amplification devices. Prerequisite: Concurrent enrollment in SHS 553.

SHS 564 Vestibular Assessment and Rehabilitation credit: 4 Hours.

This course on vestibular assessment and rehabilitation covers the anatomy and physiology of the vestibular system, common vestibular disorders and other causes of dizziness, bedside examination of the dizzy patient, administration and interpretation of vestibular tests including videonystagmography (VNG) and electronystagmography (ENG). It will also cover the role of audiologists and other health care professionals in the assessment and management of dizzy patients, and vestibular rehabilitation. 4 graduate hours. No professional credit. Prerequisite: Graduate student status or consent of instructor.

SHS 565 Teaching in the Professoriate credit: 4 Hours.

Same as CHLH 565, KIN 565, RST 565. See KIN 565.

SHS 570 Quant Reasoning Spch Hear Sci credit: 2 or 4 Hours.

Introduction to experimental designs and methods of statistical analysis in speech and hearing research. Prerequisite: Consent of instructor.

SHS 571 Clinical Sociolinguistics credit: 4 Hours.

Clinical application of sociolinguistic concepts for communicatively impaired populations. Focuses on language difference, and utilizes technological strategies needed for assessment and intervention with linguistically diverse populations. Includes computer analysis of talk data from language disordered and linguistically different speakers. Prerequisite: Consent of instructor.

SHS 572 Counseling in Comm Disorders credit: 2 to 4 Hours.

Focuses on counseling principles, theories, and methods useful to the speech-language pathologist and audiologist when working with communication disordered individuals and their families. Issues related to ethics, values, grief, culture, family systems, the impact of disability, referral sources and techniques for interviewing and counseling are discussed. Prerequisite: Consent of instructor.

SHS 575 School Spch-Lang Clin Methods credit: 2 Hours.

Study of methods and materials used in the schools by the speech and language clinician. Approved for S/U grading only. Prerequisite: Consent of instructor.

SHS 576 School Intrnshp Spch-Lang Path credit: 4 to 8 Hours.

The student is assigned to a school-based speech-language pathologist for a practical learning experience in P-12 schools full-time for 8-16 weeks. The student is expected to apply knowledge learned in the academic and clinical portions of their program to the entire school caseload by the end of this experience. Approved for letter and S/U grading. May be repeated to a maximum of 8 graduate hours. Prerequisite: Forty graduate hours of coursework including a minimum of 6 graduate hours of clinical practicum in SHS 475 C, D, or E, or consent of instructor.

SHS 577 Advanced Practicum in SHS credit: 1 to 4 Hours.

A mentored experience in which students are paired with a clinical instructor in SHS and provided opportunities to assist and take leadership roles in the ongoing management of clinical cases in a variety of settings. The advanced practicum is designed for students with more than a year of supervised clinical experience (i.e., more than 100 contact hours as defined by the American Speech-Language and Hearing Association-ASHA). Working within a clinical team, the advanced practicum will provide students with: 1) supported opportunities to assist in all aspects of clinical practice (e.g., diagnosis, intervention, documentation, team meetings/planning); 2) take lead clinician and/or case management roles for some cases; 3) opportunities to obtain supervised contact hours required by the ASHA for certification in Speech-Language Pathology or Audiology. May be repeated with approval. Prerequisite: SHS 477.

SHS 579 Prof/Eth/Legal Issues AuD/SLP credit: 3 Hours.

Emphasis will be placed on issues on ethical and professional integrity in speech and hearing clinical practice, including certification and licensure, quality assurance, evidence based practice, and health care and reimbursement. Prerequisite: SHS 555 or SHS 557.

SHS 580 Cochlear Implants credit: 4 Hours.

Focuses on current cochlear implant technologies, principles of evidence-based practice of cochlear implant assessment and intervention by audiologists and speech-language pathologists, and empirical outcomes for children and adults. 4 graduate hours. No professional credit. Prerequisite: Graduate standing in the Department of Speech and Hearing Science.

SHS 586 Adv Sem Development Com Dis credit: 2 Hours.

Study of theoretical and empirical research in typical and atypical developmental aspects of children's communication. Students will critically analyze and interpret the extant literature; lead seminar discussions and write scholarly reviews; and/or design original research projects. Specific topics will vary and be announced in the Class Schedule. 2 graduate hours. No professional credit. Approved for letter and S/U grading. May be repeated in separate terms, if topics vary.

SHS 587 Advanced Seminar in Acquired Communication Disorders credit: 2 Hours.

Study of theoretical and empirical research in acquired communication disorders in adulthood. Students will critically analyze and interpret the extant literature; lead seminar discussions and write scholarly reviews; and/or design original research projects. Specific topics will vary and be announced in the Class Schedule. 2 graduate hours. No professional credit. Approved for letter and S/U grading. May be repeated in separate terms, if topics vary.

SHS 588 Adv Sem Neural Bases Com Dis credit: 2 Hours.

Study of theoretical and empirical research in the neural bases of speech, language, hearing, cognitive, and/or swallowing disorders in pediatric and adult populations. Students will critically analyze and interpret the extant literature; lead seminar discussions and write scholarly reviews; and/or design original research projects. Specific topics will vary and be announced in the Class Schedule. 2 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms, if topics vary.

SHS 590 History of CSD credit: 4 Hours.

This doctoral seminar explores the evolution of the field of Communication Sciences and Disorders (CSD) by examining: 1) the historical research base of the field; 2) critical research and practice issues that have emerged across the history of field; and 3) the contributions of key figures in the field. The course is designed to help students understand how the discipline has been organized and where their own research interests fit with the respect to the history of the discipline. Prerequisite: Doctoral students in SHS or consent of instructor.

SHS 592 Prosem Spch & Hear Sci credit: 0 to 1 Hours.

Required seminar for all graduate students; involves reporting of ongoing research of faculty, visiting researchers, and students as well as discussion of topics related to professional and academic research careers. Approved for S/U grading only. May be repeated up to 4 credit hours toward degree requirements as topics vary.

SHS 593 Special Problems credit: 1 to 8 Hours.

Investigative projects in speech and hearing not including theses. 1 to 8 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

SHS 594 PhD Early Research Project credit: 1 to 4 Hours.

This mentored research experience provides individualized opportunities for PhD students to conduct research projects under the direction of their faculty mentors/advisors. Approved for S/U grading only. May be repeated in separate terms to a maximum of 8 hours.

SHS 599 Thesis Research credit: 0 to 16 Hours.

Individual research in the various areas of speech and hearing science. Approved for S/U grading only. May be repeated.

Statistics (STAT)

STAT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/STAT>)

Courses

STAT 100 Statistics credit: 3 Hours.

First course in probability and statistics at a precalculus level; emphasizes basic concepts, including descriptive statistics, elementary probability, estimation, and hypothesis testing in both nonparametric and normal models. Credit is not given for both STAT 100 and any one of the following: ECON 202, PSYC 235, or SOC 485. Prerequisite: MATH 112.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

STAT 200 Statistical Analysis credit: 3 Hours.

Survey of statistical concepts, data analysis, designed and observational studies and statistical models. Statistical computing using a statistical package such as R or a spreadsheet. Topics to be covered include data summary and visualization, study design, elementary probability, categorical data, comparative experiments, multiple linear regression, analysis of variance, statistical inferences and model diagnostics. May be taken as a first statistics course for quantitatively oriented students, or as a second course to follow a basic concepts course. Credit is not given for both STAT 200 and STAT 212.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

STAT 212 Biostatistics credit: 3 Hours.

Application of statistical reasoning and statistical methodology to biology. Topics include descriptive statistics, graphical methods, experimental design, probability, statistical inference and regression. In addition, techniques of statistical computing are covered. Credit is not given for both STAT 212 and STAT 200.

This course satisfies the General Education Criteria for:

Quantitative Reasoning I

STAT 361 Probability & Statistics for Computer Science credit: 3 Hours.

Same as CS 361. See CS 361.

STAT 385 Statistics Programming Methods credit: 3 Hours.

Statisticians must be savvy in programming methods useful to the wide variety of analysis that they will be expected to perform. This course provides the foundation for writing and packaging statistical algorithms through the creation of functions and object oriented programming. Fundamental programming techniques and considerations will be emphasized. Students will also create dynamic reports that encapsulate their implemented algorithms. Students must have access to a computer on which they can install software. Prerequisite: STAT 200 or STAT 212.

STAT 390 Individual Study credit: 1 or 2 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

STAT 391 Honors Individual Study credit: 1 or 2 Hours.

May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

STAT 400 Statistics and Probability I credit: 4 Hours.

Introduction to mathematical statistics that develops probability as needed; includes the calculus of probability, random variables, expectation, distribution functions, central limit theorem, point estimation, confidence intervals, and hypothesis testing. Offers a basic one-term introduction to statistics and also prepares students for STAT 410. Same as MATH 463. 4 undergraduate hours. 4 graduate hours. Prerequisite: MATH 241 or equivalent.

STAT 408 Actuarial Statistics I credit: 4 Hours.

Examines elementary theory of probability, including independence, conditional probability, and Bayes' theorem; combinations and permutations; random variables, expectations, and probability distributions; joint and conditional distributions; functions of random variables; sampling; central limit theorem. Same as MATH 408. 4 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 408 and either MATH 461 or STAT 400. Prerequisite: MATH 241 or equivalent.

STAT 409 Actuarial Statistics II credit: 4 Hours.

Continuation of STAT 408. Examines parametric point and interval estimation, including maximum likelihood estimation, sufficiency, completeness, and Bayesian estimation; hypothesis testing; linear models; regression and correlation. Same as MATH 409. 4 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 409 and STAT 410. Prerequisite: STAT 408.

STAT 410 Statistics and Probability II credit: 3 or 4 Hours.

Continuation of STAT 400. Includes moment-generating functions, transformations of random variables, normal sampling theory, sufficiency, best estimators, maximum likelihood estimators, confidence intervals, most powerful tests, unbiased tests, and chi-square tests. Same as MATH 464. 3 undergraduate hours. 4 graduate hours. Credit is not given for both STAT 410 and STAT 409. Prerequisite: STAT 400; or STAT 100 and MATH 461.

STAT 420 Methods of Applied Statistics credit: 3 or 4 Hours.

Systematic, calculus-based coverage of the more widely used methods of applied statistics, including simple and multiple regression, correlation, analysis of variance and covariance, multiple comparisons, goodness of fit tests, contingency tables, nonparametric procedures, and power of tests; emphasizes when and why various tests are appropriate and how they are used. Same as MATH 469. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 408 or STAT 400; MATH 231 or equivalent; knowledge of basic matrix manipulations; or consent of instructor.

STAT 424 Analysis of Variance credit: 3 or 4 Hours.

Estimation and hypotheses testing in linear models; one-, two-, and higher-way layouts; incomplete layouts; analysis of covariance; and random effects models and mixed models. 3 undergraduate hours. 4 graduate hours. Prerequisite: Credit or concurrent registration in MATH 415 and STAT 410.

STAT 425 Applied Regression and Design credit: 3 or 4 Hours.

Explores linear regression, least squares estimates, F-tests, analysis of residuals, regression diagnostics, transformations, model building, factorial designs, randomized complete block designs, Latin squares, split plot designs. Computer work is an integral part of the course. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 426 Sampling and Categorical Data credit: 3 or 4 Hours.

Sampling: simple random, stratified, systematic, cluster, and multi-stage sampling. Categorical data: multiway contingency tables, maximum likelihood estimation, goodness-of-fit tests, model selection, logistic regression. Computer work is an integral part of the course. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 427 Statistical Consulting credit: 3 or 4 Hours.

Students, working in groups under the supervision of the instructor, consult with faculty and graduate students through the Statistical Consulting Service; readings from literature on consulting. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 425 or consent of instructor.

STAT 428 Statistical Computing credit: 3 or 4 Hours.

Examines statistical packages, numerical analysis for linear and nonlinear models, graphics, and random number generation and Monte Carlo methods. Same as CSE 428. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410 or equivalent; knowledge of a programming language.

STAT 429 Time Series Analysis credit: 3 or 4 Hours.

Studies theory and data analysis for time series; examines autoregressive moving average model building and statistical techniques; and discusses spectral model building and statistical analysis using windowed periodograms and Fast Fourier Transformations. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410.

STAT 430 Topics in Applied Statistics credit: 3 or 4 Hours.

Formulation and analysis of mathematical models for random phenomena; extensive involvement with the analysis of real data; and instruction in statistical and computing techniques as needed. 3 undergraduate hours. 4 graduate hours. May be repeated with approval. Prerequisite: STAT 410 or STAT 420; or consent of instructor.

STAT 431 Applied Bayesian Analysis credit: 3 or 4 Hours.

Introduction to the concepts and methodology of Bayesian statistics, for students with fundamental knowledge of mathematical statistics. Topics include Bayes' rule, prior and posterior distributions, conjugacy, Bayesian point estimates and intervals, Bayesian hypothesis testing, noninformative priors, practical Markov chain Monte Carlo, hierarchical models and model graphs, and more advanced topics as time permits. Implementations in R and specialized simulation software. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410 and knowledge of R.

STAT 432 Basics of Statistical Learning credit: 3 or 4 Hours.

Topics in supervised and unsupervised learning are covered, including logistic regression, support vector machines, classification trees and nonparametric regression. Model building and feature selection are discussed for these techniques, with a focus on regularization methods, such as lasso and ridge regression, as well as methods for model selection and assessment using cross validation. Cluster analysis and principal components analysis are introduced as examples of unsupervised learning. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400, and either STAT 420 or STAT 425.

STAT 434 Survival Analysis credit: 3 or 4 Hours.

Introduction to the analysis of time-to-event outcomes. Topics center around three main procedures: the Kaplan-Meier estimator, the log-rank test, and Cox regression. Emphasis on big-picture concepts, basic methodological understanding, and practical implementation in R. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 410, STAT 420, and knowledge of R at the level of STAT 420.

STAT 440 Statistical Data Management credit: 3 or 4 Hours.

The critical elements of data storage, data cleaning, and data extractions that ultimately lead to data analysis are presented. Includes basic theory and methods of databases, auditing and querying databases, as well as data management and data preparation using standard large-scale statistical software. Students will gain competency in the skills required in storing, cleaning, and managing data, all of which are required prior to data analysis. Same as CSE 440. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400 or STAT 409.

STAT 443 Professional Statistics credit: 3 or 4 Hours.

This project-based course emphasizes written, visual, and oral communication of statistical results and conclusions. An introduction to statistical consulting is also provided. Additional topics include introductions to statistical methodologies in industry and aspects of careers in statistics. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 420 or consent of instructor.

STAT 448 Advanced Data Analysis credit: 4 Hours.

Several of the most widely used techniques of data analysis are discussed with an emphasis on statistical computing. Topics include linear regression, analysis of variance, generalized linear models, and analysis of categorical data. In addition, an introduction to data mining is provided considering classification, model building, decision trees, and cluster analysis. Same as CSE 448. 4 undergraduate hours. 4 graduate hours. Prerequisite: STAT 400 or STAT 409, and credit for or concurrent registration in STAT 410.

STAT 458 Math Modeling in Life Sciences credit: 3 or 4 Hours.

Same as ANSC 448 and IB 487. See ANSC 448.

STAT 466 Image and Neuroimage Analysis credit: 3 or 4 Hours.

Same as PSYC 466. See PSYC 466.

STAT 480 Data Science Foundations credit: 3 or 4 Hours.

Examines the methods of data management and analysis for "big data", characterized by high volume, variety, velocity, and veracity. Attention will be focused on advanced statistical analysis and visualization in data science applications employing parallel processing, storage and distribution techniques necessary for analysis of massive data sets. Data mining techniques, machine learning methods, and streaming technologies will be utilized for real-time analysis. Students must have access to a computer on which they can install software. 3 undergraduate hours. 4 graduate hours. Prerequisite: STAT 425 and familiarity with high-level language (e.g. Python, Java, C, F#), and command line programming.

STAT 484 Ethical Practice of Statistics credit: 3 or 4 Hours.

Same as PSYC 484. See PSYC 484.

STAT 510 Mathematical Statistics I credit: 4 Hours.

Distributions, transformations, order-statistics, exponential families, sufficiency, delta-method, Edgeworth expansions; uniformly minimum variance unbiased estimators, Rao-Blackwell theorem, Cramer-Rao lower bound, information inequality; equivariance. Prerequisite: STAT 410.

STAT 511 Mathematical Statistics II credit: 4 Hours.

Bayes estimates, minimaxity, admissibility; maximum likelihood estimation, consistency, asymptotic efficiency; testing and confidence intervals; Neyman-Pearson lemma, uniformly most powerful tests; likelihood ratio tests and large-sample approximation; nonparametrics. Prerequisite: STAT 510.

STAT 525 Computational Statistics credit: 4 Hours.

Various topics, such as ridge regression; robust regression; jackknife, bootstrap, cross-validation and resampling plans; E-M algorithm; projection pursuit; all with a strong computational flavor. Same as CSE 525. May be repeated if topics vary. Prerequisite: STAT 425, STAT 426, and STAT 511; or consent of instructor.

STAT 530 Bioinformatics credit: 4 Hours.

Same as ANSC 543, CHBE 571, and MCB 571. See CHBE 571.

STAT 534 Advanced Survival Analysis credit: 4 Hours.

Introduction to the analysis of time-to-event outcomes. Topics include censoring, discrete survival, parametric models, nonparametric one- and K-sample methods, Cox regression, regression diagnostics, time-dependent covariates, and multivariate survival outcomes. Emphasis on key underlying concepts. Counting process-based theoretical justification and practical implementation will also be discussed. 4 graduate hours. No professional credit. Prerequisite: STAT 410, STAT 425, and knowledge of R.

STAT 538 Clinical Trials Methodology credit: 4 Hours.

The topics of the course focus on clinical trials designs and inferential techniques that are commonly used in the pharmaceutical industry. Topics include fixed sample designs for normal and survival data, two-sided group sequential design, Pocock's and O'Brien-Fleming boundaries, general theory of group sequential design, alpha and beta spending functions, one-sided designs with early stopping to accept the null hypothesis, non-inferiority designs, and inferential techniques. Computing in SAS will be emphasized. 4 graduate hours. No professional credit. Prerequisite: STAT 410, STAT 425, and familiarity with SAS.

STAT 542 Statistical Learning credit: 4 Hours.

Modern techniques of predictive modeling, classification, and clustering are discussed. Examples of these are linear regression, nonparametric regression, kernel methods, regularization, cluster analysis, classification trees, neural networks, boosting, discrimination, support vector machines, and model selection. Applications are discussed as well as computation and theory. Same as CSE 542. Prerequisite: STAT 410 and STAT 425.

STAT 543 Appl. Multivariate Statistics credit: 4 Hours.

Same as CPSC 543. See CPSC 543.

STAT 545 Spatial Statistics credit: 4 Hours.

Theory and methods for analyzing univariate and multivariate spatial and spatio-temporal data. Covers both fundamental theories and cutting-edge research advances for geostatistics, and statistical methods for aggregated data and point processes. Real data examples will be provided in class and statistical software will be used to illustrate the data analysis. 4 graduate hours. No professional credit. Prerequisite: STAT 425 or equivalent.

STAT 551 Theory of Probability I credit: 4 Hours.

Same as MATH 561. See MATH 561.

STAT 552 Theory of Probability II credit: 4 Hours.

Same as MATH 562. See MATH 562.

STAT 553 Probability and Measure I credit: 4 Hours.

Measures and probabilities; integration and expectation; convergence theorems and inequalities for integrals and expectations; independence; convergence in probability, almost surely, and mean; Three Series Theorem; laws of large numbers. Prerequisite: MATH 447 or consent of instructor.

STAT 554 Probability and Measure II credit: 4 Hours.

Measure extensions, Lebesgue-Stieltjes measure, Kolmogorov consistency theorem; conditional expectation, conditional probability, martingales; distribution functions and characteristic functions; convergence in distribution; Central Limit Theorem; Brownian Motion. Credit is not given for both STAT 554 and either MATH 561 or MATH 562.

STAT 555 Applied Stochastic Processes credit: 4 Hours.

Same as MATH 564. See MATH 564.

STAT 558 Risk Modeling and Analysis credit: 4 Hours.

Same as MATH 563. See MATH 563.

STAT 571 Multivariate Analysis credit: 4 Hours.

Inference in multivariate statistical populations emphasizing the multivariate normal distribution; derivation of tests, estimates, and sampling distributions; and examples from the natural and social sciences. Prerequisite: STAT 410 and MATH 415, or consent of instructor.

STAT 575 Large Sample Theory credit: 4 Hours.

Limiting distribution of maximum likelihood estimators, likelihood ratio test statistics, U-statistics, M-, L-, and R-estimators, nonparametric test statistics, Von Mises differentiable statistical functions; asymptotic relative efficiencies; asymptotic expansions. Same as ECON 578. Prerequisite: STAT 511 and either MATH 561 or STAT 554.

STAT 578 Topics in Statistics credit: 4 Hours.

May be repeated if topics vary. Prerequisite: Consent of instructor.

STAT 587 Hierarchical Linear Models credit: 4 Hours.

Same as PSYC 587 and EPSY 587. See EPSY 587.

STAT 588 Covar Struct and Factor Models credit: 4 Hours.

Same as EPSY 588, PSYC 588, and SOC 588. See PSYC 588.

STAT 590 Individual Study and Research credit: 0 to 8 Hours.

Directed reading and research. Approved for letter and S/U grading. May be repeated with approval. Prerequisite: Consent of instructor.

STAT 593 STAT Internship credit: 0 to 8 Hours.

Supervised, off-campus experience in a field in which statistical science plays an important role. Approved for letter and S/U grading. Prerequisite: STAT 425 and consent of instructor.

STAT 595 Preparing Future Faculty credit: 2 Hours.

Prepares Ph.D. students who are interested in an academic career to develop a successful academic career path, and to prepare graduate students for their future roles as teachers, and researchers. The course will focus on profession, job search, research, teaching and service. The course will involve guest panels, small and large group presentations and interactive Q&A with student participation.

STAT 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

Strategic Brand Communication (SBC)

SBC Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SBC>)

Courses

SBC 500 Strategic Brand Communication Essentials credit: 2 Hours.

This course provides an overview of marketing and brand management: consumer analysis; brand positioning, integration, metrics and value. 2 graduate hours. No professional credit. Prerequisite: Restricted to MS: SBC students.

SBC 501 Strategic Branding: Global Perspectives credit: 2 Hours.

Within the context of globalization, the course underscores the importance of understanding consumers' values, attitudes, and behaviors for effective product positioning, brand value and effective marketing communications across borders. Focus on consumer behavior and brand positioning across local, regional, and global contexts. This course is designed to provide students with an advanced understanding of consumer behavior in a global context. 2 graduate hours. No professional credit. Prerequisite: Restricted to MS SBC students.

SBC 502 Essentials of Business Management credit: 3 Hours.

This course provides an understanding of theoretical and historical perspectives on business and capitalism. Covers basic principles of business strategy; understanding of financial accounting and budgeting; the importance of ethics; principles of leadership; and the importance of the global business environment. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC Students.

SBC 503 Consumer Insights I credit: 3 Hours.

The course explores how cultural, sociological and psychological factors shape consumer behavior. It will provide an overview of the key concepts of the discipline of consumer behavior and enable students to put into practice the new found understanding of consumer behavior to shape branding strategies. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 504 Managing Projects & Teams credit: 3 Hours.

Successful Strategic Brand Communication requires working on a series of projects. This course provides a socio-technical perspective to the management of projects. The technical dimensions deal with needs analysis, work breakdown, scheduling, resource allocation, risk management, and performance tracking and evaluation - within the allocated time frame and cost. The sociocultural dimensions include attributes of sound leadership, formation and management of teams, and managing customer expectations in order to formulate consistent, integrated campaigns across channels. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 505 Consumer Insights II credit: 3 Hours.

The course will provide an overview of the key qualitative methods used to gain strategic insights into consumer behavior and to provide practice in planning research projects, data collection, and analysis. 3 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC students.

SBC 506 Measurement and Evaluation credit: 3 Hours.

This course will focus on the method and analysis for consumer insights but also for measuring effectiveness of various promotional strategies and campaign effectiveness. This includes an overview of quantitative research methods with emphasis on analysis and interpretation of data, and application to evaluating effectiveness of promotional strategies. 3 graduate hours. No professional credit.

SBC 507 Promotional Strategy credit: 3 Hours.

This course will familiarize students with the topic of marketing communications and promotion management, and will teach students the steps for strategically planning a strategic brand communications campaign. The culmination of this course will be a campaign for a real-world client. 3 graduate hours. No professional credit.

SBC 508 Messaging Strategy credit: 3 Hours.

Creating and executing successful messages across communication channels. Explores the development of persuasive messaging through theories of persuasion, consumer-information processing and theories of creativity. The course examines the relationship between creative strategy and creative executions while allowing students to practice creating content for traditional and non-traditional media. Strategic brand communication manages every message and contact point within an organization. Audiences include not only consumers, but employees, stockholders, the media, and others. 3 graduate hours. No professional credit. Prerequisite: SBC 507.

SBC 509 Strategic Media Management credit: 3 Hours.

Analyzes the markets served by various advertising media and factors to consider in the selection and evaluation of media. Markets include investors, employees, and consumer segments. This course will also cover managing media in a global context. This course is designed to provide students with an advanced understanding of media analysis, planning, buying and optimization. 3 graduate hours. No professional credit. Prerequisite: SBC 502, SBC 507. Restricted to MS: SBC students.

SBC 511 Strategic Analytics & Data Visual credit: 2 Hours.

This course will prepare students to utilize data for targeting and building customer and brand relationships, with an emphasis on new and emerging media. The students will get exposure to principles of working with structured data using relational databases and data warehouses. They will understand how to work with unstructured data from the web. They will also get exposure to select data mining methods relevant to data commonly worked on by marketing and communication executives and apply these concepts with cases/exercises during each of these modules. 2 graduate hours. No professional credit. Approved for Letter and S/U grading. Prerequisite: Restricted to MS: SBC student.

SBC 512 Professional SBC Capstone Project credit: 2 Hours.

This course serves as a capstone, requiring the student to demonstrate a mastery of knowledge in the primary areas of Strategic Brand Communication. The project is designed to allow the student to demonstrate his/her mastery of strategic brand communication, focused on Creating and Executing a Research Plan; Repositioning Analysis and Strategy; Strategic Brand Communication Strategy & Tactics; Media Strategy & Tactics; Campaign Monitoring and Evaluation. 2 graduate hours. No professional credit. Prerequisite: SBC 511. Restricted to MS: SBC students.

Swahili (SWAH)

SWAH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SWAH>)

Courses

SWAH 201 Elementary Swahili I credit: 5 Hours.

Beginning standard Swahili; emphasizes grammar, pronunciation, reading and conversation in standard Swahili. Same as AFST 231. Participation in language laboratory required.

SWAH 202 Elementary Swahili II credit: 5 Hours.

Continuation of elementary Swahili, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Swahili. Same as AFST 232. Participation in language laboratory required. Prerequisite: SWAH 201.

SWAH 403 Intermediate Swahili I credit: 4 Hours.

Second-year Swahili with emphasis on developing conversational fluency; some readings on Swahili culture and customs. Same as AFST 433. 4 undergraduate hours. 4 graduate hours. Prerequisite: One year of Swahili.

SWAH 404 Intermediate Swahili II credit: 4 Hours.

Continuation of SWAH 403; emphasis on the development of appropriate reading, writing, speaking, and comprehension skills in Standard Swahili, and understanding of East African culture. Same as AFST 434. 4 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 403 or equivalent.

SWAH 405 Advanced Swahili I credit: 3 Hours.

Third-year Swahili with emphasis on conversational fluency and on increased facility in reading Swahili texts, including current newspaper prose and (East) African culture materials. Same as AFST 435. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 404 or equivalent.

SWAH 406 Advanced Swahili II credit: 3 Hours.

Third-year Swahili with emphasis on conversational fluency and on increased facility in reading Swahili texts, including current newspaper prose and (East) African culture materials. Same as AFST 436. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 405 or equivalent.

SWAH 407 Topics Swahili Lang & Lit I credit: 3 Hours.

Selected readings from modern Kiswahili authors, with a focus on novels, plays, and basic poetry illustrative of East African cultural issues and advanced level Kiswahili grammar, as well as development of expository writing skills. Same as AFST 405. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 406.

SWAH 408 Topics Swahili Lang & Lit II credit: 3 Hours.

Continuation of SWAH 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 406. 3 undergraduate hours. 3 graduate hours. Prerequisite: SWAH 407.

SWAH 409 Adv Topics Swahili Lang&Lit I credit: 3 or 4 Hours.

Introduction to Kiswahili in the professions as documented in selected newspapers, educational radio and TV programs, works of fiction, biographies, anthologies, and professional journals. Students will be introduced to argumentative writing in Kiswahili, expected to make oral presentations, and to write a research paper in their field. Same as AFST 407. 3 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 408.

SWAH 410 Adv Topics Swahili Lang&Lit II credit: 3 or 4 Hours.

Continuation of SWAH 409 with increased emphasis on the development of comprehension and writing of professional language. Same as AFST 408. 3 undergraduate hours. 4 graduate hours. Prerequisite: SWAH 409.

Systems Engineering and Design (SE)

SE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/SE>)

Courses

SE 100 Introduction to ISE credit: 1 Hour.

Overview of the engineering profession, the Industrial & Enterprise Systems Engineering Department, and the curricula in Industrial Engineering and Systems Engineering and Design.

SE 101 Engineering Graphics & Design credit: 3 Hours.

Computer-aided design (CAD) software modeling of parts and assemblies. Parametric and non-parametric solid, surface, and wireframe models. Part editing and two-dimensional documentation of models. Planar projection theory, including sketching of perspective, isometric, multiview, auxiliary, and section views. Spatial visualization exercises. Dimensioning guidelines, tolerancing techniques. Team design project. Credit is not given for both SE 101 and ME 170.

SE 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Undergraduate Open Seminar. May be repeated.

SE 261 Business Side of Engineering credit: 1 Hour.

Important elements and metrics of business and contemporary engineering economics: wealth creation, cash flow diagrams, internal rate of return, net present value, breakeven analysis, companies, corporations, profits, prices, balance sheets, income statements, and the basics of business plan writing. Particular emphasis is given to preparation for the economic analysis component of engineering practice.

SE 290 ISE Undergraduate Seminar credit: 0 Hours.

Lecture-discussion series by department faculty and visiting professional engineers addressing ethics, professional registration, the role of technical societies, and the relation of engineering to such disciplines as economics, sociology, and government. Approved for Letter and S/U grading.

SE 297 Independent Study credit: 1 to 4 Hours.

Individual investigations of any phase of Systems Engineering and Design selected by the students and approved by the department. May be repeated. Prerequisite: Consent of instructor.

SE 298 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in general engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites.

SE 310 Design of Structures and Mechanisms credit: 3 Hours.

Fundamental concepts in the classical and computer-based analysis and design of structural and machine components and assemblies. External loads, internal forces, and displacements in statically determinate and indeterminate configurations: kinematics of linkages, gears, and cams; static forces in machines. Prerequisite: CS 101, TAM 212, and TAM 251. Credit or concurrent enrollment in MATH 415.

SE 311 Engineering Design Analysis credit: 3 Hours.

Stress-strain conditions; analytical and numerical (CAD) solution techniques; analysis of various engineering materials and configurations as applied to the development and application of design analysis criteria. Prerequisite: SE 310; concurrent registration in SE 312.

SE 312 Instrumentation and Test Lab credit: 1 Hour.

Preparation for experimental projects; mechanical and electrical instruments; mechanical testing of materials; experimental stress analysis and photoelastic methods. Prerequisite: SE 310; concurrent registration in SE 311.

SE 320 Control Systems credit: 4 Hours.

Fundamental control systems and control systems technology. Sensors, actuators, modeling of physical systems, design and implementation of feedback controllers; operational techniques used in describing, analyzing and designing linear continuous systems; Laplace transforms; response via transfer functions; stability; performance specifications; controller design via transfer functions; frequency response; simple nonlinearities. Credit is not given for both SE 320 and either AE 353 or ME 340. Prerequisite: CS 101, MATH 285, and TAM 212; credit or concurrent registration in ECE 211.

SE 361 Emotional Intelligence Skills credit: 3 Hours.

Understanding emotions in ourselves and others. Assessment and improvement of interpersonal skills and emotional intelligence competencies including self-regulation, motivation, empathetic listening, communication, influence collaboration and cooperation, conflict management, leadership, teamwork, and managing change. Includes one Saturday laboratory session.

SE 390 General Engineering Seminar credit: 0 Hours.

Lecture-discussion series by department faculty and visiting professional engineers addressing ethics, professional registration, the role of technical societies, and the relation of engineering to such disciplines as economics, sociology, and government. Approved for Letter and S/U grading.

SE 397 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phase of General Engineering selected by the students and approved by the department. May be repeated in same term. Prerequisite: Consent of instructor.

SE 398 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in general engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites.

SE 400 Engineering Law credit: 3 or 4 Hours.

Nature and development of the legal system; legal rights and duties important to engineers in their professions; contracts, uniform commercial code and sales of goods, torts, agency, worker's compensation, labor law, property, environmental law, intellectual property. 3 undergraduate hours. 4 graduate hours. Prerequisite: RHET 105.

SE 402 Comp-Aided Product Realization credit: 3 or 4 Hours.

Computer-aided design, analysis, and prototyping tools used in the produce development process. Principles of computer graphics and geometric modeling, including transformations, coordinate systems, parametric solid modeling, spline curves, and surface modeling. Finite element and kinematics analyses. Rapid prototyping, product dissection, CAD-CAM-CAE operability issues, and CAD collaboration tools. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: SE 101 and SE 311.

SE 410 Component Design credit: 3 Hours.

Design of basic engineering components: structural members, machine parts, and connections. Principles applied include: material failure (yield, fracture, fatigue); buckling and other instabilities; design reliability; analytical simulation. 3 undergraduate hours. No graduate credit. Prerequisite: SE 311 and SE 320.

SE 411 Reliability Engineering credit: 3 or 4 Hours.

Concepts in engineering design, testing, and management for highly reliable components and systems. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

SE 412 Nondestructive Evaluation credit: 3 or 4 Hours.

Nondestructive Evaluation (NDE) principles and the role of NDE in design, manufacturing, and maintenance. Primary Nondestructive Testing and Evaluation (NDT&E) techniques, introduced from the fundamental laws of physics, including visual, ultrasonic, acoustic emission, acousto-ultrasonic, radiology, electro-magnetic, eddy-current, penetrant, thermal, and holographic. Industrial applications of probability of flaw detection, material properties characterization, impact and fatigue damage evaluation, adhesion, etc. Current literature. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CEE 300.

SE 413 Engineering Design Optimization credit: 3 Hours.

Application of optimization techniques to engineering design problems. Emphasis on problem formulation, including applications in structural, mechanical, and other design domains. Important theoretical results and numerical optimization methods. Matlab programming assignments to develop software for solving nonlinear mathematical programming problems. 3 undergraduate hours. 3 graduate hours. Prerequisite: MATH 241 and MATH 415.

SE 420 Digital Control Systems credit: 4 Hours.

Theory and techniques for control of dynamic processes by digital computer; linear discrete systems, digital filters, sampling signal reconstruction, digital design, state space methods, computers, state estimators, and laboratory techniques. 4 undergraduate hours. 4 graduate hours. Prerequisite: SE 320.

SE 422 Robot Dynamics and Control credit: 4 Hours.

Fundamental concepts and analytical methods for analysis and design of robot systems. Laboratory experiments complement theoretical development. Same as ECE 489 and ME 446. 4 undergraduate hours. 4 graduate hours. Prerequisite: SE 320. Recommended: ECE 470.

SE 423 Mechatronics credit: 3 Hours.

Mechatronics concepts and practice: computer interfacing of physical devices (sensors, actuators); data acquisition; real time programming and real time control; human-machine interfaces; design principles of mechatronics in manufacturing systems and in consumer systems. 3 undergraduate hours. 3 graduate hours. Prerequisite: SE 320.

SE 424 State Space Design for Control credit: 3 Hours.

Design methods; time domain modeling; trajectories and phase plane analysis; similarity transforms; controllability and observability; pole placement and observers; linear quadratic optimal control; Lyapunov stability and describing functions; simulation. 3 undergraduate hours. 3 graduate hours. Prerequisite: SE 320 and MATH 415.

SE 450 Decision Analysis I credit: 3 or 4 Hours.

Rules of thought that transform complex decision situations into simpler ones where the course of action is clear. Practical application of decision analysis in large organizations; methods to generate insights into real-life decision problems, avoid the common pitfalls in decision processes, and overcome the possible barriers to implementing a high-quality decision-making process for individual and organizational decision making; graphical representations of decision problems such as decision diagrams and utility diagrams. 3 or 4 undergraduate hours. 3 or 4 graduate hours. Prerequisite: IE 300.

SE 462 Leading Sustainable Change credit: 3 Hours.

Theories and process of change; systems thinking concerning change consequences; building coalitions and communities to support change; implementing and managing projects effectively. Processes to plan, implement, manage, and sustain change with an organization through alignment of change strategies with organizational and individual concerns. 3 undergraduate hours. 3 graduate hours.

SE 494 Senior Engineering Project I credit: 3 Hours.

Senior engineering project - team component. Student teams of three or four, guided by faculty advisors, develop solutions to real-world engineering problems provided by industry-partnering companies, subject to realistic constraints and supported by economic analyses and recommendations for implementation. Prototype solutions fabricated where practical. Multiple reports and presentations throughout the term. Several trips to company typical. Common project grade for all team members. SE 494 and SE 495 taken concurrently fulfill the Advanced Composition Requirement. Approval of the department is required to register. 3 undergraduate hours. No graduate credit. Prerequisite: SE 261, SE 390 and; SE 311, IE 300, IE 310, and TAM 335; or IE 310, IE 311, and IE Technical Elective; credit or concurrent registration in a SE Design Elective and IE Engineering Science Elective. Must enroll concurrently in SE 495.

This course satisfies the General Education Criteria for:
Advanced Composition

SE 495 Senior Engineering Project II credit: 2 Hours.

Adjunct to SE 494. Senior engineering project – individual component. Individual grade for each team member. SE 494 and SE 495 taken concurrently fulfill the Advanced Composition Requirement. 2 undergraduate hours. No graduate credit. Prerequisite: Concurrent registration in SE 494.

This course satisfies the General Education Criteria for:
Advanced Composition

SE 497 Independent Study credit: 0 to 4 Hours.

Advanced problems related to General Engineering. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated in same term. Prerequisite: Consent of instructor.

SE 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in general engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours.

SE 520 Analysis of Nonlinear Systems credit: 4 Hours.

Same as ECE 528 and ME 546. See ECE 528.

SE 521 Multivariable Control Design credit: 4 Hours.

Same as AE 555. See AE 555.

SE 523 Discrete Event Dynamic Systems credit: 3 or 4 Hours.

Modeling, analysis, control, and performance evaluation of discrete event dynamic systems (DEDS), which are characterized by state changes only at discrete points in time in response to the occurrence of particular events. Discrete-state and discrete-event models decidability, computational issues, forbidden-state problems, forbidden-string problems, enforcing safety and liveness properties via supervision, generalized semi-Markov processes, sensitivity analysis via likelihood ratio and infinitesimal perturbation methods. 3 or 4 graduate hours. No professional credit. Prerequisite: CS 173 or MATH 213; CS 225; MATH 415; MATH 461.

SE 524 Data-Based Systems Modeling credit: 4 Hours.

Identification and building of mathematical and computational models directly from data. Systems and model types, such as state-space and distributed-parameter; parametric estimation methods, such as regression and least-squares recent subspace identification methods; data preprocessing techniques; model validation methods. Assignment applications to a wide range of dynamical systems, including biological, electro-mechanical, and economic. 4 graduate hours. No professional credit. Prerequisite: SE 424 and IE 300.

SE 525 Control of Complex Systems credit: 4 Hours.

Control methodologies for complex (i.e., interconnected) dynamic systems. A unified framework based on the vector Liapunov functions concept is used to examine various methodologies: decentralized overlapping control; optimal control of interconnected systems; multi-player differential game theory; decentralized optimization and its link with the multi-criteria optimization. Illustrative examples in areas such as control of groups of unmanned vehicles, control of power systems, and coverage control. 4 graduate hours. No professional credit. Prerequisite: SE 424.

SE 530 Multiattribute Decision Making credit: 4 Hours.

Tools for subjective multiple attribute decision making when present or future states of nature are uncertain. Exploration of current research in developing computer aids to decision making. Issues in descriptive versus normative approaches in the context of the interface between operations research and artificial intelligence. Multiattribute utility analysis from theoretical foundations through assessment procedures, practice, and pitfalls of potential cognitive bases. 4 graduate hours. No professional credit. Prerequisite: CEE 202 or IE 300.

SE 550 Decision Analysis II credit: 3 or 4 Hours.

Continuation of SE 450. Fundamental requirements of a decision-making system; comparison of different decision-making methods; "paradoxes" in decision making; foundations and history of probability as a degree of belief; Bayesian vs. classical statistics; entropy of a random variable; experimentation and optimal stopping; invariance formulations in utility and probability; one-switch preferences; graph-based methods to incorporate dependence in multiattribute utility functions. 3 or 4 graduate hours. No professional credit. Prerequisite: SE 450.

SE 590 Seminar credit: 0 Hours.

Presentations by graduate students, staff, and guest lecturers of current topics in research and development in General Engineering. 0 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated. Required of all graduate students each term.

SE 594 Project Design credit: 1 to 8 Hours.

Engineering design projects emphasizing advanced engineering analysis, synthesis, optimization, and engineering economics. 1 to 8 graduate hours. No professional credit. May be repeated to a maximum of 8 hours for credit toward the Master's degree.

SE 597 Independent Study credit: 1 to 4 Hours.

Advanced problems related to General Engineering. 1 to 4 graduate hours. No professional credit. May be repeated. Prerequisite: Consent of instructor.

SE 598 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in general engineering intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 graduate hours. No professional credit. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours.

SE 599 Thesis Research credit: 0 to 16 Hours.

Thesis Research. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated to a maximum of 16 hours for credit toward the Master's or PhD degree.

Technical Systems Management (TSM)

TSM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TSM>)

Courses

TSM 100 Technical Systems in Agr credit: 3 Hours.

Examples, problems, discussions, and laboratory exercises pointing to present and potential engineering applications in agriculture; emphasis on power and machinery, soil and water control, electricity, and structures.

TSM 130 Basics of CAD credit: 1 Hour.

Introduction to Computer Aided Drawing and Design (CAD). Application of two and three dimensional CAD tools in construction systems for creating project plans, structures and building floor plans with fixtures and layers representing electrical and plumbing configurations. Self-paced learning through on-line tutorials with instructor guidance. Prerequisite: TSM 100.

TSM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Open seminar or experimental course on a topic in technical systems management. May be repeated to a maximum of 12 hours.

TSM 232 Materials and Construction Sys credit: 3 Hours.

Selection, use, and maintenance of hand and power tools; shop safety; selection of building and roofing materials; concrete masonry construction; and site preparation. Includes laboratory. Priority is given to technical systems management majors.

TSM 233 Metallurgy & Welding Process credit: 3 Hours.

Selecting and using metal-arc, inert-gas, submerged arc, oxyacetylene welding and plasma cutting processes for construction and maintenance. Includes laboratory. Additional fees may apply. See Class Schedule.

TSM 234 Wiring, Motors and Control Sys credit: 3 Hours.

Selecting and using wiring materials, electric motors and controls in lighting, heating, ventilation, and materials handling problems. Includes laboratory. Prerequisite: TSM 100.

TSM 262 Off-Road Equipment Management credit: 3 Hours.

Performance, costs, application, selection, and replacement of off-road machinery and field implements; analysis of mechanized field operations. Includes laboratory. Prerequisite: TSM 100.

TSM 293 Off-Campus Internship credit: 1 to 4 Hours.

Supervised off-campus experience in a field directly pertaining to technical systems management. May be repeated to a maximum of 6 hours. Prerequisite: Sophomore standing and consent of instructor.

TSM 295 Undergrad Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of an appropriate member of the faculty. May be repeated to a maximum of 12 hours. Prerequisite: Sophomore standing, cumulative GPA of 2.5 or above at the time the activity is arranged, and consent of instructor.

TSM 311 Humanity in the Food Web credit: 3 Hours.

The human food web is the complex network of technologies, environments, people, and social institutions that produces, processes, and distributes the world's food supply. Students will study the food webs of the past, present, and future and will explore various human roles, including their own, in the global technology-environment-society-food system. Course topics include domestication, mechanization, urbanization, the green revolution, biotechnology, food safety, the environment, and appropriate technologies for developing countries. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Hist Phil

TSM 352 Land and Water Mgt Systems credit: 3 Hours.

Principles of planning, implementing and utilizing land and water practices for Illinois land uses, especially agriculture. Includes laboratory. Prerequisite: Completion of Quantitative Reasoning requirement.

TSM 363 Fluid Power Systems credit: 2 Hours.

Emphasizes basic principles of fluid power systems related to off-road vehicles. Topics include fundamentals of fluid power systems, principles of key fluid power components, and maintenance of fluid power systems. Credit is not given for both TSM 363 and ABE 223.

TSM 371 Residential Housing Design credit: 3 Hours.

Principles and practices in residential housing; space planning, house types, structures, materials, utilities, environmental control, energy conservation, remodeling, and economic influences. Includes laboratory.

TSM 372 Environ Control & HVAC Systems credit: 3 Hours.

Introduction to heating, ventilating, and air-conditioning (HVAC) systems for building environment control. Topics include: psychrometrics, basic calculation of heating and cooling loads, human comfort and ventilation requirements, typical HVAC and control systems.

TSM 381 Grain Drying & Storage Systems credit: 3 Hours.

Grain drying fundamentals, air-moisture relationships, grain drying systems for efficient energy use, fans, grain-handling devices and systems, planning of grain handling systems, grain standards, moisture measurement, grain storage, fungi and insect problems, aeration, processing and milling of corn and soybeans. Includes laboratory.

TSM 396 UG Honors Research or Thesis credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the direction of the Honors advisor. May be repeated to a maximum of 12 hours. Prerequisite: Junior standing, admission to the ACES Honors Program, and consent of instructor.

TSM 421 Ag Safety-Injury Prevention credit: 3 Hours.

Issues associated with agricultural injuries and their prevention. Areas include: agricultural injury situation; injury causation; injury intervention strategies and their applications to agricultural issues; and, specific safety issues in the areas of farm machinery, grain and forage systems, animals, materials handling, electricity, fire safety, special populations, and emergency preparedness. Course Information: 3 undergraduate hours. 3 graduate hours.

TSM 422 Ag Health-Illnesses Prevention credit: 3 Hours.

Overview of occupational illnesses and diseases in the agricultural industry and its practices. Hazards within agricultural production are examined and potential hazards to non-farm populations and those interacting with production personnel are explored. Agricultural industry practices are summarized and potential human health effects of specific practices identified. Specific preventative measures are outlined to reduce exposures and remediate exposure symptoms. Interaction with health/medical professionals is on-going during the semester to familiarize students with medical procedures pertinent to agricultural occupational medicine. 3 undergraduate hours. 3 graduate hours.

TSM 425 Managing Ag Safety Risk credit: 3 Hours.

Management aspects of farm and agriculturally related business safety and health. Topics include: orientation to farm and agricultural related business safety and health issues, legal and ethical responsibilities, liability issues, injury/illness incident investigation, agricultural safety and health resources, how to approach and organize a safety and health management plan, and safety and health worker education and training. Case study approach to devise a safety and health management plan for an existing farm or agricultural related business. Team work to emulate development of safety management programs in general industry. Student exposure through class discussion exercises to recent agricultural safety and health research studies conducted in North America and Europe. 3 undergraduate hours. 3 graduate hours. Prerequisite: Credit or concurrent registration in TSM 421 or TSM 422, or consent of instructor.

TSM 430 Project Management credit: 2 Hours.

Same as ABE 430. See ABE 430.

TSM 435 Elec Computer Ctrl Sys credit: 3 Hours.

Microcomputer and electrical control applications; electrical fundamentals; solid-state devices; relays; biosensors; motor types and characteristics; three-phase power; logic devices; analog/digital converters; and interfacing for agricultural control applications. Includes laboratory. 3 undergraduate hours. 3 graduate hours.

TSM 438 Renewable Energy Applications credit: 3 Hours.

Renewable energy sources and applications, including solar, geothermal, wind, and biomass. Environmental consequences of energy conversion including how renewable energy can reduce air pollution and global climate change. Economics of alternative energy systems. 3 undergraduate hours. 3 graduate hours. Credit is not given for both TSM 438 and ABE 436. Prerequisite: Junior, senior, or graduate standing required.

TSM 464 Engine and Tractor Power credit: 3 Hours.

Construction, performance and maintenance of internal combustion engines, power trains, and hydraulic systems for off-road equipment; methods and equipment for performance testing; and weight transfer and traction. Includes laboratory. 3 undergraduate hours. 3 graduate hours. Credit is not given for both TSM 464 and ABE 466.

TSM 465 Chemical Applications Systems credit: 3 Hours.

Hydraulic principles; liquid application systems including pumps, controls, and spray nozzles; granular application systems; safe storage, handling, and disposal of pesticides and fertilizers; federal and state legal requirements. Includes laboratory. 3 undergraduate hours. 3 graduate hours.

TSM 467 Precision Agric Technology credit: 3 Hours.

Practices and equipment used in precision agriculture. Global positioning systems; geographic information systems; mapping; grid sampling of soil fertility and physical properties; yield monitoring; remote sensing; variable-rate technologies. 3 undergraduate hours. 3 graduate hours.

TSM 486 Grain Bioprocessing Coproducts credit: 3 Hours.

Bioprocessing of cereals and oilseeds by milling, fermentation and extraction processes in the production of a wide variety of coproducts used in animal foods. Includes the effects of the process variables and bioprocess on coproduct quality and the post-processing of coproducts. 3 undergraduate hours. 3 graduate hours.

TSM 496 Independent Study credit: 1 to 4 Hours.

Individual research, special problems, thesis, development and/or design work under the supervision of a faculty member. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: consent of instructor.

TSM 499 Seminar credit: 1 to 3 Hours.

Group discussion or an experimental course on a special topic in technical systems management. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 12 hours.

TSM 501 Graduate Research I credit: 1 Hour.

First of a two-course sequence (with TSM 502) for graduate students in Technical Systems Management. Prepares students to perform successfully in a research environment and to develop skills in teaching. Topics to be covered include research methodology, teaching methods, lecture preparation and delivery, critical review of scientific articles, peer review and publishing, mentoring and peer relationships, time management, and intellectual property.

TSM 502 Graduate Research II credit: 1 Hour.

Second of a two-course sequence (with TSM 501) for graduate students in Technical Systems Management. Prepares students to perform successfully in a research environment and to develop skills in teaching. Topics to be covered include research methodology, teaching methods, lecture preparation and delivery, critical review of scientific articles, peer review and publishing, mentoring and peer relationships, time management, and intellectual property.

TSM 594 Graduate Seminar credit: 0 Hours.

Presentations of thesis research by graduate students; other presentations on teaching or current research issues related to technical systems management. Approved for S/U grading only. May be repeated to a maximum of six times.

TSM 596 Independent Study credit: 1 to 4 Hours.

Individual investigations or studies of any phases of technical systems management selected by the student and approved by the advisor and the faculty member who will supervise the study. May be repeated in the same or separate terms if topics vary to a maximum of 6 hours. Prerequisite: Consent of instructor.

TSM 598 Special Topics credit: 1 to 4 Hours.

Group discussion or an experimental course on a special topic in technical systems management. May be repeated in the same term to a maximum of 8 hours. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: As specified for each topic offering; see Class Schedule or departmental course information.

TSM 599 Thesis Research credit: 0 to 16 Hours.

Individual research in the various areas of technical systems management under the supervision of faculty members. Approved for S/U grading only. May be repeated in separate terms.

Technology Entrepreneurship (TE)

TE Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TE>)

Courses

TE 100 Introduction to Innovation, Leadership and Engineering Entrepreneurship credit: 1 Hour.

Introduction course to innovation, leadership, and engineering entrepreneurship as a field of study. The student will learn about innovation and leadership, professionalism and ethics, hear from guest entrepreneurial lecturers, and tour innovative/entrepreneurial spaces. While working in small teams, students will pitch a problem, develop solutions, learn to work as a team, and hone their written and verbal presentation skills.

TE 150 Entrepreneurship Foundations credit: 3 Hours.

Introduction of new business formation and global entrepreneurship concepts through group projects and real-world experience. Discussion focus on defining an entrepreneur, the impact of innovation and entrepreneurship, clusternomics and societal impact, market scalability, team dynamics, product and technology development, competitive landscape, building a personal mission statement and assessment, skill competencies, and constructing dashboards. Prerequisite: This course is restricted to Innovation LLC students.

TE 200 Introduction to Innovation credit: 1 Hour.

Fundamental concepts of entrepreneurship, creativity and innovation will be explored within the context of new and existing businesses. Creative thinking and inventive problem solving will be emphasized.

TE 230 Design Thinking/Need-Finding credit: 3 Hours.

Same as ARTD 230. See ARTD 230.

TE 250 From Idea to Enterprise credit: 2 Hours.

Fundamentals of technology entrepreneurship and critical areas of the entrepreneurship process: creating a successful startup and transforming it into a sustainable business, validating an idea and taking it to market, evaluation of new ideas, forming high-performance teams, and financing a technology-based startup. Field trips to local startups, businesses, the University Research Park, and Enterprise Works incubator included along with in-depth case studies, and a hands-on class project.

TE 298 Special Topics I credit: 1 to 3 Hours.

Subject offerings of innovation, creativity, technology and entrepreneurship intended to augment the existing curriculum. See class schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary.

TE 333 Creativity, Innovation, Vision credit: 4 Hours.

Personal creativity enhancement via exploration of the nature of creativity, how creativity works, and how to envision what others may not. Practice of techniques and processes to enhance personal and group creativity and to nurture a creative lifestyle. Application to a major term project providing the opportunity to move an idea, product, process or service from vision to reality.

TE 345 Design and Innovation credit: 2 Hours.

Same as ECE 345. See ECE 345.

TE 360 Lectures in Engineering Entrepreneurship credit: 1 Hour.

Fundamental concepts of entrepreneurship and commercialization of new technology in new and existing businesses. Guest speaker topics vary, but typically include: evaluation of technologies and business ideas in general; commercializing new technologies; financing through private and public sources; legal issues; product development; marketing; international business issues. May be repeated in separate terms to a maximum of 2 hours, if topics vary; instructor approval required. Prerequisite: For undergraduate students only.

TE 398 Special Topics II credit: 1 to 4 Hours.

Subject offerings of innovation, creativity, technology and entrepreneurship intended to augment the existing curriculum. See class schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate term if topics vary.

TE 401 Developing Breakthrough Projects credit: 1 to 4 Hours.

Project-based exploration with teams of students working together in a large innovation and entrepreneurial context. Encourage development of innovative, leadership, and entrepreneurial skill sets, including financing, marketing, sales, operations, business plans, and management. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.

TE 450 Startups: Inc, Fund, Contracts, IP credit: 3 Hours.

Explore legal tools used in constructing and operating companies. Topics include: issues with business formation, intellectual property, NDA, contracts, and other corporate legal issues impacting startups. 3 undergraduate hours. 3 graduate hours.

TE 460 Lectures in Engineering Entrepreneurship credit: 1 Hour.
Fundamental concepts of entrepreneurship and commercialization of new technology in new and existing engineering and high-tech businesses. Guest speaker topics vary, but typically include: evaluation of technologies and business ideas in general; commercializing new technologies; financing through private and public sources; legal issues; product development; marketing; international business issues. 1 undergraduate hour. 1 graduate hour. May be repeated in separate terms to a maximum of 2 hours, if topics vary; instructor approval required. Credit is not given for both TE 360 and TE 460.

TE 461 Technology Entrepreneurship credit: 3 Hours.
Product design, marketing, financials, and the general business planning preparation required for start-up companies. Many start-up companies have emerged from this course. Students can work in teams (members can be from outside of class) or individually. Students without a particular idea may be provided an option to participate in PIRL (Product Innovation Research Lab) with the School of Art & Design, but spots are limited. 3 undergraduate hours. 3 graduate hours.

TE 466 High-Tech Venture Marketing credit: 2 Hours.
Cornerstone marketing concepts for innovators and engineers to enable analysis of products and technologies from a marketing perspective: engineering product development and adoption life cycle; objectives and strategies; marketing management; communication skills; sales process and tactics; special considerations for new high-tech engineering products and innovations. 2 undergraduate hours. 2 graduate hours. Credit is not given for both ENG 466 and BADM 365.

TE 497 Independent Study credit: 1 to 4 Hours.
Advanced projects related to Technology Entrepreneurship. Approved for S/U grading only. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 3 undergraduate hours or 4 graduate hours in the same term if topics vary; may be repeated for an unlimited number of hours in separate terms. Prerequisite: Consent of instructor.

TE 498 Special Topics III credit: 1 to 4 Hours.
Subject offerings of innovation, creativity, technology and entrepreneurship intended to augment the existing curriculum. See class schedule or departmental course information for topics and prerequisites. Additional fees may apply. See Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate term if topics vary.

TE 560 Managing Advanced Technol I credit: 1 Hour.
Business perspective of managing advanced technology in industry: strategic context of advanced technology; analytical financial tools used to estimate its potential value; legal concepts important in its management; interpersonal issues related to leading and advocating on behalf of advanced technology groups. 1 graduate hour. No professional credit.

TE 565 Technol Innovation & Strategy credit: 2 Hours.
Concepts and frameworks for analyzing how firms can create, commercialize and capture value from technology-based products and services. Business, commercialization, and management aspects of technology. Emphasis on reasons that existing firms or startups which have successfully commercialized products or services fail to sustain their success as technology changes and evolves. 2 graduate hours. No professional credit. Prerequisite: STAT 400.

TE 566 Finance for Engineering Mgmt credit: 2 Hours.
Cornerstone financial concepts for engineering management to enable analysis of engineering projects from a financial perspective: income statements; the balance sheet; cash flow statements; corporate organization; the time value of money; net present value; discounted cash flow analysis; portfolio theory. 2 graduate hours. No professional credit.

TE 567 Venture Funded Startups credit: 1 Hour.
Concepts, tools, and language used by venture capitalists (VCs). Venture-scale opportunity assessment and articulation; venture capital financing and valuation; deal structure; term sheets; financial plans for startups; customer development and marketing; product iterations; sales execution. 1 graduate hour. No professional credit. Prerequisite: TE 566.

TE 598 Special Topics IV credit: 1 to 4 Hours.
Subject offerings of innovation, creativity, technology and entrepreneurship intended to augment the existing curriculum. See class schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms for unlimited graduate hours if topics vary.

Technology and Management (TMGT)

TMGT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TMGT>)

Courses

TMGT 366 Product Design and Development credit: 3 Hours.
Same as BADM 366. See BADM 366.

TMGT 367 Mgmt of Innov and Technology credit: 3 Hours.
Same as BADM 367. See BADM 367.

TMGT 460 Business Process Modeling credit: 3 Hours.
Same as BADM 460. See BADM 460.

TMGT 461 Tech, Eng, & Mgt Final Project credit: 2 Hours.
Same as BADM 461. See BADM 461.

Theatre (THEA)

THEA Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/THEA>)

Courses

THEA 100 Practicum I credit: 1 to 3 Hours.
Practical work in the design, construction, and handling of scenery, lighting, sound, properties, costumes, and makeup for public performance. A minimum of forty hours of production activity to be arranged for each credit hour. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor required for non-theatre majors.

THEA 101 Introduction to Theatre Arts credit: 3 Hours.
Introduction to the arts of theater for non-majors, including acting, design, directing, dramaturgy, and playwriting, together with a survey of theatrical history, minority theater, and plays by women. Attendance at Department of Theater productions (ticket fee required). Credit not given for both THEA 101 and THEA 102.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

THEA 102 Text to Stage credit: 4 Hours.

Practical exploration of theatre production for Theatre majors with emphasis on the collaborative contributions of playwrights, actors, directors, designers, and dramaturges, culminating in final group projects in planning productions of one-act plays. Attendance at Department of Theatre productions required. Credit not given for both THEA 101 and THEA 102. This course is required for all Theatre Majors.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts

THEA 103 Survey of Theatre Production credit: 4 Hours.

Provides a broad overview of the essential functions and practices of the following foundational technical theatre areas: Scenic Technology, Costume Technology, Lighting Technology, Sound technology, Properties Construction Scene Painting, and Stage/Production Management.

Through lectures and labs the course provides students with practical application and basic skills essential in the areas of Design, Technology, and Stage Management.

THEA 110 Broadway Musicals credit: 3 Hours.

A cultural context of the uniquely "American" Broadway musical through an introduction to the art form, an analysis of the pertinent time period, and historical and critical placement of the work as a reflection (and development) of the identity of the United States. This course will introduce the collaborative artistry of the musical, survey specific iconic works, and explore the socio-economic impacts of the Broadway musical. Attendance at selected performances is required.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

THEA 125 Graphic Skills credit: 3 Hours.

Introduction to drawing, technical drafting, and model building for the theatre. Drawing and drafting supplies are required. Approved for letter and S/U grading. Prerequisite: Enrollment limited to Theatre majors only.

THEA 126 Stagecraft credit: 3 Hours.

Studies and training in materials, techniques, and processes used in executing scenery for the theater. Includes both classroom lectures and practical laboratory work in the Scenic Studio of Krannert Center. Prerequisite: Enrollment limited to Theater majors in Scenic Technology or consent of instructor.

THEA 170 Fundamentals of Acting I credit: 3 Hours.

Study of the methods of acting, with emphasis on basic acting techniques; role of character in relation to the play as a whole, the play's internal and emotional values, and their interpretation through voice and action.

THEA 175 Fundamentals of Acting II credit: 3 Hours.

Exploration and communication of experience through speech and action on the stage. Prerequisite: THEA 170.

THEA 180 Violence as a Narrative Tool credit: 3 Hours.

This course will examine the use of violence as a key element in the creation of narrative for theatre and film. Students will learn to identify and critique specific choices that directors, performers, and filmmakers use in developing scenes of violence to evoke specific responses from their audiences. In addition, this course will interrogate the relationship between theatrical violence and society. Using examples from works of theatre and cinema, students will examine, analyze, and critique the genres of "violence design," while gaining insight to the creative process of fight direction.

THEA 199 Undergraduate Open Seminar credit: 0 to 5 Hours.

Approved for letter and S/U grading. May be repeated to a maximum of 12 hours.

THEA 203 Theatre of Black Experience credit: 3 Hours.

Surveys the history and literature, and studies dramatic works focused on the black experience through the rehearsal and performance of representative works of black dramatists. May be repeated to a maximum of 9 hours.

THEA 208 Dramatic Analysis credit: 3 Hours.

Introduction to the study of plays for theatre practitioners employing analytical methods and plays from modern theatre. Requires paper or project assignments for each play. Prerequisite: Consent of instructor required for non-theatre majors.

THEA 210 The Tragic Spirit credit: 3 Hours.

Same as CLCV 222 and CWL 264. See CLCV 222.

This course satisfies the General Education Criteria for:
Humanities - Lit Arts
Cultural Studies - Western

THEA 211 Introduction to Playwriting credit: 3 Hours.

Practical course in writing for the stage, including a study of basic dramatic construction and the analysis of weekly writing assignments, focusing on structure, style, and imagination, and culminating in a final term project of a one-act play. Prerequisite: THEA 208 or consent of instructor.

THEA 212 Introduction to Directing credit: 3 Hours.

Practical course in directing for the stage, focusing on script analysis, script preparation, casting, staging techniques, and design strategies, culminating in a directorial concept presentation of a contemporary play. Prerequisite: THEA 208.

THEA 218 Intro to Social Issues Theatre credit: 3 Hours.

An introductory exploration/survey of the rich histories, theories, and practices of community-based and social issues theatre. Through discussion, participation, lecture, and performance, representative works, movement, and artists will be explored. Lively connections will be made to an array of social issues in today's world. Same as GWS 218.

THEA 220 Survey of Theatrical Design credit: 3 Hours.

Survey of design elements in theatrical production including the function of scenery, costuming, lighting, and sound in conveying directorial concepts, style, and dramatic meaning. Intended for students not concentrating on theatrical design, this course requires both theoretical and practical projects. Prerequisite: THEA 102, THEA 208, or consent of instructor.

THEA 222 Introduction to Scenic Design credit: 3 Hours.

Projects and lectures addressing basic technical and aesthetic skills of scene design. Enrollment limited to Theatre majors. Prerequisite: THEA 125.

THEA 223 Intro to Technical Direction credit: 4 Hours.

Studies in the basic principles of technical direction and practical laboratory training in the materials, techniques, and processes for scenic construction and associated technologies. Prerequisite: Enrollment limited to Theater majors only.

THEA 231 Intro to Lighting Design credit: 3 Hours.

Develop an understanding of the basic aspects of lighting design and stage electrics for live performance.

THEA 260 Intro Asian American Theatre credit: 3 Hours.

Introduction to Asian American theatre, with emphasis on theatre companies, actors, playwrights, and audiences, through the reading of major dramatic works, examining production histories, and viewing Asian American performances and film. Same as AAS 260.

This course satisfies the General Education Criteria for:
Cultural Studies - US Minority

THEA 262 Literature of Modern Theatre credit: 3 Hours.

Introduction to the principal modes of dramatic expression from around 1870 to the present day. Prerequisite: Completion of campus Composition I general education requirement and THEA 208; or consent of instructor.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts

THEA 263 Intro African American Theatre credit: 3 Hours.

Focuses on theatre artists, theatre companies, and the role of Historically Black Colleges and Universities (HBCU's). Students will read plays, view productions, screen documentaries, and examine various primary sources. Same as AFRO 212.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

THEA 270 Relationships in Acting I credit: 3 Hours.

Behavior in stage performance explored on the basis of the actor's relationship with self, with objects, and with other players; emphasizes analysis of playscript to discover action, environment, and relationships. Prerequisite: THEA 175 or consent of instructor.

THEA 271 Voice and Movement I credit: 2 Hours.

Fundamental development of vocal production as connected to body awareness and movement for the actor. Various exercises, conditioning, and training methods are used. Prerequisite: THEA 175 or consent of instructor.

THEA 275 Relationships in Acting II credit: 3 Hours.

Beginning scene work with special emphasis on analysis of plays, roles, characterization, and application of skills learned through improvisation and relationships in acting. Prerequisite: THEA 270 or consent of instructor.

THEA 276 Voice and Movement II credit: 2 Hours.

Further development of the interconnected vocal production and movement processes for the actor. Various exercises, conditioning, and training methods are used. Prerequisite: Enrollment limited to Theatre majors only.

THEA 323 The Comic Imagination credit: 3 Hours.

Same as CLCV 323 and CWL 322. See CLCV 323.

This course satisfies the General Education Criteria for:

Advanced Composition
Humanities - Lit Arts
Cultural Studies - Western

THEA 360 History of Theatre I credit: 4 Hours.

History of the drama and theatre of ancient Greece and Rome, the Middle Ages, and the Italian and English Renaissance. Prerequisite: Junior standing or consent of instructor.

THEA 361 History of Theatre II credit: 4 Hours.

History of the drama and theatre of the Spanish Renaissance, seventeenth-century France, the English Restoration, the eighteenth and nineteenth centuries in Europe and America, and Asia. Prerequisite: THEA 360 or consent of instructor.

THEA 362 Chekhov credit: 3 Hours.

Same as RUSS 325 and CWL 325. See RUSS 325.

THEA 371 Acting Studio I: Dynamics credit: 1 Hour.

Development of movement and voice skills for actors. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 372, THEA 373, and THEA 374.

THEA 372 Acting Studio I: Voice credit: 2 Hours.

Concentrated training in standard speech for the stage and the International Phonetic Alphabet. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 373, and THEA 374.

THEA 373 Acting Studio I: Movement credit: 2 Hours.

Concentrated training in movement skills and mask characterization. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 372, and THEA 374.

THEA 374 Acting Studio I: Acting credit: 3 Hours.

Acting in realistic and naturalistic plays. A performance is given at the end of the term. Enrollment limited to Theatre majors. Prerequisite: THEA 275, consent of chair of Acting Program, and concurrent registration in THEA 371, THEA 372, and THEA 373.

THEA 375 Acting Studio II: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373 and THEA 374, and concurrent registration in THEA 376, THEA 377 and THEA 378.

THEA 376 Acting Studio II: Voice credit: 2 Hours.

Continued training in standard speech for the stage and the International Phonetic Alphabet. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374, and concurrent registration in THEA 375, THEA 377 and THEA 378.

THEA 377 Acting Studio II: Movement credit: 2 Hours.

Concentrated training in movement for the stage, body alignment and awareness. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374; and concurrent registration in THEA 375, THEA 376 and THEA 378.

THEA 378 Acting Studio II: Acting credit: 3 Hours.

Development of acting skills for musical theatre including dance, singing, and the analysis of British and American musical theatre materials. A performance is given at the end of the term. Enrollment limited to Theatre majors. Prerequisite: THEA 371, THEA 372, THEA 373, and THEA 374, and concurrent registration in THEA 375, THEA 376 and THEA 377.

THEA 391 Individual Topics credit: 2 Hours.

Individual projects and problems. Prerequisite: Consent of instructor.

THEA 392 Individual Topics credit: 2 Hours.

Individual projects and problems. Prerequisite: Consent of instructor.

THEA 399 Undergraduate Group Seminar credit: 1 to 4 Hours.

Group exploration of specialized topics. May be repeated in the same term to a maximum of 8 hours. May be repeated in subsequent terms to a maximum of 12 hours.

THEA 400 Practicum II credit: 1 to 3 Hours.

Advanced practical work in acting; theatre management; dramaturgy and directing; and the design, construction, and handling of scenery, lighting, sound, properties, costumes, and makeup for public performance. 1 to 3 undergraduate hours. 1 to 3 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Enrollment limited to Theatre majors.

THEA 406 Opera/Dance Stage Management credit: 3 or 4 Hours.

Explores the professional practice of opera and dance stage management including understanding producing models, rehearsal and performance practices, and management techniques. Emphasis on building skills to prepare opera and dance prompt-books and production paperwork. 3 undergraduate hours. 4 graduate hours. In the BFA Stage Management Curriculum, this course would replace 3 credits of THEA 409 Stage Management Workshop. Prerequisite: Stage Management Majors only unless approved by instructor.

THEA 408 AEA Union Stage Management credit: 3 or 4 Hours.

Exploration of the Actors' Equity Association LORT contract: practices and concerns. Emphasis on practical use an application of union contracts with particular focus on workplace rules and regulations. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 451.

THEA 409 Stage Management Workshop credit: 3 or 4 Hours.

Explores advanced topics in stage management focusing on practical applications of principles learned in earlier courses. Possible topics include: Touring Stage Management, Stage Managing Opera and Dance, and Production Management. 3 undergraduate hours. 4 graduate hours. May be repeated in the same or separate terms to a maximum of 6 undergraduate hours or 8 graduate hours as topics vary. Prerequisite: THEA 445 and THEA 446.

THEA 410 Dramaturgs Workshop credit: 3 or 4 Hours.

Seminar course focusing on the role of the dramaturg in the collaborative process. 3 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 6 undergraduate hours and 12 graduate hours, if topics vary.

THEA 411 Playwrights Workshop credit: 3 Hours.

Seminar course focusing on the role of the playwright in the collaborative process. Course may be repeated as topics will vary. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 undergraduate hours or 9 graduate hours. Prerequisite: THEA 211.

THEA 412 Directors Workshop credit: 3 Hours.

Seminar course exploring the role of the director in the collaborative process. Course may be repeated as topics will vary. 3 undergraduate hours. 3 graduate hours. May be repeated to maximum of 6 undergraduate hours or 9 graduate hours. Prerequisite: THEA 212.

THEA 415 Scenic Design I credit: 4 Hours.

Advanced problems in scene design for period and style plays and development of professional portfolio. 4 undergraduate hours. 4 graduate hours. May be repeated to a maximum of 8 hours if topics vary. Cannot repeat a section already taken. Prerequisite: THEA 222 or consent of instructor.

THEA 417 Leading Post-Perform Dialog credit: 4 Hours.

Study of the history, processes, and methods of leading discussions with social issues theatre audiences. Emphasis on the skills and techniques of facilitators/peer educators; artistic considerations; function and application of the dramaturg; and practical experience through facilitation of social issues theatre dialog. Same as GWS 417. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above or consent of instructor.

THEA 418 Devising Social Issues Theatre credit: 3 or 4 Hours.

Focuses on the role of the artist as 'cultural worker' through devising theatre in a community-based context that is explicitly concerned with social and/or health-related issues. While there is substantial research, reading and critique involved, the overall experience will be that of rigorously composing theatrical work vital to the community. Same as GWS 418. 3 undergraduate hours. 4 graduate hours.

THEA 419 CAD Drafting for the Stage credit: 3 Hours.

Study and application of computer-aided design techniques for scenery construction and design, focusing on the use of AutoCAD to create technical drawings for theatre. 3 undergraduate hours. 3 graduate hours. May not be repeated for credit. Prerequisite: THEA 425; enrollment limited to Theatre majors or by consent of instructor.

THEA 423 Advanced Lighting Design credit: 3 or 4 Hours.

A study of lighting design as it relates to color, intensity, distribution, and movement. Material covered includes: script analysis, scenic breakdowns, photometrics and lighting for live performance. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231.

THEA 425 Stage Drafting credit: 3 Hours.

Traditional and digital drafting techniques for scenic and lighting design and for technical production. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 125. Theatre Majors only.

THEA 426 History of Decor credit: 3 Hours.

Historical and comparative survey of designs, motifs, and forms of decor in the West. Emphasis on the relation between research and design for the stage. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a max of 6 hours if topics vary.

THEA 427 Scene Painting credit: 2 Hours.

Techniques and practice of scene painting; lab time required. 2 undergraduate hours. 2 graduate hours. Prerequisite: Consent of instructor.

THEA 428 Scenic Painting II credit: 3 Hours.

In this course, students will study and apply advanced materials, techniques, and skills of scenic painting. Over the semester, students will work to improve their own skills and techniques, with an emphasis on techniques, mediums, surfaces, and process. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 3 hours if topics vary. Prerequisite: THEA 427.

THEA 430 Technical Direction credit: 3 Hours.

Advanced studies in technical direction and theatre production organization. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 223 or consent of instructor.

THEA 431 The Lighting Laboratory credit: 3 or 4 Hours.

The investigation of lighting design theories through paper projects and practical experimentation in the lighting lab. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, or graduate standing.

THEA 432 Lighting for Non-Theatrical Spaces and Styles credit: 3 or 4 Hours.

A strong focus on lighting for architecture, landscape architecture, special events, theme parks, museums, concerts and site-specific venues. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, THEA 431.

THEA 433 Business of Lighting Design credit: 3 or 4 Hours.

Practical approaches to working as a professional lighting designer. Material covered includes: unions, contracts, negotiations, agents, assistants vs. associates, city survival, promotional websites, touring, residencies, etc. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 231, THEA 423, THEA 431, THEA 432.

THEA 434 Advanced Lighting Seminar credit: 1 Hour.

An open discussion of current shows and trends in the lighting industry including Skype interviews with business professionals. 1 undergraduate hour. 1 graduate hour. Prerequisite: Theatre Majors Only.

THEA 435 Professional Lighting Systems credit: 2 Hours.

Practical study of state-of-the-art lighting technology for the theatre, using the facilities of the Krannert Center for the Performing Arts. In-depth study of lighting control systems and programming, instrument maintenance, special effects, and the role of the master electrician in production. 2 undergraduate hours. 2 graduate hours. May not be repeated for credit.

THEA 437 Software for Lighting Design credit: 2 Hours.

Practical study of lighting design software currently used in the professional theatre and the entertainment industry. As technology evolves and new software developed, software programs will be added. Accommodating upgrades may necessitate offering the course every other year. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 4 hours. Prerequisite: THEA 231 and THEA 425.

THEA 439 Stage Mechanics II credit: 3 Hours.

Examines newly accepted and developing techniques and materials used in constructing and rigging stage scenery with emphasis on metalworking. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours.

THEA 440 Stage Mechanics III credit: 3 Hours.

Study in advanced scenery methods and materials, including advanced woodworking, plastic-craft, and rigging. Enrollment limited to Theatre majors. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 126.

THEA 442 Costume Patterning credit: 3 or 4 Hours.

Methods of draping and drafting patterns for period theatrical costumes. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

THEA 444 Costume Draping credit: 4 Hours.

Development of patterns for theatrical costumes through advanced draping techniques. Extensive lab work culminating in draping and constructing. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 442.

THEA 445 Costume History and Design I credit: 2 or 4 Hours.

Surveys theatrical costume and fashion of major periods; emphasizes relationships to styles of art and dramaturgy, social milieu, and production design. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: Consent of instructor.

THEA 446 Costume History and Design II credit: 2 or 4 Hours.

Continuation of THEA 445. 2 or 4 undergraduate hours. 2 or 4 graduate hours. Prerequisite: THEA 445 or equivalent.

THEA 447 Costume Rendering credit: 3 or 4 Hours.

Studio course in costume rendering techniques: analysis of costume figure, rendering of fabrics, exploration of various rendering media. Enrollment limited to Theatre majors. 3 undergraduate hours. 4 graduate hours. Prerequisite: Consent of instructor.

THEA 448 Advanced Costume Crafts credit: 3 or 4 Hours.

The research, rendering, and execution of armor, millinery, jewelry, and masks; dyeing with natural substances and with chemical dyes and the art of distressing clothing to achieve an aged, worn, tired or tattered look. Student is responsible for providing all materials used to complete the various projects. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 445 and THEA 446.

THEA 449 Costume Fabrication credit: 4 Hours.

Explores, through design projects, the appropriateness of various fabrics for specific costumes determined by historical accuracy, style, and constructability. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 445 and THEA 446. Costume Majors or consent of instructor.

THEA 450 Management Seminar credit: 1 Hour.

Addresses production and management issues surrounding Theater Department and KCPA productions. Guest speakers provide professional points of view on various management topics. 1 undergraduate hour. 1 graduate hour. May be repeated in separate terms to a maximum of 6 undergraduate or 6 graduate hours.

THEA 451 Principles of Stage Management credit: 3 or 4 Hours.

Studies in the principles and the craft of stage management. Enrollment limited to Theatre majors. 3 undergraduate hours. 4 graduate hours. Prerequisite: Minimum of sophomore standing in a Theatre curriculum.

THEA 452 Principles of Arts Management credit: 3 or 4 Hours.

Introduction to the basic practices of theatre and arts management with emphasis on facilities management, arts marketing, and financial planning in the performing arts. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior or graduate standing.

THEA 453 Theatre Sound Technology credit: 3 Hours.

Exploration of audio production techniques and equipment, as related to theatre sound. Related topics include acoustics, electronics, and music. 3 undergraduate hours. 3 graduate hours. Prerequisite: Enrollment limited to junior, senior or graduate theatre majors.

THEA 454 Sound Design I credit: 3 Hours.

Introduction to sound reproduction, recording, and basic systems design as applied to the modern theatre. 3 undergraduate hours. 3 graduate hours. Prerequisite: THEA 453, THEA 455 and THEA 459.

THEA 455 Audio Production credit: 2 Hours.

Project-based study of professional techniques in audio recording, mixing, and editing for music, theatre, and film production, utilizing current digital technology. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: THEA 453.

THEA 456 Properties Design credit: 3 Hours.

Principles of stage property design, planning and management. 3 undergraduate hours. 3 graduate hours.

THEA 457 Model Making for the Stage credit: 2 Hours.

Familiarizes students with diverse techniques, materials, and tools available to model makers, especially in theatre design. Focuses work on traditional craftsmanship of 1/4" scale and 1/2" scale models including sculpting, casting, and soldering. Also address issues of scale, texture, color, and specialty finishes. Open to all designers, artists, and technicians, including students in Museum Studies. Prior knowledge of studio art helpful but not required. 2 undergraduate hours. 2 graduate hours. Prerequisite: Contact instructor for approval.

THEA 458 Rendering for Live Performance credit: 2 Hours.

Develops students' ability to realize visually their design ideas through drawings and renderings. Students will deal with perspective problems and study shadow and light. Focuses on painting techniques with various media on different surfaces and explorations of different materials used by known designers in the field. Students will be given opportunities to render specific design projects for their personal portfolios. Course consists of lectures, demonstrations, and in-class exercised. Open to all designers, artists, and technicians. 2 undergraduate hours. 2 graduate hours. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Consent of instructor required.

THEA 459 Sound Systems credit: 2 Hours.

Project-based study of professional techniques in sound system applications and design for sound reinforcement in music, theatre, and architectural applications. 2 undergraduate hours. 2 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: THEA 453.

THEA 460 Multi-Ethnic Theatre credit: 4 Hours.

Focuses on the history and aesthetics of African, Asian, African American, Asian American, Latino/Latina, and Native American plays and productions. 4 undergraduate hours. 4 graduate hours. Prerequisite: THEA 102.

THEA 462 Advanced Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on the advanced tools and skills of creating programmed images for live performance of dance, theatre and music theatre. Students will acquire advanced technical skills as well as continue to explore to the relationship of projected images to text, performer, space and time. Lectures and projects develop advanced skills with digital technology, images and projections in live performance. 3 undergraduate hours. 4 graduate hours.

THEA 463 American Theatre History I credit: 3 or 4 Hours.

Survey of the development of American theatre as a cultural, social, political, and economic institution from the colonial era to 1900. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior, or graduate standing.

THEA 464 American Theatre History II credit: 3 or 4 Hours.

Survey of the development of American theatre as a cultural, social, political, and economic institution from the late nineteenth century to the present. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, senior or graduate standing.

THEA 465 Musical Theatre History credit: 4 Hours.

History of the American musical in the twentieth century, studied through the contributions of major composers, lyricists, directors, and choreographers. 4 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above, or consent of instructor.

THEA 467 Contemporary Theatrical Forms credit: 3 or 4 Hours.

Study of post-World War I theatre, including the New Stagecraft, expressionism, Brecht and epic theatre, theatre of the absurd, and later developments. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 208, and junior, senior or graduate standing.

THEA 471 Acting Studio III: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. 1 undergraduate hour. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 472, THEA 473 and THEA 474.

THEA 472 Acting Studio III: Voice credit: 2 Hours.

Advanced training in voice and speech for the stage with emphasis on classic texts. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 471, THEA 473 and THEA 474.

THEA 473 Acting Studio III: Movement credit: 2 Hours.

Training in stage combat, sword, and rapier. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent registration in THEA 471, THEA 472 and THEA 474.

THEA 474 Acting Studio III: Acting credit: 3 Hours.

Acting in Shakespearean and other Elizabethan, Jacobean, and Caroline drama. A performance is given at the end of the term. Enrollment limited to Theatre majors. 3 undergraduate hours. No graduate credit. Prerequisite: THEA 375, THEA 376, THEA 377 and THEA 378, and concurrent enrollment in THEA 471, THEA 472 and THEA 473.

THEA 475 Acting Studio IV: Dynamics credit: 1 Hour.

Continuing development of movement and voice skills for actors. Enrollment limited to Theatre majors. 1 undergraduate hour. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 476, THEA 477 and THEA 478.

THEA 476 Acting Studio IV: Voice credit: 2 Hours.

Advanced training in voice and speech for the stage with emphasis on dialects. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 477 and THEA 478.

THEA 477 Acting Studio IV: Movement credit: 2 Hours.

Advanced training in unarmed stage combat and quarterstaff. Enrollment limited to Theatre majors. 2 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 476 and THEA 478.

THEA 478 Acting Studio IV: Acting credit: 3 Hours.

Studies in the techniques of acting for the camera and cold readings; analysis of distinguished film acting. Scenes are recorded in the television studio. Enrollment limited to Theatre majors. 3 undergraduate hours. No graduate credit. Prerequisite: THEA 471, THEA 472, THEA 473 and THEA 474, and concurrent enrollment in THEA 475, THEA 476 and THEA 477.

THEA 479 Preparation for Auditions credit: 2 Hours.

Each actor, through extensive research, prepares a portfolio of audition pieces for the opportunities imminent before and after graduation for resident companies, commercial productions, and film, or professional graduate schools. Enrollment limited to Theatre majors. 2 undergraduate hours. 2 graduate hours. Prerequisite: THEA 375, THEA 376, THEA 377, THEA 378.

THEA 481 Content Creation 1: Camera and Editing for Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on creating original video content. There is special emphasis on producing media assets to be used as a part of live performance of dance, theatre and music theatre. Lecture and classwork projects develop skills in developing image ideas from text to storyboards to camera images to completed motion video. 3 undergraduate hours. 4 graduate hours.

THEA 482 Content Creation 2: Motion Graphics & VFX for Media Design credit: 3 or 4 Hours.

Lecture/Studio Course focused on creating motion graphics & video special effects content. There is special emphasis on producing media assets to be used as a part of live performance of dance, theatre and music theatre. Lecture and classwork projects are intended to explore and develop skills in preparing still images and animating them into motion video. 3 undergraduate hours. 4 graduate hours.

THEA 483 Modern Scandinavian Drama credit: 3 or 4 Hours.

Same as CWL 463 and SCAN 463. See SCAN 463.

THEA 485 Prop Furniture Construction credit: 3 or 4 Hours.

This course explores the skills and tools commonly used for furniture construction. Students will learn a variety of fine woodworking techniques while constructing samples that will ultimately lead to a realized piece of furniture. In this advanced course of study, students will focus on joinery, the properties of finer lumber choices, programming the CNC for automated cutting assistance, the use of a wood lathe, and natural fiber upholstery techniques such as rushing and caning. 3 undergraduate hours. 4 graduate hours. Prerequisite: Students taking this class should have prior carpentry and woodworking experience and a familiarity with bench tools, hand tools, various glues, and common construction materials.

THEA 488 Premodern Chinese Drama credit: 3 or 4 Hours.

Same as CWL 416 and EALC 413. See EALC 413.

THEA 490 Professional Internship credit: 0 to 14 Hours.

Professional work with an approved host theatre or institution in an area related to the student's academic program; exposure to and participation in professional theatre. Full documentation and approval of internship activities required. 0 to 14 undergraduate hours. 0 to 12 graduate hours. Approved for S/U grading only. May be repeated in the same or subsequent terms, if topics vary. Prerequisite: Junior, senior, or graduate standing in Theatre; consent of Internship Coordinator.

THEA 491 Advanced CAD Drafting for Lighting Designers credit: 3 or 4 Hours.

Advanced practical study of CAD drafting for lighting designers and technicians utilizing current industry software. 3 undergraduate hours. 4 graduate hours. Prerequisite: THEA 437.

THEA 492 Digital Rendering for Lighting credit: 3 or 4 Hours.

An exploration of 3-D rendering techniques for live performance using software specific to the lighting industry. Teach skills necessary to create an artistic representation of a design and to imagine a production. 3 undergraduate hours. 4 graduate hours.

THEA 493 Lighting Opera & Musicals credit: 3 or 4 Hours.

An advanced study of techniques used for lighting musicals and operas through paper projects and various lectures. 3 undergraduate hours. 4 graduate hours.

THEA 494 Advanced Problem Solving for Lighting Designers credit: 3 or 4 Hours.

Practical projects to help lighting designers and technicians prepare for unforeseen problems that arise in professional situations when dealing with various lighting projects and gear. Topics addressed include storytelling, plot, practical lighting, and repertory. 3 undergraduate hours. 4 graduate hours.

THEA 505 Proseminar in Theatre Practice credit: 4 Hours.

Orientation to production activity at the Krannert Center for the Performing Arts, review of contemporary theatre practice in the United States, survey of methods in production research, and selected projects in theatre specialties. Prerequisite: Enrollment limited to Theatre majors.

THEA 550 Colloquium Design & Theat Tech credit: 4 or 8 Hours.

Projects in design for the theatre or in theatre technology, including stage scenery, costuming, lighting, makeup, projections, and sound and stage systems. May be repeated to a maximum of 32 hours. Prerequisite: Enrollment limited to graduate students in theatre design and technology.

THEA 560 Seminar in Theatre History credit: 4 Hours.

Studies in the history of the theatre. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

THEA 561 Seminar in Dramatic Literature credit: 4 Hours.

Advanced studies of plays as dramatic literature in historical and theoretical contexts. Selection of plays may vary each semester. May be repeated in separate terms to a maximum of 16 graduate hours.

THEA 562 Seminar in Theatre Theory credit: 4 Hours.

Studies in theories of drama, theatre, and performance. Examination of major theorists in both theatre scholarship and critical theory. Emphasis placed on studies in methodology. Specific topics may vary. May be repeated in separate terms to a maximum of 16 hours.

THEA 564 Stud Theatre Hist 20th Century credit: 4 Hours.

Examines selected movements and contributors to the theatre from the late nineteenth-century to the contemporary period. May be repeated to a maximum of 8 hours with approval. Prerequisite: Consent of instructor.

THEA 571 Colloquium in Acting: Dynamics credit: 1 Hour.

Intensive professional training in voice and movement skills for the actor. May be repeated to a maximum of 6 hours. Prerequisite: Enrollment limited to graduate acting students; concurrent registration in THEA 572, THEA 573 and THEA 574.

THEA 572 Colloquium in Acting: Voice credit: 2 Hours.

Intensive professional training in voice and speech for the actor. May be repeated to a maximum of 12 hours. Prerequisite: Enrollment limited to graduate acting students; concurrent registration in THEA 571, THEA 573 and THEA 574.

THEA 573 Colloquium in Acting: Movement credit: 2 Hours.

Intensive professional training in movement and stage combat for the actor. May be repeated to a maximum of 12 hours. Prerequisite: Enrollment limited to graduate acting students; concurrent registration in THEA 571, THEA 572 and THEA 574.

THEA 574 Colloquium in Acting: Acting credit: 3 Hours.

Intensive professional training in acting with a different focus each term on a particular style of dramatic literature. May be repeated to a maximum of 18 hours. Prerequisite: Enrollment limited to graduate acting students; concurrent registration in THEA 571, THEA 572 and THEA 573.

THEA 591 Special Problems credit: 0 to 8 Hours.

Individual research in selected topics by arrangement with the instructor. 0 to 8 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated up to 72 hours if topics vary. Prerequisite: Consent of instructor.

THEA 595 Creative Project credit: 1 to 8 Hours.

Open to MFA, MA, and PhD in Theatre 1 to 8 graduate hours. No professional credit. May be repeated up to 20 hours in the same term or 72 hours in separate terms, if topics vary. Prerequisite: Consent of instructor.

THEA 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated. Prerequisite: Consent of instructor.

Theoretical and Appl Mechanics (TAM)

TAM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TAM>)

Courses

TAM 195 Mechanics in the Modern World credit: 1 Hour.

Freshman introduction to engineering mechanics and its role in modern engineering analysis and design. Project activity.

TAM 199 Undergraduate Open Seminar credit: 1 to 5 Hours.
May be repeated.

TAM 201 Mechanics for Technol & Mgmt credit: 3 Hours.
Engineering mechanics (statics, dynamics, solid mechanics, and fluid mechanics) and the role that mechanics plays in engineering analysis and design. For Technology and Management majors only.

TAM 210 Introduction to Statics credit: 2 Hours.
Forces, moments, couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; shear-force and bending-moment distributions; Coulomb friction; centroids and center of mass; applications of statics in design. Credit is not given for both TAM 210 and TAM 211. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

TAM 211 Statics credit: 3 Hours.
Forces, moments, and couples; resultants of force systems; equilibrium analysis and free-body diagrams; analysis of forces acting on members of trusses, frames, etc.; shear-force and bending-moment distributions; Coulomb friction; centroids, center of mass, moment of inertia, polar moment of inertia, and product of inertia; virtual work; hydrostatic pressure; applications of statics in design. Credit is not given for both TAM 211 and TAM 210. Prerequisite: PHYS 211; credit or concurrent registration in MATH 241.

TAM 212 Introductory Dynamics credit: 3 Hours.
Kinematics and dynamics of the three-dimensional motion of particles; kinematics and dynamics of the plane motion of rigid bodies; methods of work energy and impulse momentum; moving reference frames. Prerequisite: TAM 210 or TAM 211.

TAM 251 Introductory Solid Mechanics credit: 3 Hours.
Relationship between internal stresses and deformations produced by external forces acting on deformable bodies, and design principles based on mechanics of solids: normal stresses, shear stresses, and deformations produced by tensile, compressive, torsional, and bending loading of members; beam deflections; elastic energy and impact; multi-dimensional stress states; buckling of columns. Prerequisite: TAM 210 or TAM 211.

TAM 252 Solid Mechanics Design credit: 1 Hour.
Design problems and projects intended to accompany TAM 251. Prerequisite: Credit or concurrent registration in TAM 251.

TAM 270 Design for Manufacturability credit: 3 Hours.
Same as ME 270. See ME 270.

TAM 297 Introductory Independent Study credit: 1 to 3 Hours.
Independent study and/or individual projects related to engineering mechanics. Approved for Letter and S/U grading. May be repeated to a maximum of 6 credit hours for letter grade; no limit for S/U grade mode. Prerequisite: Consent of Instructor.

TAM 302 Engineering Design Principles credit: 3 Hours.
Examples of mechanical design problems that occur in engineering practice and the procedures and issues involved in solving them; technical aspects and societal ramifications of the design process; intellectual property, ethics, and contemporary issues; probability and statistics; computational mechanics; case studies; student discussion of design-related issues at different levels; design project reports and presentations; student teams.

TAM 324 Behavior of Materials credit: 4 Hours.
Same as CEE 300. See CEE 300.

TAM 335 Introductory Fluid Mechanics credit: 4 Hours.
Fluid statics; continuity, momentum, and energy principles via control volumes; ideal and real fluid flow; introduction to the Navier-Stokes equation; similitude; laminar and turbulent boundary layers; closed-conduit flow, open-channel flow, and turbomachinery. Prerequisite: TAM 212.

TAM 412 Intermediate Dynamics credit: 4 Hours.
Lagrangian mechanics of dynamical systems with an emphasis on vibrations; constraints and generalized coordinates; motion in accelerating frames; conservation laws and invariance of the Lagrangian; particle motion in one dimension, the two-body problem, and central-force motion; free and forced vibration of linearized single-degree-of-freedom and multi-degree-of-freedom discrete systems; weakly nonlinear vibrations; parametric resonance; introduction to Hamiltonian dynamics; rigid-body motions. 4 undergraduate hours. 4 graduate hours. Credit is not given for both TAM 412 and AE 352. Prerequisite: MATH 225 or MATH 415; MATH 285; TAM 212.

TAM 413 Fund of Engrg Acoustics credit: 3 or 4 Hours.
Same as ECE 473. See ECE 473.

TAM 416 Intro to Nonlinear Dyn & Vib credit: 4 Hours.
Single- and multi-degree-of-freedom oscillators; asymptotic methods; forced, internal and combination resonances; time-discrete dynamical systems (maps); complex dynamics; parametric vibrations and resonances; introduction to nonlinear localization and nonlinear targeted energy transfer; nonlinear vibrations of elastic continua; application in mechanics and engineering. 4 undergraduate hours. 4 graduate hours. Prerequisites: MATH 285 OR MATH 441; MATH 415; TAM 212.

TAM 424 Mechanics of Structural Metals credit: 3 Hours.
Micromechanisms at the atomic, single-crystal, and polycrystal levels and their use in explaining the deformation and failure characteristics of metals; elastic deformation, dislocation mechanics, plastic deformation and strengthening mechanisms, fracture mechanics and fracture mechanisms, fatigue, and creep; design criteria; special topics. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 300 or ME 330.

TAM 427 Mechanics of Polymers credit: 3 Hours.
Mechanical behavior of amorphous and semi-crystalline polymers; overview of polymer structure, properties, and processing; polymer linear viscoelasticity using Boltzmann superposition and mechanical models; measurement of viscoelastic properties; polymeric yield phenomena; fracture and craze formation; impact and fatigue. Same as AE 427 and MSE 454. 3 undergraduate hours. 3 graduate hours. Prerequisite: CEE 300 or ME 330.

TAM 428 Mechanics of Composites credit: 3 Hours.
Same as AE 428 and MSE 456. See MSE 456.

TAM 435 Intermediate Fluid Mechanics credit: 4 Hours.
Analytical solution methods for problems involving ideal and real fluids: potential flow theory, boundary-layer theory; surface waves, vortex dynamics, and compressible flows. 4 undergraduate hours. 4 graduate hours. Prerequisite: One of AE 312, ME 310, TAM 335.

TAM 445 Continuum Mechanics credit: 4 Hours.
Tensor algebra and analysis; kinematics of continua; mass, force, stress, and the general balance laws of continuum mechanics; introduction to constitutive equations. 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 451 Intermediate Solid Mechanics credit: 4 Hours.

Analysis of stress and strain (definitions, transformation of axes, equilibrium equations, and symmetry of the stress tensor); linear materials, Hooke's law; strain energy, potential energy, energy principles and methods; two-dimensional problems in elasticity (torsion, axisymmetric problems); the finite-element method for two- and three-dimensional boundary-value problems in linear elasticity; plasticity (introduction, yield criteria, elastic-plastic behavior, and limit-load calculations); linear-elastic fracture mechanics (introduction, Griffith's approach, stress intensity factor, and energy release rate). 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 456 Experimental Stress Analysis credit: 3 Hours.

Basic theories for measuring stresses and deformations in load-carrying engineering components; use of optical, electrical, and mechanical instrumentation; laboratory sessions on brittle coatings, electrical resistance strain gages, photoelasticity, and moire interferometry. 3 undergraduate hours. 3 graduate hours. Prerequisite: TAM 251.

TAM 461 Cellular Biomechanics credit: 4 Hours.

Mechanics of biological cells and tissues: cell structure; mechanics of biomembranes; the cytoskeleton and cortex; dynamic cell processes; cell motility and control of cell shape and proliferation; experimental approaches and theoretical models. Same as BIOE 461. 4 undergraduate hours. 4 graduate hours. Prerequisite: TAM 251.

TAM 470 Computational Mechanics credit: 3 or 4 Hours.

Modercomputational mechanics: mappings and iterative methods; stability; convergence; consistency; numerical and symbolic solutions of ordinary and partial differential equations; finite-difference methods; the finite-element method; spectral methods. Applications to problems in solid mechanics, fluid mechanics, and dynamics. Same as CSE 450. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: CS 101 and MATH 285.

TAM 497 Independent Study credit: 1 to 4 Hours.

Individual studies in any area of theoretical and applied mechanics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 12 hours, with a maximum of 8 hours in any one term. Prerequisite: consent of instructor.

TAM 498 Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in theoretical and applied mechanics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in the same or separate terms if topics vary to a maximum of 9 undergraduate hours or 12 graduate hours.

TAM 499 Senior Thesis credit: 3 Hours.

Thesis investigation of special subjects in mechanics, including theoretical or experimental research. 3 undergraduate hours. No graduate credit. Prerequisite: Department and instructor approval required.

TAM 500 Seminar credit: 1 Hour.

Lectures and discussion on current topics in theoretical and applied mechanics. Approved for S/U grading only.

TAM 514 Elastodynamics and Vibrations credit: 4 Hours.

Review of theory of multi-degree-of-freedom systems; problems in the free and forced vibration of continuous linear elastic structures, rods, beams, membranes, plates, and three-dimensional solid and fluid bodies; Lagrangian densities, Sturm-Liouville problems, time and frequency domains, damping, Green's functions, and elastic waves; propagation and modal analysis; modeling of damping in structures; response of complex structures. Same as AE 551. 4 graduate hours. No professional credit. Prerequisite: TAM 412, TAM 542, and TAM 551.

TAM 518 Wave Motion credit: 4 Hours.

Linear waves in one-dimensional homogeneous and inhomogeneous media (both solids and fluids), linear elastic waves in a homogeneous halfspace, scalar waves in a layer and in a layered halfspace, nonlinear diffusive waves, nonlinear dispersive waves, and the inverse scattering transform. Prerequisite: TAM 541 or MATH 556; one of TAM 514, TAM 531, TAM 551.

TAM 524 Micromechanics of Materials credit: 4 Hours.

Advanced analysis of modern engineering materials with emphasis on relating microstructural phenomena to the mechanics of material behavior: prediction of elastic and thermal properties of materials with heterogeneous microstructure (such as composites), micromechanics of failure and damage, toughening mechanisms, mechanics of phase transformations; current topics in materials research (such as high-temperature response and ferroelasticity). Prerequisite: CEE 300 or ME 330; TAM 551.

TAM 529 Viscoelasticity Theory credit: 4 Hours.

Same as AE 529. See AE 529.

TAM 531 Inviscid Flow credit: 4 Hours.

Dynamics of fluids in the limit of zero viscosity: governing equations of motion, kinematics, and vorticity transport; general theory of irrotational flow, including two-dimensional potential flow, the complex potential, and three-dimensional potential flow; applications to thin airfoil theory and free streamline theory; inviscid flows with vorticity; vortex dynamics; water wave theory; aspects of inviscid compressible flow. Prerequisite: MATH 285 and TAM 435.

TAM 532 Viscous Flow credit: 4 Hours.

Dynamics of flow in which viscosity is significant or dominant, and the development and use of theoretical and numerical tools for practitioners of modern fluid mechanics; physics of viscous layers that arise in both high- and low-Reynolds-number flows; dimensional analysis, exact solutions to the Navier-Stokes equations; jets and wakes; microhydrodynamics; fluid stability; turbulence. Prerequisite: MATH 285 and TAM 435.

TAM 536 Instability and Transition credit: 4 Hours.

Stability of fluid motion: linearized flow equations and normal-mode analysis, Kelvin-Helmholtz instability, inviscid and viscous theory of parallel shear flow, Squire's and Rayleigh's inflection-point theorems, secondary instability theory; critical layers; boundary-layer stability; Orr-Sommerfeld equations, Tollmien-Schlichting waves; non-parallel theory, centrifugal instabilities, and Benard convection; nonlinear theory and transition to turbulence; bifurcations, Landau's theory; routes to chaos, strange attractors; transition modeling, prediction, and control; boundary-layer receptivity, experimental evidence. Prerequisite: TAM 532.

TAM 537 Experimental Fluid Mechanics credit: 4 Hours.

Methods and techniques for measurement and analysis of data used in experimental fluid mechanics: signal processing, electronics, and electro-optics; fluid mechanical properties; experimental signal processing; random data and signal analysis; analog and digital data processing; dynamic similarity, self-preservation; pressure measurement, thermal anemometry, and laser-Doppler velocimetry; flow visualization, particle-image velocimetry. Prerequisite: TAM 531 or TAM 532.

TAM 538 Turbulence credit: 4 Hours.

Instability and origins of chaotic motion in fluid flow; Reynolds averaging and statistical description of turbulence, correlations and spectral dynamics of homogeneous turbulence, anisotropic flows, coherent structures, inhomogeneous turbulence, transport models, and large-eddy simulations. Prerequisite: TAM 532.

TAM 539 Fluid Mechanics Seminar credit: 1 Hour.

Weekly seminar on current research topics in turbulent and other complex flows: theoretical modeling, numerical analysis, computational techniques, and experimental investigations. Approved for S/U grading only.

TAM 541 Mathematical Methods I credit: 4 Hours.

Vector and tensor algebra and complex-variable methods; ordinary differential equations, qualitative questions of existence and uniqueness; analytic solution methods, numerical methods, power-series solution and special functions; eigenvalue problems, Green's functions, Laplace transforms, stability of solutions; engineering applications drawn from mechanics. Prerequisite: MATH 285 and TAM 251.

TAM 542 Mathematical Methods II credit: 4 Hours.

Continuation of TAM 541. Modeling, inequalities, elements of functional analysis; partial differential equations, existence and uniqueness, second-order equations; hyperbolic conservation laws; numerical methods, eigenfunction expansions, integral transforms, and fundamental solutions; engineering applications drawn from mechanics. Prerequisite: TAM 541.

TAM 545 Advanced Continuum Mechanics credit: 4 Hours.

Unified treatment of modern continuum mechanics: mathematical preliminaries; review of kinematics and general balance laws; general theory of mechanical constitutive equations, including material constraints and material symmetry. Prerequisite: TAM 551.

TAM 549 Asymptotic Methods credit: 4 Hours.

Advanced methods of perturbation theory and asymptotic analysis, with examples drawn from classical dynamics, fluid mechanics, and wave propagation: asymptotics of integrals, singular perturbation theory (boundary layers, matched asymptotic expansions, and composite expansions), multiple scales, summation of series; special topics. Prerequisite: MATH 446 and TAM 541.

TAM 551 Solid Mechanics I credit: 4 Hours.

Mechanics of elastic deformable bodies, based on the fundamental concepts of modern continuum mechanics: kinematics, balance laws, constitutive equations; classical small-deformation theory; formulation of initial boundary-value problems of linear elastodynamics and boundary-value problems of linear elastostatics; variational formulations, minimum principles; applications of theory to engineering problems. Prerequisite: MATH 285.

TAM 552 Solid Mechanics II credit: 4 Hours.

Continuation of TAM 551. Selected topics in linear elasticity (including St. Venant beam theory and plane problems of elastostatics), plasticity (including yield surfaces, von Mises and Tresca yield criteria, Drucker's stability postulate, J-flow theory, perfect plasticity, limit analysis, and slip-line theory), and fracture mechanics (including linear elastic analysis, fracture criteria for elastic brittle fracture, and elastic-plastic fracture). Prerequisite: TAM 551.

TAM 554 Plasticity credit: 4 Hours.

Phenomenological and mathematical formulation of the constitutive laws of plasticity; yield criteria and their experimental verification; plastic stress-strain relations and their associated flow rules; correspondence between rate-independent and rate-dependent plasticity; solutions to basic boundary-value problems, including plane problems and those involving cylindrical and spherical symmetries; variational and minimum principles; limit analysis; plane-strain problems and crystal plasticity; finite-strain theory. Prerequisite: TAM 552.

TAM 555 Fracture Mechanics credit: 4 Hours.

Unified analytical treatment of modern fracture problems: macroscopic theories used to determine the static strength of bodies containing cracks; Griffith criterion, linear-elastic fracture mechanics, elastic-plastic fracture mechanics models; small-scale yielding results and their implications; general yielding; interfacial fracture; fracture control; micromechanisms of fracture. Prerequisite: TAM 424 or MSE 440; TAM 541; TAM 552.

TAM 557 Mechanics of Random Media credit: 4 Hours.

Methods to study mechanics of complex/random microstructures involving several scales: random geometry and stochastic processes and fields, including spatial point processes, mathematical morphology, geodesics, ergodicity, entropy; (non)stationary and (an)isotropic tensor random fields for fluids (turbulence) and solids (microstructures), representations and spectra; truss- and beam-lattices and corresponding (non-)classical continua for modeling crystals, cellular media (e.g. metallic foams), and granular matter; geometric and rigidity percolation; plasticity, fracture, slip statistics, and fractals in disordered media; scaling to Representative Volume Element (RVE) in conductivity, (non)linear elasticity, elasto-plasticity, flow in porous media, and coupled field phenomena; statistical continuum theories for problems without RVE (i.e., lacking separation of scales); stochastic finite elements; effects of microscale randomness on waves and wavefronts in (non)linear elastic/dissipative solid or fluid media; fractional calculus and mechanics of fractal media. Prerequisite: TAM 445 or TAM 551; MATH 362.

TAM 570 Computational Fluid Mechanics credit: 4 Hours.

Highly accurate and reliable techniques for large-scale numerical simulations of fluid flows: spectral numerical methods, including Fourier and other functional expansions, Galerkin and collocation projections, domain decompositions and the solution of partial differential equations, especially the Navier-Stokes equations; high-resolution methods for the solution of hyperbolic conservation laws with discontinuous solutions, and issues related to implementation on supercomputers. Same as CSE 560. Prerequisite: TAM 470 and TAM 542.

TAM 574 Adv Finite Element Methods credit: 4 Hours.

Advanced theory and applications of the finite-element method, as needed for research in computational science and engineering: applications to mechanics of solids and fluids, thermal problems, etc.; variational foundations of the finite-element method, error estimates, and adaptive analysis; finite-element methods for parabolic and hyperbolic problems; mixed finite-element methods; applications to systems of equations. Same as CSE 517. Prerequisite: One of TAM 470, CEE 570, CS 555, ME 471.

TAM 597 Advanced Independent Study credit: 1 to 8 Hours.

Analytical, experimental, or computational studies in one or more areas of theoretical and applied mechanics, including solid mechanics, behavior of materials, fluid mechanics, dynamics, applied mathematics, and computational science and engineering. May be repeated. (Summer session, 1 to 4 hours). Prerequisite: Consent of instructor.

TAM 598 Advanced Special Topics credit: 1 to 4 Hours.

Subject offerings of new and developing areas of knowledge in theoretical and applied mechanics intended to augment the existing curriculum. See Class Schedule or departmental course information for topics and prerequisites. May be repeated in the same or separate terms if topics vary to a maximum of 12 hours.

TAM 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated.

Translation Studies (TRST)

TRST Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TRST>)

Courses

TRST 201 Intro to Translation Studies credit: 3 Hours.

Introduction to translation as an academic discipline and professional field through a series of texts in translation. Explores the ways in which texts, images, and ideas move across cultures, across time, across languages, and through different art forms; to elevate the students' appreciation of literature and other art forms; and get acquainted with the complexities of a work of art as a cultural manifestation and with the ways in which various artists, writers and translators have attempted to recreate these complexities in other languages and cultures. Prerequisite: Students must have met the University of Illinois foreign language requirement.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

TRST 400 Translation in the EU credit: 3 or 4 Hours.

Focuses on language policy and the role of the translator as mediator and communicator in Europe's multilingual and multicultural societies. Discusses why the EU project depends on the concept of "living together" across languages and cultures and how translation is done in EU institutions and other international organizations. Seeks to answer the question of how multilingual individuals are trained and how they apply their skills to ensure that the multicultural project that the European Union represents will flourish thanks to this diversity, rather than being hampered by it. Preparatory for the study abroad course in Summer I in the European Union, but can be taken whether or not a student studies abroad in the EU. 3 undergraduate hours. 4 graduate hours.

TRST 401 Translation Study Abroad credit: 3 or 4 Hours.

Two to four-week intensive study abroad course in the EU that studies the dynamics of language and the language policy in the EU and provides hands-on experience with the translator's role and responsibility as mediator and communicator in today's European multi-lingual and multi-cultural societies. 3 undergraduate hours. 4 graduate hours. Prerequisite: Students must have met the University of Illinois foreign language requirement. Departmental approval.

TRST 403 German-English Translation: Theory & Practice credit: 3 Hours.

Same as GER 403. See GER 403.

TRST 404 Bilingualism and Translation credit: 3 or 4 Hours.

Studies selected writings by authors published bilingually to reflect on the ways in which the practice of translation may be informed by self-translation, and to encounter biographical aspect of bilingualism that directly relates to translators' self-perception and the experience of translation. The emphasis is on how authors' strategies in self-translation compare with the strategies of a translator and how bilingualism relates to self, creativity, national identity, and politics. 3 undergraduate hours. 4 graduate hours. Prerequisite: Students must have met the University of Illinois foreign language requirement.

TRST 405 Commercial & Technical Trans credit: 3 or 4 Hours.

Theoretical and practical aspects of commercial and technical translation resulting in a portfolio of business and technical documents relating to a fictional business. 3 undergraduate hours. 4 graduate hours. Prerequisite: Departmental approval. Six semesters of foreign language study.

TRST 406 Translation for Professions credit: 3 or 4 Hours.

Develop the practice of "instrumental" translation skills in a variety of technical domains, including translation for new media, medical and legal translation, and localization. Focuses on the technical, cultural and terminological problems that characterize localization and globalization as governing criteria of translation in today's knowledge economy. 3 undergraduate hours. 4 graduate hours. Prerequisite: Departmental approval. Six semesters of foreign language study.

TRST 407 Terminology and CAT credit: 3 or 4 Hours.

The theoretical and practical aspects of terminology studies, as well as the computer skills required of a translator in today's Language Service Provider (LSP) environment, mastery of a variety of computer-assisted translation (CAT) tools and the SDL Trados suite. Practical applications of terminology work include advanced Internet research for translation work, terminology "mining" exercises, construction of terminology databases and management of those databases. Terminology theory is situated within the field of translation studies as derived from the discipline of linguistics. 3 undergraduate hours. 4 graduate hours. Prerequisite: Departmental approval. Six semesters of foreign language study.

TRST 408 Translation Tools & Practice credit: 3 or 4 Hours.

An advanced tools course that provides familiarity with a range of CAT tools and also localization software. Combines the most up-to-date theoretical studies on translation/localization practices with hands-on activities aimed at having students understand and reflect, by using the tools, on the language, culture- and content-bound issues that translation professionals face when adapting content from an L1 to an L2 culture. Standard industry tools will be used in class and for assignments. The class will be structured into three main units: Corpus Generation, Website/Software Localization and Machine Translation. 3 undergraduate hours. 4 graduate hours.

TRST 410 Translation Theory & Practice credit: 3 or 4 Hours.

Study of the history, theory and methods of literary translation and the practice of literary translation as we engage in our own work as translators. Examines the growing importance of translation studies as a rapidly expanding field which examines the close relationships between language and culture, language and art, and broad questions of intercultural exchange. 3 undergraduate hours. 4 graduate hours. Prerequisite: Departmental approval.

TRST 412 Spanish/English Translation credit: 3 or 4 Hours.

Same as SPAN 410. See SPAN 410.

TRST 413 Arabic-English Translation credit: 3 or 4 Hours.

Same as ARAB 413. See ARAB 413.

TRST 415 Machine Translation: History and Applications credit: 3 or 4 Hours.

Explores the 60-year history of using computers to translate human languages, from the 1954 Georgetown experiment to the present. Explores the dominant symbolic and statistical paradigms that have defined machine translation, and the positive and negative dynamics that human translators have experienced when interacting with machine translation systems. Provides hands-on experience with machine translation today. Same as LING 415. 3 undergraduate hours. 4 graduate hours.

TRST 420 Translation Practice credit: 3 or 4 Hours.

Introduction to a variety of issues focused on how to approach translation projects including a study of text types and genres, the formal properties of texts, grammatical and syntactical issues of translating, questions of linguistic register, considerations of the target audience, the meaning of "localization", cultural and ethical concerns and strategies of compensation. The importance of studying a text and making strategic decisions before starting a translation will be emphasized and discussed, as well as the crucial step of revising and editing the translated text. 3 undergraduate hours. 4 graduate hours. Prerequisite: Departmental approval. Six semesters of foreign language study.

TRST 430 Chinese Poetry and Translation credit: 3 Hours.

Same as EALC 425. See EALC 425.

TRST 431 History of Translation credit: 3 or 4 Hours.

Same as CLCV 430, CWL 430, ENGL 486, GER 405, SLAV 430, and SPAN 436. See SLAV 430.

TRST 440 Translation Studies Capstone credit: 3 or 4 Hours.

Capstone project in translation done under the supervision of a mentor or instructor in a specialized area of translation according to the student's area of interest and language pair. Possible specializations include literary, technical, commercial, legal, medical, or translation for new media. The student may combine the project with an internship or apprenticeship in an appropriate organization, such as a health center, courthouse, international corporation, government or non-governmental agency, or a publishing house. Students must complete a contract with the instructor or mentor prior to initiating the project and meet with the advisor weekly. 3 undergraduate hours. 4 graduate hours. Prerequisite: TRST 407 and TRST 410. Six semesters of foreign language study.

TRST 500 Translation and Interpretation: Reflective Practice credit: 4 Hours.

Exploration of the ethical and epistemological dimensions of translation and interpreting. Through discussion of primary texts and case studies, this course aims to take students beyond codified codes of professional ethics to discover the intellectual traditions (e.g., hermeneutics and philosophy of language, critical social theory, virtue ethics, etc.) that frame reflective practice. Topics include the nature of language, dialogue across difference, and the crafting of a personally fulfilling and morally responsive life of practice. 4 graduate hours. No professional credit. Prerequisite: TRST 410 or consent of instructor.

TRST 501 Applied Literary Translation I credit: 4 Hours.

Focuses on both the theory and the practice of literary translation, as well as the business aspect of how to negotiate a translation proposal through the US publishing market. Students will produce a completed translation of a short story or a selection of poems.

TRST 502 Applied Literary Translation II credit: 4 Hours.

Focuses on the practice and strategies of literary translation through the study of what prominent and successful translators have written about their own experience and through comparative analysis of prize-winning translations. Students will be exposed to reader response theory and the role of the translator as cultural agent while learning how to produce paratext for their translations (prefaces, notes, etc.) and developing skills in translation, editing, grant-writing, and participation in professional associations. Prerequisite: TRST 501 or consent of unit.

TRST 540 Translation Capstone credit: 4 Hours.

Graduate level capstone project in translation done under the supervision of a mentor or instructor in a specialized area of translation according to the student's area of interest and language pair. The possible specializations include literary, technical, commercial, legal, medical, or translation for film and new media. The student may combine the project with an internship or apprenticeship in an appropriate organization, such as a health center, courthouse, international corporation, governmental or non-governmental organization, or a publishing house. Students must complete a contract with the instructor or mentor prior to initiating the project and must meet weekly with the advisor. Prerequisites: TRST 407, 410, and 500. Students must be in the final stages of their graduate work in translation studies.

TRST 541 Community Interpreting credit: 4 Hours.

Introduction to community interpreting and its main theoretical concepts, including what is interpreting, interpreting as process, and what is community interpreting. The major areas of community interpreting will be introduced including interpreting in the medical and legal contexts. The interpreter code of ethics and ethical dilemmas of the interpreter will be introduced and analyzed. Prerequisite: Admission to the Masters in Translation and Interpretation.

TRST 542 Conference Interpreting credit: 4 Hours.

Introduction to conference interpreting as its main theoretical concepts, including what is interpreting, interpreting as process, and what is conference interpreting. Core skills will be introduced and practiced, such as understanding the spoken language and language analysis techniques, acquisition of subject matter knowledge, terminology management, verbal expression skills, interpreting in practice, and mastery of the technologist of the interpreter booth. Interpreting practice in the student's language pairs will be a part of the course. Prerequisite: Admission to the Masters in Translation and Interpretation.

TRST 580 Special Topics in Translation credit: 4 Hours.

Covers topics of special interests to rising professional translators in the three areas of specialization of the MA in Translation and Interpreting: Applied Literary Translation, Translation for the Professions and Interpreting. Examples of topics may include: Translation for Government, Literary Translation, Translation and Digital Humanities. May be repeated in separate terms for a maximum of 8 hours.

Turkish (TURK)

TURK Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/TURK>)

Courses

TURK 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

Approved for letter and S/U grading. May be repeated in separate terms to a maximum of 10 hours.

TURK 201 Elementary Turkish I credit: 5 Hours.

Mastery of Turkish alphabet and phonetics; elementary formal grammar and the development of reading and writing skills; and conversation in the formal noncolloquial style. Participation in the laboratory is required.

TURK 202 Elementary Turkish II credit: 5 Hours.

Continuation of TURK 201, with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Turkish. Participation in the language laboratory required. Prerequisite: TURK 201 or equivalent.

TURK 403 Intermediate Turkish I credit: 4 Hours.

Continuation of TURK 202; emphasis on the development of appropriate reading, writing, speaking, and comprehension skills in Standard and Colloquial Turkish, with increased attention to ordinary written texts. 4 undergraduate hours. 4 graduate hours. Prerequisite: TURK 202 or equivalent.

TURK 404 Intermediate Turkish II credit: 4 Hours.

Continuation of TURK 403; emphasis on the development of better receptive and productive language skills in Standard and Colloquial Turkish, with increased attention to both written and spoken texts. 4 undergraduate hours. 4 graduate hours. Prerequisite: TURK 403 or equivalent.

TURK 405 Advanced Turkish I credit: 3 Hours.

Third-year Turkish with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and Turkish cultural materials. Course will also deal with the advanced level grammar found in such texts. 3 undergraduate hours. 3 graduate hours. Prerequisite: TURK 404 or equivalent.

TURK 406 Advanced Turkish II credit: 3 Hours.

Continuation of TURK 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. 3 undergraduate hours. 3 graduate hours. Prerequisite: TURK 405 or equivalent.

TURK 490 Special Topics in Turkish credit: 2 to 4 Hours.

Provides an opportunity to focus on various aspects of Turkish language, culture, and society. 2 to 4 undergraduate hours. 2 to 4 graduate hours. Approved for letter and S/U grading. May be repeated in separate terms.

Ukrainian (UKR)

UKR Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/UKR>)

Courses

UKR 101 Basic Ukrainian I credit: 4 Hours.

Oral and written work on basic pronunciation, grammar, and vocabulary. For students with no previous study of Ukrainian.

UKR 102 Basic Ukrainian II credit: 4 Hours.

Continuation of UKR 101. Prerequisite: UKR 101 or equivalent proficiency.

UKR 113 Ukrainian Culture credit: 3 Hours.

Course situates Ukrainian culture in the broad context of Slavic nations. Acquaints students with Ukrainian culture from the origins of Kievan Rus' in the Middle Ages to the present. Includes highlights of historical-cultural events, an overview of literature and of the arts, as well as an outline of Ukrainian folklore. No knowledge of Ukrainian required.

This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

UKR 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

UKR 201 Second-Year Ukrainian I credit: 4 Hours.

Completion of grammar, oral drills, and written exercises. Prerequisite: UKR 102 or equivalent.

UKR 202 Second-Year Ukrainian II credit: 4 Hours.

Selected readings in contemporary Ukrainian literature. Prerequisite: UKR 201 or equivalent.

UKR 218 Survey of Ukrainian Literature credit: 3 Hours.

Critical survey of major works in Ukrainian literature from the beginnings to the modern period in light of their historical and cultural background; lectures and readings in English. Same as CWL 218.

UKR 498 Problems in Ukrainian Lit credit: 3 or 4 Hours.

Critical survey of major works in Ukrainian literature from the beginnings to the modern period in light of their historical and cultural background; lectures and readings in English. 3 undergraduate hours. 3 or 4 graduate hours.

Urban and Regional Planning (UP)

UP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/UP>)

Courses

UP 101 Introduction to City Planning credit: 3 Hours.

Provides an introduction to urban and regional planning by examining the history of American urbanization, the evolution of American planning thought and practice, and contemporary issues and planning approaches.

UP 116 Urban Informatics I credit: 3 Hours.

Introduces students to basic analytical techniques used to better understand how cities work. Topics include the foundational statistical concepts of data, variation, and inference. Students formulate a research question about an urban studies or planning issue, collect data, use statistical software to analyze data, and communicate the findings. This course satisfies the General Education Criteria for: Quantitative Reasoning I

UP 136 Urban Sustainability credit: 3 Hours.

Provides students with a basic understanding of how to make cities more sustainable by connecting how and where we live to environmental issues. Emphasis on green infrastructure and urban systems, vulnerability and resilience, green design and construction methods, energy production and consumption, and water conservation.

UP 185 Cities in a Global Perspective credit: 3 Hours.

Introduction to the process of urbanization from a global perspective by exploring the social, political, cultural and economic forces that shape urban life. Students will learn to analyze urban development in a range of cities including those in the Middle East and South Asia, Latin America and Africa.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

Cultural Studies - Western

UP 199 Undergraduate Open Seminar credit: 1 to 5 Hours.

May be repeated.

UP 201 Planning in Action credit: 3 Hours.

Introduces students to different career paths open to urban studies and planning majors. Students interact with professionals and take part in hands-on activities related to different concentration areas: sustainability, policy & planning, social justice and global cities.

UP 203 Cities: Planning & Urban Life credit: 3 Hours.

Provides a broad introduction to social science theories and analysis methods to examine how people, communities, and governments plan a city. Draws upon theories and methods of several social science disciplines including economics, geography, political science, anthropology and sociology. Includes hands-on application of fundamental analysis techniques. Credit is not given for both UP 203 and UP 204. Prerequisite: UP 101.

UP 204 Chicago: Planning & Urban Life credit: 3 Hours.

Provides a broad introduction to social science theories and analysis methods, and uses the City of Chicago as a semester-long case study to examine how people, communities, and governments plan a city. Draws upon theories and methods of several social science disciplines including economics, geography, political science, anthropology, and sociology. Balances themes and concepts from the assigned readings with discussion of Chicago-specific case studies and hands-on application of fundamental analysis techniques. Credit is not given for both UP 204 and UP 203. Prerequisite: UP 101.

UP 205 Ecology & Environmental Sustainability credit: 3 Hours.

Basic ecological principles underlying environmental sustainability. Examination of problems that arise from inadequate consideration of structure and function of ecological systems, and approaches to ecological restoration and environmentally sound planning. Applications of principles to case studies drawn from urban planning, natural resource management and sustainable development.

This course satisfies the General Education Criteria for:
Nat Sci Tech - Life Sciences

UP 210 Environmental Economics credit: 3 Hours.

Same as ACE 210, ECON 210, ENVS 210, and NRES 210. See ACE 210. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

UP 211 Local Planning, Gov't and Law credit: 3 Hours.

Provides students with a basic understanding of the governmental structure, legal aspects, and practice of local municipal planning, with special emphasis on case law, constitutional principles, zoning, subdivision regulations and comprehensive planning. Gives an introduction for students interested in pursuing more advanced studies in land use law and local government planning.

UP 260 Social Inequality and Planning credit: 3 Hours.

How are inequalities produced and contested in an urban environment? This course examines this question by analyzing how the urban landscape shapes and is shaped by race, class, and gender inequalities. Uses comparative cases to explore successful intervention, both from formal and informal, across multiple scales from the local to the global. This course satisfies the General Education Criteria for:
Social Beh Sci - Soc Sci

UP 301 Capstone Preparation credit: 1 Hour.

Students work with capstone advisor to develop a plan to meet the capstone experience requirement. Students submit a proposal at the end of the semester. Approved for S/U grading only. Prerequisite: Junior standing.

UP 312 Communication for Planners credit: 4 Hours.

Integrates written, verbal, and graphic communication techniques into planning and analysis. Activities simulate professional situations where students develop skills and pieces of broader arguments and synthesize them into final products. Prerequisite: Completion of campus Composition I general education requirement.

This course satisfies the General Education Criteria for:
Advanced Composition

UP 316 Urban Informatics II credit: 3 Hours.

Provides an introduction to formal methods for collecting and analyzing data required in various planning processes. Methods include survey research, regional demographic and economic analysis, forecasting techniques, benefit-cost analysis, and decision analysis. Prerequisite: UP 116 or an introductory statistics course.

This course satisfies the General Education Criteria for:
Quantitative Reasoning II

UP 330 The Modern American City credit: 3 Hours.

Explore the transformation of the American city in its journey from abandonment to renewed growth. Cities today are sites of rapid change and experimentation with new ideas for how people can and should live. This course examines the resurgence of American cities, the challenges they face, and their transformation in the 21st century. Each week, class will focus on a different aspect of the modern American city—work, housing, globalization, high finance—and explore its promises, challenges, and implications for the future.

UP 335 Cities and Immigrants credit: 3 Hours.

Focuses on the experiences of United States cities and towns undergoing rapid demographic economic, social, and cultural changes and the local responses to those changes, including local policy making, land-use regulations, community controversy, and grassroots activism. Same as SOCW 335.

UP 340 Planning for Healthy Cities credit: 3 Hours.

Explores the evolving role of health in urban planning. Historical and current theories on the relationship between public health and the built environment are highlighted, as are prescriptions for healthy urban design. Community health planning, health disparities, and the needs of special populations in the city are also examined, along with some of the major policy issues affecting urban health care today.

UP 345 Economic Development Planning credit: 3 Hours.

Public-private-partnerships in urban economic development, including study of potentials, problems, and projects; financing urban economic development through federal grant programs, tax increment financing, and other means.

UP 347 Junior Planning Workshop credit: 6 Hours.

Introduction to planning practice, with an emphasis on physical planning skills. Includes field observation, spatial data analysis, professional communication, and design. Prerequisite: UP 205, UP 312, UP 260 and UP 316.

UP 357 The Land Development Process credit: 3 Hours.

The planning practice requires an understanding of the land development process. In this course students will learn about the decision process used for land development and the technical skills required for reading site plans. The course provides the essential skills necessary in the field of public-sector planning. Developers are required to make key determinations in the decision process for developing land. Planners are required to understand these decisions and they must possess the ability to interpret proposed site plans for development. This includes an understanding of existing conditions of land proposed for development and the impact of new development on the site and surrounding areas. This course contains three primary components in teaching an understanding of the land development process. They are: Understanding Market Decision for Developing Land; Reading Site Plans; and Assembling a Development Plan. Credit is not given for UP 357 if credit for UP 347 has already been given. Prerequisite: UP 312-Communication for Planners is highly recommended or basic familiarity with InDesign, Illustrator, and SketchUp.

UP 390 Planning Internship credit: 0 to 4 Hours.

Professionally supervised field experience in public and private planning or development agencies. Designed to introduce students to professional employment and actual planning practice. Students work in an agency of their own choice, subject to departmental approval, either during the summer session or part-time during a regular term. At least two weeks of full-time employment or its equivalent is required for each term hour of credit to a maximum of 4 hours. Summary reports are submitted by both employer and student. Approved for S/U grading only. May be repeated. Counts toward the Capstone Experience Requirement. Prerequisite: Upper division undergraduate standing in urban planning.

UP 397 Undergraduate Project credit: 1 to 3 Hours.

Special projects and applied research related to real world urban problems and professional practice. One credit hour requires approximately 80 hours of work. May be repeated up to 3 hours. Counts toward the Capstone Experience Requirement. Prerequisite: Upper division standing in Urban Planning and consent of Capstone advisor.

UP 401 Undergraduate Capstone Seminar credit: 1 Hour.

Seminar for peer discussion about the capstone experience and required capstone experience presentation. Students will attend lectures and workshops about career opportunities, resume writing, interviewing, and networking. Meets on a monthly basis. 1 undergraduate hour. No graduate credit. Approved for S/U grading only. May be repeated in separate terms up to 2 hours. Prerequisite: Senior standing.

UP 405 Watershed Ecology and Planning credit: 4 Hours.

Uses the watershed as the basic organizing concept in environmental planning and management; methods for assessing watershed boundaries, soils, land use, and groundwater system processes and developing plans for watershed protection. Emphasizes ecological implications of patterns of land use on functional and qualitative aspects of watershed systems. All-day field trip required. 4 undergraduate hours. 4 graduate hours. Prerequisite: Should have a previous course in environmental science.

UP 406 Urban Ecology credit: 4 Hours.

Examines cities as natural systems, combining ecological analyses with historical, anthropological, and sociological studies of urban nature. Addresses ecological sustainability, growth management, biodiversity, restoration, and environmental justice. Required field trip. Same as ENVS 406. 4 undergraduate hours. 4 graduate hours.

UP 407 State and Local Public Finance credit: 4 Hours.

Provides students with an understanding of the fundamental concepts of fiscal planning at the state and local levels of government. Addresses both the theory and methods of state and local finance, focused on state and local fiscal policy. Addresses emerging policy issues involving land use and taxation, spending and budgeting, intergovernmental cooperation, debt financing, financing for economic development, and privatization. 4 undergraduate hours. 4 graduate hours.

UP 418 GIS for Planners credit: 4 Hours.

Detailed introduction to the design and use of computerized geographic information systems, focusing on their significance for planning. Emphasizes GIS within an institutional setting, covering not only fundamental technical concepts, but also organizational, management, and legal issues. Students will be introduced to GIS applications and products through readings, videos, demonstrations, and exercises. Computer laboratory work is included. 4 undergraduate hours. 4 graduate hours. Prerequisite: Upper division undergraduate or graduate standing.

UP 420 Plng for Historic Preservation credit: 4 Hours.

Historic preservation in the context of urban planning, including legal issues and ordinances, economic incentives, comprehensive plans and preservation plans, public participation, media relations, and more. Students will conduct a building survey including research and architectural descriptions for an on-going project in Urbana. Tours of local preservation projects. 4 undergraduate hours. 4 graduate hours. Prerequisite: At least junior standing.

UP 423 Community Development in the Global South credit: 4 Hours.

Introduces students to the main theoretical frameworks and conceptual building blocks of urban and community development in the Global South. It helps students to develop critical grassroots focused understanding of the approaches to development planning, the notion of community participation and empowerment, and the role of various actors including the non-government organizations and the community-based groups. 4 undergraduate hours. 4 graduate hours.

UP 426 Urban Design and Planning credit: 4 Hours.

Concepts and techniques of urban analysis, plan making, and implementation essential for effective interdisciplinary work in urban design. 4 undergraduate hours. 4 graduate hours. Prerequisite: Senior standing.

UP 428 International Planning Studio credit: 3 to 6 Hours.

Involves multidisciplinary student teams developing design or policy proposals for urban development of sites in international contexts. The studio combines seminar and studio/workshop formats to apply critical analysis, define planning problems, and propose solutions that integrate the social, economic, physical, and cultural aspects of site development. 3 to 6 undergraduate hours. 3 to 6 graduate hours. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

UP 430 Urban Transportation Planning credit: 4 Hours.

Role of transportation in urban development and planning; characteristics of urban-person transportation systems and methods of analysis and forecasting of urban-person transportation demand; transportation systems management and capital improvement programming; and emphasis on the needs and activities of metropolitan planning organizations. Same as CEE 417. 4 undergraduate hours. 4 graduate hours.

UP 436 Urban Design Workshop credit: 4 Hours.

Examines urban design theory and principles, and evaluates the built environment in a lab-based setting. Working in teams, students become immersed in real work examples and propose design interventions for specific places, including socially diverse neighborhoods in small cities and major metropolitan urban centers. Normally includes active engagement with community residents. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 426, senior or graduate standing, or consent of instructor.

UP 438 Disasters and Urban Planning credit: 4 Hours.

Introduction to the role of urban planners in preparing for and rebuilding after disasters. Emphasizes U.S. planning practice, with particular attention to the role of local government. Includes basic U.S. emergency management laws and framework, local mitigation planning, and post-disaster recovery planning. 4 undergraduate hours. 4 graduate hours. Prerequisite: Graduate standing, senior in Urban Planning, or consent of instructor.

UP 441 Land Resource Evaluation credit: 4 Hours.

Same as LA 441. See LA 441.

UP 443 Scenarios, Plans & Future Cities credit: 3 Hours.

This course teaches theories and tools of scenario analysis, a set of techniques useful for making plans and creating more sustainable future cities. Scenario analysis can be used to think about multiple facets of a problem simultaneously and for addressing the uncertain future in light of the limited cognitive and computational capacity of individuals and organizations. Urban planners and policymakers are adopting and extending scenario approaches to envision the future, analyze decisions, and identify robust strategies in situations as varied as comparing projected outcomes of alternative routes for highway investment, to making decisions in situations when formal regulatory mechanisms may be lacking. The need for knowledge and skills in this area is reflected in (1) the growing use of scenario analysis as a required method in many government-funded planning initiative in the United States and around the world, (2) new courses and workshops offered by urban planning programs and professional trainers, such as the American Planning Association and Planetizen, and (3) the sprouting of scenario planning support tools, such as Envision Tomorrow and Index PlanBuilder. 3 undergraduate hours. 3 graduate hours. Prerequisite: A completion of an urban planning class would be useful. Junior standing is required.

UP 446 Sustainable Planning Seminar credit: 4 Hours.

Same as LA 446, GEOG 446, and NRES 446. See LA 446.

UP 447 Land Use Planning Workshop credit: 4 Hours.

Small group field work applying principles and techniques to specific land use problems in selected jurisdictions. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 211, senior or graduate standing, or consent of instructor.

UP 455 Economic Development Workshop credit: 4 Hours.

Small group field work applying principles and techniques of economic development planning and policy analysis to specific problems in selected cities, regions, or states. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 345 or consent of instructor.

UP 456 Sustainable Planning Workshop credit: 4 Hours.

Focuses on applying sustainable planning principles in a real world setting. Readings and research into indices of sustainable development, sustainable urbanism, and related literature help establish parameters for resolving a local planning project. Course is a hybrid workshop with portions of the semester spent on reading, research, and application working with a local planning agency. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 136 and UP 205, senior or graduate standing, or consent of instructor.

UP 457 Small Town/Rural Planning Workshop credit: 4 Hours.

What is rural and why does it matter? This workshop focuses on small towns and rural communities using Central Illinois communities in local case studies. Students will apply concepts and skills from prior courses and work extensively in teams to compile, synthesize, and communicate information that furthers planning and placemaking efforts. Archival research techniques; analysis of demographic, social, and economic trends; qualitative interviewing; and documentary film production are examples of the kinds of skills students will develop and refine. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 211, senior or graduate standing, or consent of instructor.

UP 460 Transportation/Land Use Policy credit: 4 Hours.

Provides an integrated perspective and analytical framework for understanding urban transportation and land use policies. Emphasizes the interplay between the built environment and transportation by focusing on: fundamental travel demand theories; performance measures of urban transportation systems; impacts of transportation on land use and urban form; impacts of land use and urban form on travel patterns; congestion pricing; public transportation and active transportation; and transit oriented development (TOD). 4 undergraduate hours. 4 graduate hours.

UP 466 Energy, Plng & Blt Environment credit: 4 Hours.

Focuses on the study of buildings, including their past and present uses, their place in the environment, and most importantly, how they can become more sustainable. Teaches students to think about and plan physical space from an energy-and climate-centric perspective. Uses climate mitigation and building energy systems-modeling techniques to analyze potential energy systems reductions and approaches to affect a building's carbon footprint. Same as LA 466. 4 undergraduate hours. 4 graduate hours.

UP 470 Shrinking Cities credit: 4 Hours.

This seminar examines urban shrinkage—a phenomenon typically associated with population loss, but also characterized by obsolescence, disinvestment, and abandonment. While some cities thrive and struggle to house the global urban majority, other cities face the stark reality of shrinkage and decline. What should we do to envision and enact a viable future for our shrinking cities? This course will be taught as a seminar, using readings, student facilitated discussions, and lectures as a means for creating a shared understanding around urban shrinkage. Literature from Planning, Economics, Sociology, and other areas will contribute to discussions of the meaning of urban decline as a set of social, economic, and spatial phenomena. Some seminar sessions will be "lab" sessions, focused on developing your analytical skillset via qualitative and quantitative methods. 4 undergraduate hours. 4 graduate hours. Credit is not given for UP 470 if credit for UP 494-AG has been given. Prerequisite: Students must have at least a junior standing.

UP 473 Housing & Urban Policy credit: 4 Hours.

The role of housing in American social policy planning: the history of public and private intervention in housing, regulation of supply and demand within housing markets and market imperfections; analysis of public policies for housing as they affect special populations (for example, the poor, the elderly, the disabled, homeless, and minorities). 4 undergraduate hours. 4 graduate hours.

UP 474 Neighborhood Revitalization credit: 4 Hours.

Examines rationale and techniques for planning at the neighborhood level; the major social, political, and economic issues that confound public and private sector efforts to revitalize distressed neighborhoods. 4 undergraduate hours. 4 graduate hours.

UP 475 Real Estate Development Fundamentals credit: 4 Hours.

This course will provide an introduction to the fundamental concepts and techniques applied in the real estate development process. In addition, this course will examine both the broader economic and social context in which real estate development is situated as well as how various professions interact within this context. Course assessments will include several case study assignments and a group project using an actual development site that will provide students with the chance to apply the concepts and techniques learned in the course, culminating in a final report and presentation. The overall objective of the course is to provide students with a useful framework for understanding the real estate development process, allowing them to identify viable development opportunities and analyze real estate development projects, while weighing the economic, social, and environmental costs and benefits for a community. 4 undergraduate hours. 4 graduate hours. Credit is not given for UP 475 if credit was already given for UP 494-RE. Prerequisite: This course has no prerequisites, however, having had at least an introductory urban planning class would be helpful. Upper-level or graduate standing is recommended.

UP 478 Community Development Workshop credit: 4 Hours.

Application of community development principles and techniques to the solution of environmental, economic and social problems facing low income urban communities. Involves small group projects and off-campus field work in collaboration with community leaders. 4 undergraduate hours. 4 graduate hours. Prerequisite: UP 260, senior or graduate standing, or consent of instructor.

UP 480 Sustainable Design Principles credit: 2 Hours.

Same as LA 480. See LA 480.

UP 481 Urban Communities & Public Pol credit: 3 or 4 Hours.

Same as AFRO 481 and SOC 472. See AFRO 481.

UP 493 Democracy and Environment credit: 3 or 4 Hours.

Same as GEOG 493, NRES 494, SOC 493. See GEOG 493.

UP 494 Special Topics in Planning credit: 1 to 6 Hours.

Seminar on topics of current interest, as announced in the Schedule. 1 to 6 undergraduate hours. 1 to 6 graduate hours. May be repeated to a maximum of 16 hours.

UP 501 Planning History and Theory credit: 4 Hours.

Offers students a survey of classic and contemporary theories of planning. Students will gain a deeper appreciation for the profession's roots as well as be introduced to some of "the theoretical tools" used to analyze planning. An important aspect of the course is intellectual dialogue through critical reading, informed discussion and writing assignments. Prerequisite: Graduate standing in Urban Planning or consent of instructor.

UP 503 Physical Planning credit: 4 Hours.

Provides grounding in the issues and principles underlying physical planning; lecture and discussion sessions are complemented by project work that applies principles and methods. Prerequisite: Graduate standing in Urban Planning or consent of instructor.

UP 504 Urban History and Theory credit: 4 Hours.

Historical and international comparison of the origins and evolution of cities, the process of urbanization, and the human endeavor to effect urban growth and change. Includes history of urban physical form and of planning efforts, emphasizing planning origins in the nineteenth century and transnational influences. Includes equity issues of urban spatial arrangement, including racial segregation and housing market differentiation. Covers elements of urban physical form, including grid and organic structure, commercial city forms, the urban skyline, and urban sprawl. Prerequisite: Graduate standing in Urban Planning or consent of instructor.

UP 505 Urban and Regional Analysis credit: 2 or 4 Hours.

Techniques, data sources, and skills for analyzing regions as economic, social, and spatial systems. The first half of the course focuses on understanding current conditions and trends, and the second half on forecasting most likely and alternative futures. Students may opt to enroll for only the first 8 weeks and receive 2 hours of credit. Prerequisite: Graduate standing in Urban Planning or consent of instructor.

UP 508 Survey Design and Analysis credit: 2 Hours.

Design of primary data collection instruments, focusing on the large sample survey. Discusses techniques for implementing qualitative and physical data collection by mail, web, and phone. Students learn multivariate statistical techniques for analyzing survey results.

UP 509 Economics for Planners credit: 4 Hours.

Exploration of how economics can contribute to understanding and solving urban problems. Application of economic analysis and reasoning to the important issues that planners confront, including zoning, land use, housing investment, and transportation. Focuses also on skills to use economic methods effectively.

UP 510 Plan Making credit: 4 Hours.

Provides skills to develop a wide range of plans and an understanding of the processes to implement them. Topics covered include planning analysis, political constraints of planning and planning ethics, techniques of negotiation, facilitation, mediation, and presentation to the public. Uses a general framework for plan making that includes plan review, problem framing, information gathering, alternative modeling, scenarios development, impact assessment, and alternatives evaluation. Students will work on applied tasks individually and in groups. Prerequisite: Graduate standing or consent of instructor.

UP 511 Law and Planning credit: 4 Hours.

Examines the legal framework within which planning takes place in urban areas of this country. Emphasizes the role of law in structuring local government responses to social, economic and physical planning issues and in allocating power among local governments, between local governments and state and federal governments, and between governments and the private sectors of society. Course may not be repeated for credit.

UP 519 Advanced Applications of GIS credit: 4 Hours.

Advanced course in geographic information systems emphasizing application of GIS to problems involving spatial analysis. Building upon fundamental concepts, students learn to use GIS software frequently found in planning practice. Also prepares students to use GIS in research requiring management and analysis of geographic data. Extensive use of computing workstations. Prerequisite: UP 418 or consent of instructor.

UP 521 International Planning Seminar credit: 4 Hours.

Advanced graduate seminar concerning urban and regional development processes in a global context. Closely examines critical issues and select topics in international development planning based upon individual research readings. Prerequisite: Consent of instructor.

UP 533 Community In American Society credit: 4 Hours.

Same as HDFS 533 and SOC 572. See HDFS 533.

UP 535 Local Policy & Immigration credit: 4 Hours.

Explores major issues confronting urban planners, administrators, elected officials and community activists working in highly diverse communities that are undergoing rapid demographic, economic, social, and cultural change. Focuses specifically on local policy-making in communities with large numbers of immigrants, particularly in cities and regions in the United States, Canada, Australia and Europe. Same as LA 535 and SOCW 535.

UP 543 Environmental Policy & Planning credit: 4 Hours.

Examines environmental policy and planning from both theoretical and applied perspectives. Provides an overview of the elements of environmental policy at national and state levels and investigates local implementation of environmental policies. Students will learn how local environmental planning practice fits within the broader context of environmental policies. Intended for graduate students in Urban and Regional Planning, but also open to graduate students with appropriate background and interests from Landscape Architecture, Geography, and relevant social sciences. Prerequisite: Graduate standing in Urban and Regional Planning or consent of instructor.

UP 545 Economic Development Policy credit: 4 Hours.

Explores and evaluates urban and regional economic development policy in the U.S. Taking the twin lenses of cities and urbanized regions, it asks why the public sector engages in economic development; how the goals of economic development are defined; and how different policies attempt to steer economic activity and jobs to particular places. The course pays special attention to the question of equity, asking who will benefit from different policies.

UP 546 Land Use Policy and Planning credit: 4 Hours.

Examines a variety of approaches to land use policy and planning, from both a theoretical and an applied perspective. Explores different values in American land use policy, recent evolution of land use policy. Taught as a seminar.

UP 547 Regional Planning and Policy credit: 4 Hours.

When are regional approaches more common and why? This course builds knowledge of principles and practices to tackle challenges that go beyond the geographical or disciplinary domain of a single agency. Through readings, seminar discussions, and assignments, students will develop an understanding of problems and settings that involve multiple jurisdictions and actors. Topics will address crosscutting issues such as affordable housing, foreclosures, fiscal stability, and spatial inequality. Prerequisite: Intended for graduate students in Urban and Regional Planning, and others with appropriate background and interests from Public Administration, Political Science, Natural Resources, Civil Engineering, Landscape Architecture, Geography, and relevant social sciences.

UP 552 Regional Development Theory credit: 4 Hours.

Covers fundamental concepts and theories of regional economic development including export base, neoclassical and endogenous growth, regional convergence, core-periphery, interregional trade, product cycle, industrial districts, entrepreneurship, and regional innovation systems theories. Also discusses policy and planning frameworks for applying regional theory to spatial development problems. Same as ACE 552. Prerequisite: UP 445 and UP 407, or consent of instructor.

UP 555 Economic Impact Analysis credit: 2 Hours.

Same as ACE 555. See ACE 555.

UP 556 Regional Science Methods credit: 4 Hours.

Same as GEOG 556. See GEOG 556.

UP 557 Seminar in Regional Science credit: 4 Hours.

Same as GEOG 557. See GEOG 557.

UP 576 Sustainable Urban Systems credit: 4 Hours.

Same as CEE 592 and NRES 592. See CEE 592.

UP 578 Ethnography Urban Communities credit: 4 Hours.

Same as AFRO 552, HDFS 543, and SOC 578. See AFRO 552.

UP 580 Advanced Planning Theory credit: 4 Hours.

Recent advances in planning, policy-making and decision-making theories as they relate to the efficient use of land and to the complex interrelationships among the major uses of land, i.e., housing, transportation, agriculture; specific applications vary annually, reflecting the students' dissertation research topics. Prerequisite: UP 501 or consent of instructor.

UP 585 Advanced Modeling in Planning credit: 4 Hours.

Seminar on formal models used to analyze planning problems and planning behavior. Includes static and dynamic, linear and non-linear, and deterministic and stochastic optimization models. Derivations of models and methods for solution treated in depth, but the emphasis is on applications to planning problems such as transportation, land use, and environmental management. Specific themes change from year to year. Prerequisite: UP 505 and UP 508, or consent of instructor.

UP 587 Qualitative Research Methods credit: 4 Hours.

Students use individual research to practice qualitative methods of studying social interaction. Includes field research and historical/archival research methods; project areas include community development, environment, and landscape. Discussion is divided between 1) readings on issues such as techniques and research design, social theory, ethnocentrism, and combining qualitative with quantitative research and 2) student research reports. Same as GEOG 587.

UP 589 Research Design and Methods credit: 4 Hours.

Prepares students to embark on thesis research and independent grant proposals. Introduces the phases of research design process, including literature review, identification of the research problem, statement of research objectives and questions, establishment of the conceptual framework, and selection of methods, sampling strategies, measurements, and analyses that are most suitable to address the research questions. Provides an overview of the commonly used quantitative and qualitative research methods, e.g., survey, quasi-experiment, and case study. Guides students through the process of writing and reviewing a research proposal and providing feedback to others. Prerequisite: Enrollment in a PhD program or consent of instructor.

UP 590 Professional Internship credit: 0 Hours.

Summer, part-time, or other professional-level employment in the field of planning, usually in an area of concentration; exposure to the social, political, and institutional setting in which planning operates; and full documentation of internship activities required. Approved for S/U grading only. Prerequisite: Consent of instructor.

UP 591 Capstone Seminar credit: 0 Hours.

Provides general capstone advising to MUP students. Seminar is used for peer discussion and feedback about work in progress, as well as to organize for the capstone poster session held each spring semester. Meets on a monthly basis. Approved for S/U grading only. May be repeated in separate terms.

UP 594 Seminar credit: 1 to 6 Hours.

Selected topics in urban and regional planning; several sections each term. May be repeated.

UP 596 Independent Study credit: 0 to 8 Hours.

Independent study in selected urban and regional planning topics under the supervision of an appropriate member of the faculty. Can be used by doctoral students for synthesis paper requirement. Approved for both letter and S/U grading. May be repeated to a maximum of 8 hours if topics vary.

UP 597 Urban Planning Research credit: 1 to 4 Hours.

Individual research work under the supervision of an appropriate member of the faculty. Approved for S/U grading only. May be repeated to a maximum of 8 hours. May be used by doctoral students for the research paper requirement. Prerequisite: Graduate Standing in Urban and Regional Planning, consent of instructor, and consent of the Department.

UP 598 Master's Project credit: 4 or 8 Hours.

Major independent or small group project applying planning principles and methods to a current problem in urban and regional planning resulting in a final professional product. Approved for S/U grading only. Prerequisite: Graduate standing in Urban and Regional Planning, consent of instructor, and consent of the Department.

UP 599 Thesis Research credit: 0 to 16 Hours.

Approved for S/U grading only. May be repeated to a maximum of 8 hours for Master's students. May be repeated to a maximum of 16 hours for PhD students. Prerequisite: Graduate standing in Urban and Regional Planning, consent of instructor, and consent of the Department.

Veterinary Clinical Medicine (VCM)

VCM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/VCM>)

Courses

VCM 290 Undergraduate Independent Research credit: 1 to 5 Hours.

Supervised scholarly laboratory/field work and/or reading in fields selected in consultation with an appropriate faculty member. Approved for Letter and S/U grading. May be repeated in separate terms.

VCM 501 Zoological Medicine Seminar credit: 2 Hours.

Discussion of selected topics and literature pertaining to zoological, wildlife and aquatic animal medicine and presentation of a formal seminar. May be repeated to a maximum of 6 hours. Prerequisite: Post DVM and enrolled in the Zoological and Aquatic Animal Residency Program.

VCM 502 Issues in Clinical Research credit: 2 Hours.

This course is intended for students interested in applying analytical epidemiological methods in assessing the health and disease status of populations (animal and human) and assessing the factors affecting that status. It includes lecture/discussion sessions and exercises on the study design, statistical analysis, and interpretation of clinical trials and cross-sectional, case-control, and longitudinal studies. Database management, risk assessment, and techniques for enhancing the validity of field-based studies of naturally occurring disease will also be covered. Prerequisite: Consent of instructor.

VCM 503 Current Lit in Equine Med Surg credit: 1 Hour.

This course will use current primary literature in the fields of equine medicine and surgery as a gateway to discussion. Current literature will be reviewed, critiqued, and discussed in the context of current equine clinical practice. Students are expected to be graduate veterinarians with a thorough understanding of equine medical and surgical concepts before enrolling in the course. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 506 Topics in Pathophysiology credit: 1 Hour.

Current basic and advanced concepts in hemostasis (primary hemostasis, secondary hemostasis, fibrinolysis, normal and abnormal endothelium, natural anticoagulants, anticoagulant drugs and their mechanisms of action) and respiratory physiology and pathophysiology (including acid base and strong ion difference). Prerequisite: DVM degree.

VCM 508 Trans Mol Path Veterinary Dz credit: 3 Hours.

Translation Molecular Pathogenesis of Veterinary Disease (Trans Mol Path Veterinary Dz) equips graduate students with knowledge and skills needed to understand molecular pathologic processes and determine how they translate to clinical manifestations of disease. The pathologic processes to be covered including those involved in cellular response to stress, inflammation, tissue repair, circulation and hemodynamics, immunity, cancer, and infectious disease. Translational associations that link pathologic mechanisms with disease manifestations commonly encountered in companion animal veterinary practice will be emphasized and will promote comprehensive bench-to-bedside learning.

VCM 510 Science of Animal Well-Being credit: 1.5 Hours.

Reviews scientific literature on the well-being of agricultural animals. Topics include indicators of well-being, causes and indicators of stress, impact of housing, management, and veterinary practices on well-being, and enrichment methods. Topics relevant to all major agricultural animal species (swine, dairy cattle, beef cattle, horses, poultry, and sheep) will be covered each semester, in accordance with the interests of enrolled students. Students will critically review and summarize literature and lead and participate in class discussions. Grades will be based on attendance, quality of performance, and a final examination. Same as ANSC 510. Prerequisite: Graduate student in the College of Veterinary Medicine or College of ACES, or consent of instructor.

VCM 511 Seminar in Prod/Pop Medicine credit: 1 Hour.

Same as PATH 511. See PATH 511.

VCM 522 Adv Comp Theriogenology credit: 1 Hour.

Advanced study on the principles and practice of theriogenology in domestic and non-domestic animals. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 524 Effective Biomedical Teacher credit: 3 Hours.

Provides current or future university-level biomedical educators with the knowledge, motivation and proficiencies needed to apply the most recent developments in higher education to their teaching. The overall aim of the course is to cultivate an informed, passionate and adventurous approach to teaching and learning in participants. This will be achieved by fostering new thinking about teaching and learning, and by encouraging collaborative and cooperative learning between the class members. May be repeated in separate terms if topics vary.

VCM 528 Comparative Veterinary Physiology credit: 3 Hours.

This graduate level physiology course covers advanced physiology of all the major organ systems. Enrolled graduate students are assumed to have a knowledge of basic physiology (such as what is obtained during veterinary school). This advanced graduate level course emphasizes the requirements for normal physiology by discussion of pathologies affecting the organ systems. The overall aim is to increase the clinician-scientist-graduate student's merging of physiology into their day to day practice on the clinic floor and research endeavors. 3 graduate hours. 3 professional hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 536 ECC Journal Topics credit: 1 Hour.

This is a weekly course aimed at evaluating journals specific to the requirements of the American College of Veterinary Emergency and Critical Care. Seminars of selected articles will be presented to the group every week. 1 graduate hour. Approved for S/U grading only.

VCM 542 Ocular Pathology credit: 1 Hour.

Same as PATH 542. See PATH 542.

VCM 553 Advanced Diagnostic Imaging credit: 1 Hour.

Reviews the physics, clinical indications and technical aspects of advanced diagnostic imaging. The course will utilize clinical case examples. Studies are required to prepare one lecture and take a final examination. Attendance at 80% of the classes is required. May be repeated in separate terms for unlimited graduate credit.

VCM 572 Clinical Epidemiology credit: 4 Hours.

Reviews the common epidemiologic and statistical methods used to design studies, analyze data, and interpret diagnostic tests and research findings. 4 graduate hours.

VCM 577 Advanced Large Animal Medicine credit: 1 Hour.

A seminar series devoted to intense study of pathophysiologic and current therapeutic aspects of selected topics in large animal internal medicine. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 581 Emergency Diagnostic Imaging credit: 1 Hour.

Provides graduate students in emergency medicine, small animal surgery and diagnostic imaging the opportunity to share principles of diagnostic imaging based on recent case examples. Students will be expected to present at least two cases demonstrating competence in reviewing radiographic findings, formulating a list of differential diagnoses and discussing additional imaging modalities, as appropriate. 1 graduate hour. May be repeated in separate terms to a maximum of 9 graduate hours.

VCM 584 Current Concepts Comp Surgery credit: 1 Hour.

Advanced study of topics concerning the pathophysiology, diagnosis, and current therapy of diseases which are treated with surgical procedures. May be repeated to a maximum of 4 hours. Prerequisite: Graduate Veterinarian or consent of instructor.

VCM 585 Current Lit Sm Anim Medicine credit: 1 Hour.

Participants will discuss and analyze current veterinary journal articles which pertain to small animal internal medicine. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian.

VCM 588 Advances in Vet Dermatology credit: 1 or 2 Hours.

A series of lectures, seminars and discussions devoted to the intense study of pathophysiologic aspects of the integument and related systems including: structure and functions, endocrinology, immunology, microbiology, virology, parasitology, pharmacology, oncology, and miscellaneous disorders. Students enrolling for graduate credit will also participate in weekly critiques of current literature. May be repeated to a maximum of 8 hours; duplicate registration is permitted up to 4 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 590 Seminar credit: 0 to 1 Hours.

Required of all graduate students whose major is Veterinary Clinical Medicine. Approved for S/U grading. May be repeated.

VCM 591 Advances in Vet Internal Med credit: 0 or 1 Hours.

A series of lectures, seminars, and discussions devoted to intense study of new pathophysiologic aspects of selected topics in veterinary internal medicine. Each term is devoted to three topics. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 592 Special Problems credit: 1 to 4 Hours.

Basic and applied study including orientation and research on pertinent initial and continuing problems in the student's area of interest. May be repeated. Prerequisite: Consent of instructor.

VCM 593 Adv Topics Vet Clin Med credit: 1 to 4 Hours.

Instruction in advanced diagnosis, therapeutic modalities, and research methodologies in the areas of small animal internal medicine, small animal surgery, equine and food animal medicine and surgery, ophthalmology, theriogenology, radiology, and clinical pharmacology. May be repeated to a maximum of 8 hours. Prerequisite: Graduate Veterinarian and consent of instructor.

VCM 598 Manuscript Research credit: 0 to 12 Hours.

Independent research to fulfill requirement for non-thesis alternative in Master of Science Program. Credit is not given for both VCM 598 and VCM 599. (Summer Session, 1 to 2 hours.) Prerequisite: Must be enrolled in the departmental graduate program.

VCM 599 Thesis Research credit: 0 to 12 Hours.

Approved for S/U grading only. May be repeated.

VCM 601 Clinical/Laboratory Practice credit: 1.5 to 6 Hours.

Individual customized clerkship in clinical medicine and surgery for VM-4 professional students. Approved for S/U grading only. May be repeated to a maximum of 9 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 604 Equine Medicine and Surgery credit: 1.5 to 4.5 Hours.

Clerkship in equine medicine and surgery for VM-4 professional students. Approved for S/U grading only. May be repeated to a maximum of 12 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 608 Equine Veterinary Husbandry credit: 1 Hour.

Designed to familiarize veterinary students with the basic principles of equine husbandry, including biosecurity, infectious disease prevention, anti-parasite programs, dental care, transport, and nutrition. Approved for both letter and S/U grading. Prerequisite: Good standing in the veterinary professional curriculum, Graduate College, or consent of instructor.

VCM 611 Dermatology credit: 1.5 Hours.

Clerkship in dermatology for VM-4 professional students. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 612 Oncology credit: 1.5 Hours.

Clerkship in oncology for VM-4 professional students. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 613 Clinical Neuro/Neurosurgery credit: 1.5 Hours.

Clerkship in neurology and neurosurgery for VM-4 professional students. Students will obtain basic skills in diagnosis, treatment, and care of medical and surgical neurological diseases. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 615 Ophthalmology credit: 1.5 Hours.

Clerkship in ophthalmology for VM-4 professional students. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 620 Food Animal Selective Rotation credit: 1.5 to 6 Hours.

Enables fourth year veterinary students to expand their clinical experience in food supply veterinary medicine by taking rotations at off-campus locations with different training opportunities than are available at the University of Illinois at Urbana-Champaign. Approved for S/U grading only. May be repeated to a maximum of 15 hours. Only students in the food animal track may take this course for food animal selective credit. Students in all tracks may take this course for free elective credit. Prerequisite: Fourth-year standing in the veterinary medicine professional curriculum.

VCM 624 Bereavement Issues credit: 1 Hour.

Theoretical and clinical perspectives on the concepts of attachment, bonding, grief and loss will be discussed. The course also includes instruction in basic counseling and crisis intervention skills. Students will answer calls on the CVM C.A.R.E. Helpline under the supervision of the instructor.

VCM 625 Exotic Mammal Medicine credit: 1 Hour.

Exotic Mammal Medicine is an elective course for veterinary students in their second year of the veterinary curriculum or graduate students interested in zoology. Students will learn clinical aspects of comparative anatomy, physiology, husbandry and handling of exotic mammal species encountered in zoological practice, including rodents, lagomorphs, marsupials, canids, carnivores, primates, and cervids. The most commonly encountered diseases of these species will also be discussed. 1 graduate hour. 1 professional hour. Approved for both letter and S/U grading. Prerequisite: Enrollment in the 2nd year veterinary curriculum.

VCM 626 Shelter Medicine I credit: 1 Hour.

Introduction to the field of Shelter Animal Medicine and is intended to create a pool of well-informed veterinarians that will become an important resource for shelter managers nationwide. This course is a prerequisite for the more advanced Shelter Medicine II (offered in the third year). Course will foster veterinarian participation in community service and encourage personal responsibility in the area of animal welfare. Offered for S/U grading only.

VCM 627 Equine Infectious Disease credit: 1 Hour.

Provides an in-depth review of common equine infectious diseases (viral, bacterial, parasitic) according to body systems. Primarily uses a lecture-based format to review the key aspects of disease pathogenesis, common clinical signs and most appropriate diagnostic test(s) for pathogen identification. Lectures are followed by several (3-4) cases that the lecturer will review in class with the students. These cases will be designed to emphasize the essential aspects of the different infectious diseases and generate critical thinking by the students with regards to developing an appropriate diagnostic plan. Approved for S/U grading only.

VCM 634 GP Surg. Oncology credit: 1 Hour.

A five-week course focusing on the theory and practice of small animal surgical oncology for general practice. This course will provide students with the theory and practical skills required to diagnose and treat surgical oncology cases at a primary care level. The module includes lectures and cadaver laboratories pertaining to the principles of surgical oncology and the diagnosis, treatment and prognosis of specific neoplasms. In the laboratories, students will practice a variety of biopsy techniques, cutaneous and subcutaneous tumor resection, intestinal resection and anastomosis, visceral tumor resection and limb amputations. No graduate credit. 1 professional hour. Prerequisite: VM 608. DVM professional students only.

VCM 635 Advanced Soft Tissue Surgery credit: 1 Hour.

Seven-week course during the second half of the Fall semester focusing on the theory and practice of small animal soft tissue surgery. This course covers many of the soft tissue surgical procedures which new veterinary graduates are expected to competently perform. Procedures to be covered include bandaging and wound management, drain placement, declaw, dewclaw removal, tendonectomy, aural hematoma repair, pinna repairs, biopsies, surgery of the integument, gastrointestinal surgery, limb amputations and mastectomy. Approved for S/U grading only. Prerequisites: VM 605, VM 606, VM 607 and VM 608.

VCM 636 Inactive credit: 2 Hours.

Inactive.

VCM 640 Advanced Orthopedic Surgery credit: 1 Hour.

This course will provide hands-on training in fracture fixation and common knee and hip procedures to veterinary students with an interest in orthopedic surgery. This hands-on training is not available in the core course. Approved for S/U grading only. Prerequisite: Third year standing in the veterinary curriculum.

VCM 641 Equine Neonatology credit: 1 Hour.

Designed to familiarize the veterinary student with the basic and advanced principles of equine neonatology. Topics include normal and abnormal physiology, problems of the mare that impact the foal, prematurity, sepsis, uremia, musculoskeletal problems, and therapy. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 606.

VCM 642 Equine Critical Care credit: 1 Hour.

Familiarizes the veterinary student with the basic and advanced principles of equine critical medicine. Topics include normal and abnormal physiology particularly as it relates to shock and systemic inflammatory response syndrome (SIRS); point-of-care testing, clinical pathology and other testing techniques, including cardiovascular and imaging, for assessment and monitoring of critically ill horses; responsible antimicrobial use in critically ill horses; and end of life conversations. 1 graduate hour. 1 professional hour. Prerequisite: VM 606.

VCM 643 Equine Emergency Medicine credit: 1 Hour.

Familiarizes the veterinary student with the basic and advanced principles of emergency care for adult horses. Topics include gastrointestinal, musculoskeletal, respiratory, central nervous system, ophthalmic, and urogenital emergency problems of the horse. Particular attention will be paid to gastrointestinal disease of the horse that present as an emergency, such as colic, enteritis, and typhlocolitis. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 606.

VCM 644 Veterinary Pain Management credit: 1 Hour.

This course will serve to increase a student's knowledge base on many aspects of pain management of the veterinary patient. Subjects covered in this course will include in depth review of neuroanatomy and physiology of pain, pathophysiology of pain, pharmacology of medications used for pain management, non-pharmacologic treatments for pain, and specific pain management strategies for various domestic species, and exotic and zoo animals. No graduate credit. 1 professional hour. Approved for S/U grading only. Prerequisite: For students in the veterinary professional program only.

VCM 645 Equine Surgery Laboratory credit: 1 Hour.

Provides introductory laboratory experiences in common and basic equine surgical techniques. Topics include normal and cryptorchid equine castration, distal limb surgeries, casting techniques, and joint injections. Approved for S/U grading only. Prerequisite: VM 606.

VCM 646 Lab Animal Science I credit: 1 Hour.

Addresses fundamental issues in Laboratory Animal Sciences including history, regulatory aspects, ethical considerations, and basic biology and husbandry of common laboratory animal species. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: Second or third-year standing in the veterinary medicine curriculum, registration in the graduate college, or consent of instructor.

VCM 648 One Medicine: One Health credit: 3 Hours.

Explores the interrelatedness of human, animal and environmental health with a focus on new and emerging diseases. Through a combination of lecture, class discussion and small group projects, students will learn about how human, animal and ecosystem health are all affected by many of the same factors and how the health of one affects the health of the others. Public policy affecting community health will be discussed and new policy initiatives will be developed by students. Approved for letter and S/U grading.

VCM 649 Avian Medicine and Surgery credit: 2 Hours.

Avian species represent a significant segment of the companion animal population. Their anatomy, physiology, and behavior are substantially different from traditional species. Intended to provide students with the knowledge and skills required a practice clinical avian medicine and surgery. Diagnostic and therapeutic principles, as well as diseases of companion avian species are included. 2 graduate hours. 2 professional hours. Approved for letter and S/U grading.

VCM 650 Clinical Sm Animal Dentistry credit: 1.5 Hours.

Clerkship in small animal dentistry for VM-4 professional students. Students will assist in the diagnosis and treatment of dogs and cats with dental disease. The psychomotor skills laboratory will be available for students practicing dental procedures on models and frozen specimens. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth-year standing or equivalent in the veterinary medicine curriculum and with prior consent of instructor.

VCM 656 Lab Animal Science II credit: 1 Hour.

Continuation of VCM 646. Additional topics include laboratory animal diseases, biohazard control, gnotobiology and animal models of human disease. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VCM 646 or equivalent, or consent of instructor.

VCM 657 Shelter Medicine II credit: 1 Hour.

Series of lectures/discussions focusing on the history of the humane movement and animal control in the United States and abroad, legal issues for animal control/welfare, the association of domestic violence, animal abuse, and animal fighting, shelter animal medicine and operation, infectious disease management in the shelter setting, population control/epidemiology, feral animal issues, and animal behavior. The "laboratory" portion entails a optional field trip or out rotations with The Anti-Cruelty Society in Chicago, the Champaign/Urbana Humane Society, and CCHS. Approved for S/U grading only. Prerequisite: VCM 626.

VCM 660 Advanced Equine Anatomy credit: 1 Hour.

Designed to provide an in-depth assessment of the unique anatomical characteristics of the horse with focused attention to clinically important aspects of equine anatomy. The material will cover the anatomy of the head, larynx and pharynx, gastrointestinal anatomy and function, and musculoskeletal anatomy in particular detail, relating equine anatomy to the diagnostic and surgical approaches used in the management of diseases involving these body systems. Prerequisite: VM 604.

VCM 661 Advanced Equine Lameness credit: 2 Hours.

Covers equine lameness from a clinician's perspective. Offers an in-depth integrative approach to the diagnosis of equine lameness using the presenting complaint as a starting point. Rather than approaching equine musculoskeletal disease from the perspective of specific injuries, students will be guided through the lameness examination process. Active student participation in class discussion is expected. 2 professional hours. May not be repeated for credit. Prerequisite: Third year veterinary student.

VCM 663 Small Animal Dermatology credit: 1 Hour.

First half of the course presents a systematic approach to small animal dermatologic diagnoses and therapeutics; the second half deals with immunological disorders, seborrheic syndromes, hereditary disorders, cutaneous neoplasms, and feline dermatology. Prerequisite: VCM 631 or equivalent, or consent of instructor.

VCM 664 Wildlife and Exotics credit: 1.5 or 3 Hours.

Clinical experience pertaining to wildlife and exotic pet species including avian, reptile, amphibian, and small mammal species. Exposes participants to all aspects of non-traditional species care including medicine, surgery, husbandry, population considerations, infectious and zoonotic disease principles and shelter medicine. Participants will work with patients of the Wildlife Medical Clinic, the Exotic Animal service, the Acute Illness Center and participating shelters. A basic understanding of anatomy, physiology, husbandry and handling of non-traditional species is required as is the completion of a relevant project by the end of the course. Approved for S/U grading only. May be repeated to a maximum of 3 hours. Prerequisite: Fourth year standing in the veterinary medicine curriculum, 1 semester of previous participation on the Wildlife Medical Clinic or other demonstrated interest in non-traditional species medicine approved by the course instructor.

VCM 666 Shelter Animal Med and Surg credit: 1.5 to 4.5 Hours.

Partnering with Chicago's Animal Care and Control, The AntiCruelty Society of Chicago, and the Champaign County Humane Society, this course will provide a truly unique community veterinary practice program for the low income populations of Chicago and Champaign County. Clinical rotations at these facilities will expose veterinary students to community practice through a low income clinic and shelter setting and explore new ways of improving animal health and welfare, alleviating animal suffering, abuse and abandonment, and protecting public health. Approved for S/U grading only. May be repeated to a maximum of 6 hours. Prerequisite: VCM 657.

VCM 669 Primary Care Elective Rotation credit: 1.5 to 3 Hours.

Externship at a general private veterinary practice in the United States. This elective clinical rotation will expose students to primary and preventive veterinary medical care of small and/or large animals in a private practice setting, and will familiarize students with the business and operational aspects of private practice. Approved for S/U grading only. May be repeated in the same or subsequent terms to a maximum of 3 hours. Prerequisite: All preclinical and paraclinical core courses in the veterinary medicine professional curriculum.

VCM 671 International Vet Medicine credit: 1 Hour.

Discussion of selected topics relevant to animal welfare and disease in the global society and, with guest speakers, of political issues of different continents. Students present a short seminar on a topic of choice. Prerequisite: DVM student.

VCM 672 Food Supply Disease Prevention credit: 1 Hour.

This course is designed to familiarize the student with the basic principles of food supply disease control. The first half of the course is designed to enhance the student's ability to detect disease with observation of necropsy lesions at the gross level. The second half of the course will cover immunizations and the judicious use of antimicrobials. 1 graduate hour. 1 professional hour. Prerequisites: VCM 690 or permission of the instructor if a graduate student or house officer.

VCM 673 Companion Animal Rehab credit: 1 Hour.

Series of lectures/discussions focusing on the proper application of companion animal rehabilitation modalities. Designed to give an understanding of the basics of rehabilitation and begin the thought process of implementing rehabilitation in to veterinary medicine. Prerequisite: Registration in the veterinary curriculum or consent of the instructor.

VCM 674 Equine Exercise Physiology credit: 1 Hour.

Designed to familiarize veterinary students with the basic principles of equine exercise, physiology and sports medicine. Topics include physiology, energetics, thermoregulation, fatigue, conventional and alternate training techniques, and drugs and medications used in equine athletes. Approved for letter and S/U grading. Prerequisite: Good standing in the veterinary professional curriculum, Graduate College, or consent of instructor.

VCM 677 Study Abroad Germany credit: 1.5 Hours.

Study Abroad Program to learn about public health issues and regulations in Germany. Approved for S/U grading only.

VCM 678 Reptile Medicine & Surgery credit: 1 Hour.

Provides an introduction to reptile medicine and surgery. Specific topics to be addressed include non-infectious and infectious diseases, diagnostic sampling techniques, anesthesia and analgesia, and common surgical procedures for reptiles. Approved for S/U grading only.

VCM 679 Adv Veterinary Ophthalmology credit: 1 Hour.

Anatomic, physiologic, pathologic, and pharmacologic considerations in eye diseases and their treatments; instrumentation and methods of study of ocular structure, physiology, and diseases; and laboratories devoted to techniques of examination of the eye and surgical procedures used in treatment of eye diseases. No graduate credit. 1 professional hour. Approved for S/U grading only. Prerequisite: Third-year standing in veterinary medicine curriculum.

VCM 681 Adv Equine Internal Medicine credit: 1 or 2 Hours.

Advanced instruction in case management, laboratory data interpretation, decision-making regarding therapeutics, and advanced diagnostic techniques. Approved for S/U grading only. Prerequisite: Consent of instructor.

VCM 682 Wildlife Medicine credit: 1 Hour.

An 8-week elective course for veterinary students offered in their second or third year of the veterinary curriculum. Participation in weekly rounds and team meetings, for the purpose of independent study and training, is required. Students will be required to maintain a personal clinic journal describing case work, training, and self-assessment. Team leaders should include any training that they conduct for their teams. The journals will be reviewed at the end of the semester by the course instructors. Available to VM2 students during the first and second 8-week terms of the spring term. Available to VM3 students during the first and second 8-week terms of the fall term. May be repeated in the same term to a maximum of 2 hours. May be repeated in separate terms to a maximum of 4 hours. Prerequisite: Enrolled students must be an active member assigned to a treatment team in the Wildlife Medical Clinic.

VCM 684 Client Relations credit: 1 Hour.

Introduction to client relations, including techniques of effective verbal and nonverbal communication and applications of these techniques for veterinary students.

VCM 685 Advanced Diagnostic Imaging credit: 1 Hour.

Stresses imaging principles and comparative anatomy, using clinical cases as examples for echocardiography, diagnostic ultrasound, nuclear medicine, CT and MRI. Prerequisite: First, second or third year veterinary students or by consent of instructor.

VCM 686 ZooMed: What is Your Diagnosis credit: 1 Hour.

A series of interactive, non-domestic animal cases will be discussed during each meeting. Expands a veterinary student's confidence and diagnostic skill when working with these species. Approved for S/U grading only. May be repeated in separate terms to a maximum of 2 hours.

VCM 687 Canine Occupational Health I credit: 1 Hour.

This course will address the most common occupations for working and performance dogs and how these occupational activities may impact health. Subjects covered in this course will include handling of working dogs, breed predisposition to disease, equipment and its proper use, nutrition, rehabilitation and physical therapy, pain management, alternative therapies and prevention strategies in managing occupation-related illnesses in working and performance dogs. The course will be presented in lecture format. No graduate credit. 1 professional hour. Prerequisite: First, Second or Third year standing in the DVM curriculum or permission of instructor.

VCM 688 Food Supply Disease Management credit: 1 Hour.

This course is designed to familiarize the veterinary student with the principles of disease management of the major body systems in herd situations. The student will be given case examples and opportunities to evaluate and treat diseases of the respiratory and enteric systems as well as multiple periparturient diseases. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VCM 672 or permission of the instructor if a graduate student or house officer. Class Scheduled Information: DVM graduate students or house officers in food animal related training programs.

VCM 690 Intro to Food Supply Medicine credit: 1 Hour.

This course is designed to familiarize the student with the basic principles of food supply veterinary medicine. Topics include epidemiologic investigation, veterinary inputs into food supply systems, reproductive aspects associated with production systems and therapeutic standards in food production. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading. Prerequisite: VM 601 or permission of the instructor.

VCM 692 Special Problems credit: 1 to 3 Hours.

Individual research on a special problem chosen in consultation with the instructor and department head. 1 to 3 graduate hours. 1 to 3 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Enrollment in veterinary medicine curriculum with grade point average of 3.0 or above, or consent of instructor.

VCM 693 Comparative Anatomy - Zoo credit: 1 Hour.

The comparative anatomy of zoological species commonly encountered in clinical practice will be discussed in lecture format followed by laboratory dissection of cadavers. Additionally, radiographic anatomy of these species will be discussed. Species covered include representatives of the taxonomic Classes Chondrichthyes, Osteichthyes, Amphibia, Reptilia, Aves, Mammalia. Cadaver specimens include bony fish, sharks, frogs, iguana, turtles, snakes, birds (pigeons), rats and rabbits. Emphasis will be placed on anatomical differences as related to domestic species. Meets for one hour of lecture and two hours of laboratory, one or two times each week during the eight weeks of the course for a total of eight lecture hours and 16 laboratory hours. Approved for S/U grading only.

VCM 694 Veterinary Clinical Medicine credit: 1 to 3 Hours.

To be used to designate a trial or experimental course for five or more students, designed to be an elective in the CVM professional curriculum. The course can be taught under this designation for two years or two offerings, whichever time is greater. 1 to 3 graduate hours. 1 to 3 professional hours. Approved for letter and S/U grading. May be repeated to a maximum of 6 hours. Prerequisite: Registration in the veterinary medicine curriculum or consent of instructor.

VCM 695 Food Supply Decision Making credit: 1 Hour.

This course is designed to enhance veterinary student knowledge of case management and allow them to utilize case information to make decisions. The course will be laboratory and problem based with the opportunity to use antemortem and postmortem samples of animals with disease to evaluate therapeutic and management outcomes. 1 professional hour. Approved for S/U grading only. Prerequisite: VCM 688.

VCM 696 Fish Medicine and Surgery credit: 1 Hour.

Introduction to ornamental fish medicine and surgery. Specific topics to be addressed in this course include non-infectious and infectious diseases, diagnostic sampling techniques, anesthesia and analgesia, and common surgical procedures for fish. 1 graduate hour. 1 professional hour. Approved for letter and S/U grading.

VCM 697 Adv Topics of Feline Medicine credit: 1 Hour.

Presents basic aspects of feline medicine, feline preventive medicine and current medical topics in feline internal medicine. Approved for S/U grading only.

VCM 698 Adv Small Animal Dentistry credit: 1 Hour.

The recognition and appropriate treatment of various types of feline and canine dental diseases will be discussed. The laboratories will be utilized to assist students in the determination of the appropriate diagnosis based on dental radiographs, photographs and models. Oral surgery, periodontic and endodontic therapy will also be performed in the laboratory. 1 graduate hour. 1 professional hour. Approved for S/U grading only.

Veterinary Medicine Courses (VM)

VM Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/VM>)

Courses

VM 601 Clinical Practice I credit: 4 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on exposure to the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 4 professional hours. Approved for S/U grading only.

VM 602 Structure and Function I credit: 9.5 Hours.

Teaches gross anatomy of the limbs of the dog, cat, horse, and ox; histology of basic tissues, and endocrines, immune, integumentary, and musculoskeletal systems; early development; cell physiology and endocrinology; neurobiology of excitable tissues including brain, nerves, and muscles; and clinical correlations between these subjects and the clinical experiences of VM 601. No graduate credit. 9.5 professional hours.

VM 603 Structure and Function II credit: 9 Hours.

Teaches gross anatomy of the thoracic and abdominal cavity of the dog, cat, horse, ox, sheep, goat and pig; histology and physiology of the cardiovascular, respiratory and gastrointestinal systems; neurobiology of the autonomic system and pain; and clinical correlations between these subjects and the clinical experiences of VM 601. No graduate credit. 9 professional hours. Prerequisite: VCM 602 and good-standing in the veterinary professional curriculum or consent of instructor.

VM 604 Structure and Function III credit: 9.5 Hours.

Teaches gross anatomy of the pelvic cavity and head of the dog, cat, horse, ox, sheep, goat and pig; histology of the reproductive, urinary, and special senses systems; reproductive and renal physiology; neurobiology of cranial nerves and special senses; basic animal nutrition; and clinical correlations between these subjects and the clinical experiences of VM 601. Course Information: No graduate credit. 9.5 professional hours. Prerequisite: VM 603 and good-standing in the veterinary professional curriculum, or consent of instructor.

VM 605 Pathobiology I credit: 9.5 Hours.

Teaches principles of pharmacology; general pathology; immunology; medical genetics; and mechanistic toxicology. No graduate credit. 9.5 professional hours. Prerequisite: VM 604 and good standing in the veterinary professional curriculum, or consent of instructor.

VM 606 Clinical Practice II credit: 4 Hours.

Teaches in greater depth the clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on exposure to the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 4 professional hours. Approved for S/U grading only. Prerequisite: VM 601, VM 604, and good standing in the veterinary professional curriculum, or consent of instructor.

VM 607 Pathobiology II credit: 10 Hours.

Infectious disease concepts in parasitology, protozoology, bacteriology, mycology, and virology; and introduces basic antimicrobial pharmacology. No graduate credit. 10 professional hours. Prerequisite: VM 605, VM 606, and good standing in the veterinary professional curriculum; or consent of instructor.

VM 608 Pathobiology III credit: 9 Hours.

Pathology, clinical pathology, and imaging of organ systems; epidemiology and food safety; and includes an integrative laboratory covering commonly encountered problems in infectious diseases. No graduate credit. 9 professional hours. Prerequisite: VM 607 and good standing in the veterinary professional curriculum, or consent of instructor.

VM 609 Medicine and Surgery I credit: 10.5 Hours.

Teaches the practice of medicine and surgery of anesthesiology, neurology, ophthalmology, reproduction, and neonatology. Surgery and Theriogenology laboratories occur throughout this course. No graduate credit. 10.5 professional hours. Prerequisite: VM 608 and good-standing in the veterinary professional curriculum, or consent of instructor.

VM 610 Medicine and Surgery II credit: 10.5 Hours.

Teaches and practice of medicine and surgery of dermatology, endocrinology, gastroenterology, and urology. Surgery and Theriogenology laboratories continue throughout this course. No graduate credit. 10.5 professional hours. Prerequisite: VM 609 and good-standing in the veterinary professional curriculum, or consent of instructor.

VM 611 Medicine and Surgery III credit: 9.5 Hours.

Teaches the practice of medicine and surgery of animal behavior, cardiology, clinical toxicology, imaging, musculoskeletal diseases, oncology/hematology/immune-related diseases, and respiratory diseases. Surgery laboratories continue through the course. No graduate credit. 9.5 professional hours. Prerequisite: VM 610 and good standing in the veterinary professional curriculum, or consent of instructor.

VM 612 Clinical Practice III credit: 8 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on experience in the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 8 professional hours. Approved for S/U grading only. Prerequisite: VM 611.

VM 613 Clinical Practice IV credit: 13 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on experience in the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 13 professional hours. Approved for S/U grading only. Prerequisite: VM 611.

VM 614 Clinical Practice V credit: 8 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on experience in the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 8 professional hours. Approved for S/U grading only. Prerequisite: VM 611.

VM 615 Clinical Practice VI credit: 8 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on experience in the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 8 professional hours. Approved for S/U grading only. Prerequisite: VM 611.

VM 616 Clinical Practice VII credit: 8 Hours.

Teaches clinical skills, practices, and procedures used in the Veterinary Teaching Hospital and the Veterinary Diagnostic Laboratory and provides hands-on experience in the methodologies used to diagnose, treat, and prevent disease in animals. No graduate credit. 8 professional hours. Approved for S/U grading only. Prerequisite: VM 611.

VM 617 Professional Development credit: 8 Hours.

Provides students with a capstone experience near graduation to enhance their educations with advanced professional experiences tailored to their career needs and/or to strengthen perceived areas of weakness in their professional education and development. No graduate credit. 8 professional hours. Approved for S/U grading only. Prerequisite: VM 616 and good-standing in the veterinary professional curriculum.

VM 620 Canine Feline Behavior credit: 1 or 3 Hours.

This lecture/discussion course examines the evolutionary histories, domestication process, development behavior social behavior and problem behavior of the dog and the cat. Topics also include learning theory, training methods, and behavior modification approaches for companion animals. Analysis and discussion of behavior/training case studies are included, and lectures and discussions focus on issues that are relevant to the involved in-depth analysis of behavior problem case studies. No graduate credit. 1 or 3 professional hours.

VM 622 Research Project I credit: 2 Hours.

In this lecture/discussion course, students will work in groups, each led by a faculty mentor. Each group will develop a research question, design experiments to answer the question, and write a project proposal. No graduate credit. 2 professional hours. Approved for S/U grading only. Prerequisite: Good standing in the veterinary curriculum.

VM 623 Research Project II credit: 2 Hours.

In this lecture/discussion course, which is a continuation of VM 622, students will work in groups, each led by a faculty mentor. The groups will conduct the research project that was planned and proposed in VM 622, analyze the data, and prepare a scientific manuscript for publication. No graduate credit. 2 professional hours. Approved for S/U grading only. Prerequisite: Good standing in the veterinary curriculum.

VM 626 The Basics of Business credit: 1 Hour.

Business principles related to managing a veterinary practice including economics, negotiations, finance, communication and interpersonal skills, accounting, and management. 1 graduate hour. 1 professional hour. Prerequisite: Third year standing in the veterinary curriculum or consent of instructor.

VM 627 Fundamentals of Finance credit: 1 Hour.

Provides students with a strong introductory background in the basic aspects of personal and corporate finance. Topics addressed include financial statements, budgeting, debt management, interest rates, personal investment strategies, developing and managing a portfolio of investments, time value of money, financial decision making, and managing financial risk. No graduate credit. 1 professional hour.

Approved for S/U grading only.

VM 635 Veterinary Medical Spanish credit: 2 Hours.

In this course second year veterinary students will learn basic veterinary Spanish terminology to enable them to communicate effectively with clients. This involves language skills necessary to describe diseases of various animals and discuss treatment options, their benefits and side effects, and cost of treatment with the client. No graduate credit. 2 professional hours. Approved for S/U grading only. Prerequisites: Students should have basic writing, reading, and speaking skills in Spanish. Second year students only.

VM 642 Contemporary Issues in Vet Med credit: 1 Hour.

An introductory course for first year veterinary students that will explore issues affecting the profession and practice of veterinary medicine, as well as career opportunities. Approved for S/U grading only.

VM 643 Fundamentals of Management credit: 1 Hour.

An introductory course for second year veterinary students that explores the aspects of managing people in a business setting. Compliance, motivation, engagement, persuading, developing, and retaining employees will be covered as well as cross generational issues in the work place. No graduate credit. 1 professional hour. Approved for S/U grading only.

VM 645 Communications in Practice credit: 1 Hour.

An introductory course for third year veterinary students that will explore the service and communication side of veterinary medicine as well as facilitate in educating students on personal finance, resume development, interviewing contracts and negotiation, and intra and interpersonal communication. No graduate credit. 1 professional hour. Approved for S/U grading only.

VM 694 Veterinary Medicine credit: 1 to 4 Hours.

To be used to designate a trial or experimental course for five or more students. It is designed to be an elective in the CVM professional curriculum. A course can be taught under this designation two times within a two-year period and cannot be renewed as a VM 694 course. No graduate credit. 1 to 4 professional hours. May be repeated to a maximum of 8 hours if topics vary. Prerequisite: Registration in the veterinary medicine curriculum or consent of instructor.

Wolof (WLOF)

WLOF Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/WLOF>)

Courses

WLOF 201 Elementary Wolof I credit: 5 Hours.

Introduction to Wolof; emphasizes grammar, pronunciation, reading, and conversation in standard Wolof. Same as AFST 241. Participation in language laboratory required.

WLOF 202 Elementary Wolof II credit: 5 Hours.

Continuation of elementary Wolof, with introduction of more advanced grammar; emphasizes more fluency in speaking, reading, and writing simple sentences in standard Wolof. Same as AFST 242. Prerequisite: WLOF 201. Participation in language laboratory required.

WLOF 403 Intermediate Wolof I credit: 4 Hours.

Survey of more advanced grammar, with emphasis on increasing conversational fluency, composition skills, study of written texts in standard and Dakar Wolof, and discussion of grammatical variations. Same as AFST 443. 4 undergraduate hours. 4 graduate hours. Prerequisite: WLOF 202.

WLOF 404 Intermediate Wolof II credit: 4 Hours.

Continuation of WLOF 403. Emphasizes ability to engage in reasonably fluent discourse in Wolof, comprehensive knowledge of formal grammar, and ability to read ordinary texts in standard and Dakar Wolof. Same as AFST 444. 4 undergraduate hours. 4 graduate hours. Prerequisite: WLOF 403.

WLOF 405 Advanced Wolof I credit: 3 Hours.

Third year Wolof with emphasis on conversational fluency and on increased ability in reading and comprehending texts, including newspaper prose and West African cultural materials. Course will also deal with the advanced level grammar found in such texts. Same as AFST 445. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 404 or equivalent.

WLOF 406 Advanced Wolof II credit: 3 Hours.

Continuation of WLOF 405 with increased emphasis on conversational fluency and comprehension of advanced level grammar in the reading of a variety of prose texts on current cultural issues. Same as AFST 446. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 405 or equivalent.

WLOF 407 Topics Wolof Lang & Lit I credit: 3 Hours.

Selected readings from modern Wolof authors, with a focus on novels, plays, and basic poetry illustrative of West African cultural issues and advanced level Wolof grammar, as well as development of expository writing skills. Same as AFST 447. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 406.

WLOF 408 Topics Wolof Lang & Lit II credit: 3 Hours.

Continuation of WLOF 407 with increased emphasis on the reading and comprehension of literary texts exemplified in advanced level novels, plays, and poetry, as well as on advanced mastery of expository writing skills. Same as AFST 448. 3 undergraduate hours. 3 graduate hours. Prerequisite: WLOF 407.

Women and Gender in Global Perspectives (WGPP)

WGPP Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/WGPP>)

Courses

WGPP 581 Gender Relations & Intl Dev credit: 4 Hours.

Interdisciplinary seminar examining theoretical and empirical research on gender and the transformation of social and economic structures. Students will develop a comparative perspective on issues of women and public policy by contrasting and comparing such policies in North and South America, Eastern and Western Europe, Asia, and Africa. Same as GWS 512 and SOCW 581.

Writing Studies (WRIT)

WRIT Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/WRIT>)

Courses

WRIT 300 Issues in Tutoring Writing credit: 3 Hours.

Introduction to the work of writing centers, theories of composition, and writing pedagogy through readings, discussion, and observation. Theories of learning, collaborative learning, and the dynamics of the tutoring relationship will be discussed. Issues of working with specific writers such as English Language Learners will be explored. A relevant issue of interest will become the topic for an extended research paper. As theory is applied to practice, students will write, share their writing with others, and observe and participate in writing tutoring sessions. Later in the semester students will consult with writers, either with an experienced consultant or alone. Satisfactory completion of all requirements of the class and approval of the Writers Workshop Director will allow students to consult in the Writers Workshop the following semester. Credit is not given for WRIT 203 and WRIT 300. Prerequisite: Consent of instructor.

WRIT 303 Writing Across Media credit: 3 Hours.

Same as INFO 303. See INFO 303.

This course satisfies the General Education Criteria for:
Advanced Composition

Yiddish (YDSH)

YDSH Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/YDSH>)

Courses

YDSH 101 Beginning Yiddish I credit: 4 Hours.

Course develops basic conversational and reading skills as well as the essentials of Yiddish grammar.

YDSH 102 Beginning Yiddish II credit: 4 Hours.

Continuation of YDSH 101 focusing on comprehension and reading skills. Prerequisite: YDSH 101.

YDSH 103 Intermediate Yiddish I credit: 4 Hours.

Continuation of YDSH 102. Develops more advanced conversational, comprehension, reading and writing skills as well as introducing more advanced features of Yiddish grammar. Prerequisite: YDSH 102 or equivalent placement score.

YDSH 104 Intermediate Yiddish II credit: 4 Hours.

Continuation of YDSH 103. Prerequisite: YDSH 103 or equivalent placement score.

YDSH 220 Jewish Storytelling credit: 3 Hours.

Course will introduce the great Jewish storytellers such as Nachman of Bratslav, Scholem-Aleichem, and I.B. Singer through readings of Yiddish tales, short stories, poetry, drama and excerpts from novels and autobiographies from the 19th and 20th centuries. In addition, Yiddish films and folklore will be used to exemplify the variety of Jewish cultural expression in Eastern Europe, Russia, and America. Course will also present a sample of critical approaches to Yiddish literature. Taught in English translation. Same as CWL 221, ENGL 223, JS 220, and REL 220. This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

YDSH 320 Lit Responses to the Holocaust credit: 3 Hours.

Course introduces a variety of Jewish literary responses to the Holocaust written during and after the Second World War (from 1939). The discussion of Holocaust memoirs, diaries, novels, short stories, poems, and other texts will focus on the unique contribution of literary works to our understanding of the Holocaust. In addition, the works and their authors will be situated in their Jewish cultural historical context. Taught in English translation. Same as CWL 320, ENGL 359, JS 320, and REL 320. This course satisfies the General Education Criteria for:

Humanities - Lit Arts

Cultural Studies - Western

YDSH 420 Jewish Life-Writing credit: 3 or 4 Hours.

Jewish life-writing from the late 18th century until today. Emphasis on cultural historical context, literary styles, and forms. All texts will be available in English translation. Same as CWL 421, HIST 436, REL 420, and SLAV 420. 3 undergraduate hours. 4 graduate hours.

Zulu (ZULU)

ZULU Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ZULU>)

Courses

ZULU 201 Elementary Zulu I credit: 5 Hours.

Introduction to Zulu; emphasis on grammar, pronunciation, reading and conversation in standard Zulu. Same as AFST 251. Participation in the language laboratory is required.

ZULU 202 Elementary Zulu II credit: 5 Hours.

Continuation of ZULU 201 with introduction of more advanced grammar; emphasis on more fluency in speaking, reading, and writing simple sentences in standard Zulu. Same as AFST 252. Participation in the language laboratory is required. Prerequisite: ZULU 201.

ZULU 403 Intermediate Zulu I credit: 4 Hours.

Survey of more advanced grammar; emphasis on increasing conversational fluency, composition skills, study of written texts in standard Zulu and discussions of grammatical variations. Same as AFST 451. 4 undergraduate hours. 4 graduate hours. Prerequisite: ZULU 202.

ZULU 404 Intermediate Zulu II credit: 4 Hours.

Continuation of ZULU 403; emphasis on increasing conversational fluency, composition skills, study of written texts in the standard and spoken Zulu dialects, and discussion of grammatical variations. Same as AFST 452. 4 undergraduate hours. 4 graduate hours. Prerequisite: ZULU 403.

ZULU 405 Advanced Zulu I credit: 3 Hours.

Third year Zulu with emphasis on conversational fluency and on increased facility in reading, comprehension, writing in response to authentic Zulu texts such as those documented in selected newspapers, magazines, and South African cultural materials. Same as AFST 453. 3 undergraduate hours. 3 graduate hours. Prerequisite: ZULU 404.

ZULU 406 Advanced Zulu II credit: 3 Hours.

Continuation of ZULU 405 with increased emphasis on conversational fluency and increased facility in reading and comprehending authentic literary texts including prose and cultural materials from South Africa. Same as AFST 454. 3 undergraduate hours. 3 graduate hours. Prerequisite: ZULU 405.

DEGREE PROGRAMS INDEX

Degree Programs (emphasis)	School/College	Undergraduate	Graduate	Professional
Accountancy	BUS	BS (p. 111)	MAS (p. 637), MSA (p. 638), PhD (p. 635), CONC (Tax) (p. 637), CONC (Accy) (p. 639), CONC (Data) (p. 639), Minor (p. 636)	
Acting	FAA	CONC (p. 305)	CONC (p. 909)	
Actuarial Science	LAS	BSLAS (p. 502)	CONC (p. 825)	
Adult Development	ACES	Minor (p. 66)		
Advanced Analytics in Industrial Enterprise Systems Engineering	ENGR		CONC (p. 790)	
Advanced Clinical Concentration	SOCW		CONC (p. 891)	
Advertising	MDIA	BS (p. 598)	MS (p. 639)	
Aerospace Engineering	ENGR	BS (p. 157)	MS (p. 642), PhD (p. 643)	
African American Studies	LAS	BALAS (p. 323), Minor (p. 324)	CONC (p. 644), Minor (p. 644)	
African Studies	LAS	Minor (p. 328)	MA (p. 646), Minor (p. 647)	
Aging	AHS	Minor (p. 106)		
Agri-Accounting	ACES	CONC (p. 16)		
Agribusiness Markets and Management	ACES	CONC (p. 16)		
Agricultural Communications	ACES	BS (p. 79)		
Agricultural Education	ACES		MS (p. 647)	
Agricultural Leadership Education	ACES	CONC (p. 82)		
Agricultural Leadership and Science Education	ACES	BS (p. 82)		
Agricultural Production	ACES		PSM (p. 648)	
Agricultural Safety and Health	ACES	Minor (p. 15)		
Agricultural Science Education	ACES	CONC (p. 82)		
Agricultural and Applied Economics	ACES		MS (p. 653), PhD (p. 654)	
Agricultural and Biological Engineering	ENGR	BS (p. 9)	MS (p. 651), PhD (p. 650)	
Agricultural and Biological Engineering Sciences	ACES	BS (p. 13)		
Agricultural and Consumer Economics	ACES	BS (p. 16)		
Agroecology	ACES	CONC (p. 45)		

American Indian Studies	LAS		Minor (p. 330)	
American Indian and Indigenous Studies	LAS			Minor (p. 923)
Analytics	LAS			CONC (p. 905)
Animal Sciences	ACES		BS (p. 25), Minor (p. 25)	MS (p. 657), PhD (p. 657), CONC (p. 658)
Anthropology	LAS		BALAS (p. 332), Minor (p. 332), CONC (p. 342)	MA (p. 659), PhD (p. 659)
Applied Mathematics	LAS		CONC (p. 503)	MS (p. 824)
Applied Statistics	LAS			CONC (p. 905)
Arabic Studies	LAS		Minor (p. 494)	
Archaeology	LAS		CONC (p. 341)	
Architectural Studies	FAA		BS (p. 243), Minor (p. 244)	MS (p. 661)
Architecture	FAA			MARCH (p. 663), PhD (p. 661), CONC (p. 662)
Art Education	FAA		BFA (p. 264)	EdM (p. 667), MA (p. 667), PhD (p. 665)
Art History	LAS FAA		BALAS (p. 581), BFA (p. 265), Minor (p. 319)	MA (p. 666), PhD (p. 666), Minor (p. 665)
Art and Design	FAA		BFA (p. 264), Minor (p. 267)	MFA (p. 667)
Asian American Studies	LAS		BALAS (p. 345), Minor (p. 346)	Minor (p. 923)
Astrochemistry	LAS			CONC (p. 668)
Astronomy	LAS		BSLAS (p. 348), Minor (p. 349)	MS (p. 670), PhD (p. 670)
Atmospheric Sciences	LAS		BSLAS (p. 351), Minor (p. 351)	MS (p. 672), PhD (p. 673)
Audiology	AHS		CONC (p. 100)	AuD (p. 902)
Balkan Studies	LAS			Minor (p. 884)
Biochemistry	LAS		BS (p. 517)	MS (p. 675), PhD (p. 675)
Bioengineering	ENGR		BS (p. 168), Minor (p. 234)	MENG (p. 678), MS (p. 678), PhD (p. 677), CONC (p. 678)
Bioinformatics				MS (p. 787)
Biological Sciences (Crop Sciences)	ACES		CONC (p. 45)	
Biological Sciences, Teaching of	LAS			MS (p. 907)
Biology	LAS		BS-IB (p. 584), BS-MCB (p. 584)	MS (p. 683)
Biology Teaching	LAS		BSLAS (p. 585)	
Biomaterials	ENGR		CONC (p. 205)	
Biomechanics	ENG			CONC (p. 836)
Biomolecular Engineering	LAS		CONC (p. 355), Minor (p. 358)	
Biophysics and Quantitative Biology	LAS			MS (p. 684), PhD (p. 684)
Bioprocessing and Bioenergy	ACES			PSM (p. 676)
Business	BUS		Minor (p. 124)	

Business Administration	BUS		MBA (p. 695), ExecMBA (p. 693), MS (p. 690), PhD (p. 686), CONC (p. 687)	Computer Science	ENGR		BS (p. 180), Minor (p. 235)	MS (p. 725), MCS (p. 724), PhD (p. 723), CONC (p. 722)
Cancer Nanotechnology	ENG		CONC (p. 679)	Computer Science and Anthropology	LAS		BSLAS (p. 586)	
Cell and Developmental Biology	LAS		MS (p. 697), PhD (p. 697)	Computer Science and Astronomy	LAS		BSLAS (p. 587)	
Ceramics	ENGR FAA		CONC (p. 205)	Computer Science and Chemistry	LAS		BSLAS (p. 588)	
Chemical Engineering	LAS	BS (p. 355), CONC (p. 355)	MS (p. 701), PhD (p. 700)	Computer Science and Crop Sciences	ACES		BS (p. 49)	
Chemical Physics			PhD (p. 698)	Computer Science and Linguistics	LAS		BSLAS (p. 585)	
Chemical and Biomolecular Engineering	LAS		CONC (p. 700)	Consumer Economics and Finance	ACES		CONC (p. 21)	
Chemistry	LAS	BSLAS (p. 365), BS (p. 367), Minor (p. 361)	MA, MS (p. 703), PhD (p. 702)	Corporate Governance International Business	BUS			Minor (p. 689)
Chemistry Teaching	LAS	CONC (p. 365)	MS (p. 703)	Corporate Law, Commercial Law, and Trade				CONC (p. 810)
Child and Adolescent Development	ACES		CONC (p. 69)	Costume Design and Technology	FAA		CONC (p. 305)	
Choral Music	FAA		CONC (p. 850)	Crafts	FAA		BFA (p. 263)	CONC (p. 667)
Cinema Studies	MDIA	CONC (p. 610), Minor (p. 606)	Minor (p. 924)	Creative Writing	LAS		BALAS (p. 406), Minor (p. 409)	MFA (p. 726)
Civic Leadership	LAS	CONC (p. 530), Minor (p. 531)	CONC (p. 873)	Criminal Law	LAW			CONC (p. 811)
Civil Engineering	ENGR	BS (p. 173)	MS (p. 706), MENG (p. 707), PhD (p. 706)	Criminology, Law, and Society	LAS		Minor (p. 568)	
Classical Archaeology	LAS	CONC (p. 369), Minor (p. 374)		Crop Agribusiness	ACES		CONC (p. 46)	
Classical Civilization	LAS	CONC (p. 369), Minor (p. 374)		Crop Sciences	ACES		BS (p. 34)	MS (p. 729), PhD (p. 727), CONC (p. 728)
Classical Philology	LAS		PhD (p. 709)	Crop and Soil Management	ACES		Minor (p. 57)	
Classics	LAS	BALAS (p. 369), CONC (p. 372)	MA (p. 709)	Crops	ACES		CONC (p. 46)	
College Teaching	EDUC		Minor (p. 745)	Cultural-Linguistic Diversity	AHS		CONC (p. 100)	
Communication	LAS	BALAS (p. 375), Minor (p. 375)	MA (p. 713), PhD (p. 712)	Curriculum and Instruction	EDUC			EdM (p. 732), MA (p. 734), MS (p. 734), CAS (p. 731), EdD (p. 731), PhD (p. 732)
Communications and Media	MDIA		PhD (p. 795)	Czech Studies	LAS		CONC (p. 559)	
Community Based Art Education	FAA		Minor (p. 267)	Dance	FAA		BFA (p. 278), BA (p. 277)	MFA (p. 735), Minor (p. 736)
Community Health	AHS	BS (p. 90)	MSPH (p. 719), MS (p. 718), PhD (p. 715)	Design and Technology	FAA			CONC (p. 910)
Companion Animal and Equine Science	ACES		CONC (p. 30)	Dietetics	ACES		CONC (p. 62)	
Comparative Biomedical Sciences	VMED		PhD (p. 916)	Digital Libraries	LIS			CONC (p. 815)
Comparative Literature	LAS	CONC (p. 385)	MA (p. 721), PhD (p. 721)	Early Childhood Education	EDUC		BS (p. 127)	EdM (p. 733)
Comparative and World Literature	LAS	BALAS (p. 380)		Earth Science Teaching	LAS		CONC (p. 436)	MS (p. 779)
Computational Engineering	ENGR		CONC (p. 833)	Earth and Environmental Science	LAS		CONC (p. 436)	
Computational Science and Engineering	ENGR	Minor (p. 238)	CONC (p. 711)	Earth, Society, and Environmental Sustainability	LAS		BSLAS (p. 549)	
Computer Engineering	ENGR	BS (p. 193)		East Asian Languages Teaching	LAS		CONC (p. 393)	

East Asian Languages and Cultures	LAS	BALAS (p. 393), Minor (p. 387)	PhD (p. 738)	Finance	BUS	BS (p. 121)	MS (p. 762), PhD (p. 763), Minor (p. 763)
East Asian Studies	LAS		MA (p. 737)	Finance in Agribusiness	ACES	CONC (p. 16)	
Ecology and Conservation Biology	LAS	Minor (p. 473)		Financial Engineering	BUS ENGR		MS (p. 765)
Ecology, Ethology Evolution	LAS		CONC (p. 655)	Financial Planning	ACES	CONC (p. 16)	
Ecology, Evolution and Conservation Biology	LAS		MS (p. 875), PhD (p. 875)	Fish and Wildlife Conservation	ACES	CONC (p. 70)	
Economics	LAS	BALAS (p. 394)	MS (p. 739), PhD (p. 739)	Food Science	ACES	CONC (p. 58), Minor (p. 64)	CONC (p. 766)
Education Policy, Organization and Leadership	EDUC		EdM (p. 742), MA (p. 742), EdD (p. 743), PhD (p. 743), CAS (p. 744)	Food Science and Human Nutrition	ACES	BS (p. 58)	MS (p. 767), PSM (p. 767), PhD (p. 767)
Educational Administration and Leadership	EDUC		CONC (p. 745)	Food and Agribusiness Management	ACES	Minor (p. 23)	
Educational Psychology	EDUC		EdM (p. 751), MA (p. 752), MS (p. 752), CAS (p. 749), PhD (p. 750)	Food and Environmental Systems	ACES	Minor (p. 85)	
Electrical Engineering	ENGR	BS (p. 195)		French	LAS	BALAS (p. 411), Minor (p. 417)	MA (p. 773), PhD (p. 772)
Electrical and Computer Engineering	ENGR	Minor (p. 235)	MENG (p. 755), MS (p. 755), PhD (p. 754)	French Commercial Studies	LAS	CONC (p. 411)	
Electronic Materials	ENGR	CONC (p. 205)		French Studies	LAS	CONC (p. 411)	
Elementary Education	EDUC	BS (p. 128)	EdM (p. 733)	French Teaching	LAS	BA (p. 415)	
Energy Systems Engineering	ENGR		CONC (p. 860)	Gender Relations in International Development	SOCW		Minor (p. 890)
Engineering Mechanics	ENGR	BS (p. 217)		Gender and Women's Studies	LAS	BALAS (p. 418), Minor (p. 422)	Minor (p. 924)
Engineering Physics	ENGR	BS (p. 229)		General Anthropology	LAS	CONC (p. 332)	
English	LAS	BALAS (p. 397), CONC (p. 408), Minor (p. 397)	MA (p. 757), PhD (p. 758), CONC (p. 734)	General Geography	LAS	CONC (p. 423)	
English Teaching	LAS	CONC (p. 408)		Geographical Information Science	LAS	CONC (p. 423)	
English as a Second Language	LAS	Minor (p. 495), Minor (p. 496)		Geography	LAS		MA (p. 774), MS (p. 774), PSM (p. 774), PhD (p. 774)
Entomology	LAS		MS (p. 759), PhD (p. 760)	Geography and Geographic Information Science	LAS	BALAS (p. 423)	
Environmental Chemistry	LAS	CONC (p. 366)		Geology	LAS	BSLAS (p. 432), CONC (p. 432), Minor (p. 432)	MS (p. 778), PhD (p. 777)
Environmental Economics and Law	ACES	Minor (p. 22)		Geology and Geophysics	LAS	BS (p. 432)	
Environmental Economics and Policy	ACES	CONC (p. 22)		Geophysics	LAS	CONC (p. 432)	
Environmental Engineering in Civil Engineering	ENGR		MS (p. 706), PhD (p. 706)	German	LAS	Minor (p. 445)	MA (p. 780), PhD (p. 781)
Environmental Geology	LAS	CONC (p. 432)		German Business and Commercial Studies	LAS	CONC (p. 447)	
European Union Studies	LAS		MA (p. 761), Minor (p. 761)	German Culture and Literature	LAS	CONC (p. 447)	
Family Studies	ACES	CONC (p. 65)		German Linguistics	LAS	CONC (p. 446)	
Farm Management	ACES	CONC (p. 16)		German Teaching	LAS	BA (p. 440)	
				Germanic Languages and Literatures	LAS	BALAS (p. 440)	

Global Change and Landscape Dynamics	ACES	CONC (p. 70)		
Global Labor Studies	LER	Minor (p. 627)		
Global Markets and Society	LAS	Minor (p. 451)		
Global Studies	LAS	BALAS (p. 448), Minor (p. 449)	Minor (p. 925)	
Global Studies in Education	EDU	CONC (p. 745)		
Graduate Preparatory (Math)	LAS	CONC (p. 496)		
Graphic Design	FAA	BFA (p. 266)	CONC (p. 667)	
Greek	LAS	CONC (p. 369), Minor (p. 374)	CONC (p. 710)	
Health Behavior Change	AHS	CONC (p. 106)		
Health Communication	LAS	MS (p. 713)		
Health Diversity	AHS	CONC (p. 106)		
Health Education and Promotion	AHS	CONC (p. 90)		
Health Planning and Administration	AHS	CONC (p. 90)		
Health and Aging	AHS	CONC (p. 106)		
Heritage Studies	FAA	Minor (p. 926)		
Higher Education	EDU	CONC (p. 745)		
Hindi Studies	LAS	Minor (p. 495)		
History	LAS	BALAS (p. 452), Minor (p. 452)	MA (p. 782), PhD (p. 783)	
Horticultural Food Systems	ACES	CONC (p. 47)		
Horticulture	ACES	Minor (p. 57)		
Hospitality Management	ACES	CONC (p. 58)		
Human Development and Family Studies	ACES	BS (p. 65), Minor (p. 66)	MS (p. 785), PhD (p. 785)	
Human Dimensions of the Environment	ACES	CONC (p. 70)		
Human Geography Concentration	LAS	CONC (p. 423)		
Human Nutrition	ACES	CONC (p. 58)		
Human Resource Development	EDU	CONC (p. 745)		
Individual Plans of Study	LAS	BALAS (p. 589), BSLAS (p. 589)		
Industrial Design	FAA	BFA (p. 266)	CONC (p. 667)	
Industrial Engineering	ENGR	BS (p. 199)	MS (p. 793), PhD (p. 790)	
Informatics		Minor (p. 627)	PhD (p. 787)	
Information Management	LIS	MS (p. 815)		
Information Sciences	IS	MS (p. 816), CAS (p. 815), PhD (p. 813), CONC (p. 816)		
Information Systems	BUS	BS (p. 118)		
Information Technology and Control	BUS	Minor (p. 689)		
Innovation, Leadership, and Engineering Entrepreneurship	ENGR	BS (p. 238)		
Instrumental Conducting (Band)	FAA	CONC (p. 844)		
Instrumental Conducting (Orch)	FAA	CONC (p. 845)		
Instrumental Conducting (Wind Band)	FAA	CONC (p. 845)		
Instrumental Performance Music	FAA	BM (p. 283)		
Integrative Biology	LAS	BSLAS (p. 466), Minor (p. 473)		
Integrative Biology Honors	LAS	BSLAS (p. 466)		
Intellectual Property and Technology Law	LAS	CONC (p. 811)		
Interdisciplinary Health Sciences	AHS	BS (p. 106)		
Interdisciplinary Studies	LAS	BALAS (p. 474)		
International Development Economics	ACES	Minor (p. 23)		
International Minor in ACES	ACES	Minor (p. 86)		
International Minor in Engineering	ENGR	Minor (p. 236)		
International and Comparative Law	LAS	CONC (p. 811)		
Islamic World, Study of the	LAS	Minor (p. 570)		
Italian	LAS	BALAS (p. 417), Minor (p. 417)	MA (p. 773), PhD (p. 773)	
Jazz Performance	FAA	BM (p. 283)	CONC (p. 850)	
Jewish Studies	LAS	CONC (p. 476), Minor (p. 478)		
Journalism	MDIA	BS (p. 602), Minor (p. 605)	MS (p. 796)	
Justice, Democracy, and Legal Rights	LAW	CONC (p. 810)		
Kinesiology	AHS	BS (p. 93)	MS (p. 798), PhD (p. 799)	
LGBT/Queer Studies	LAS	Minor (p. 423)		
Labor and Employment Relations	LER	MHRIR (p. 801), PhD (p. 802)		
Landscape Architecture	FAA	BLA (p. 279)	MLA (p. 804), PhD (p. 805)	
Landscape Studies	FAA	Minor (p. 280)		
Language Studies (German)	LAS	CONC (p. 440)		
Latin	LAS	CONC (p. 374), Minor (p. 373)	CONC (p. 710)	
Latin American Studies	LAS	BALAS (p. 479), Minor (p. 480)	MA (p. 807)	
Latin American and Caribbean Studies	LAS	Minor (p. 808)		
Latin, Teaching of	LAS	BA (p. 373)	MA (p. 710)	

Latina/Latino Studies	LAS	BALAS (p. 481), Minor (p. 481)	Minor (p. 926)	Natural Resource Conservation	ACES	Minor (p. 78)	
Law	LAW		LLM (p. 810), MSL (p. 810), JSD (p. 809)	Natural Resources and Environmental Sciences	ACES	BS (p. 70)	MS (p. 854), PhD (p. 855)
Leadership Studies	ACES	Minor (p. 87)		Neuroscience			PhD (p. 856)
Leadership and Social Change	SOCW		CONC (p. 891)	Neuroscience of Communication	AHS	CONC (p. 100)	
Learning Design and Leadership	EDU		CONC (p. 745)	New Media	FAA	BFA (p. 268)	
Learning and Education Studies	EDUC	BS (p. 129)		Nuclear, Plasma and Radiological Engineering	ENGR	BS (p. 223)	MS (p. 860), PhD (p. 859)
Lighting Design	FAA	CONC (p. 305)		Nutrition	ACES	Minor (p. 64)	
Linguistics	LAS	BALAS (p. 485), Minor (p. 486)	MA (p. 819), MATESL (p. 819), PhD (p. 818)	Nutritional Sciences			MS (p. 861), PhD (p. 862)
Management	BUS	BS (p. 119)	MS (p. 692)	Open Studies	FAA	BM (p. 283)	
Marketing	BUS	BS (p. 120)		Operations Management	BUS	BS (p. 118)	
Materials Engineering	ENGR		MENG (p. 822)	Operations Research	LAS	CONC (p. 496)	
Materials Science and Engineering	ENGR	BS (p. 205), Minor (p. 236)	MS (p. 823), PhD (p. 821)	Painting	FAA	BFA (p. 269)	CONC (p. 667)
Mathematics	LAS	BSLAS (p. 496), Minor (p. 505)	MS (p. 824), PhD (p. 824)	Performance and Literature (Music)	FAA		CONC (p. 852)
Mathematics Teaching	LAS	CONC (p. 507)	MS (p. 827)	Philosophy	LAS	BALAS (p. 518), Minor (p. 519)	MA (p. 864), PhD (p. 864)
Mathematics and Computer Science	LAS	BSLAS (p. 505)		Photography	FAA	BFA (p. 269)	CONC (p. 667)
Mechanical Engineering	ENGR	BS (p. 220)	MS (p. 833), MENG (p. 833), PhD (p. 831)	Physical Geography	LAS	CONC (p. 423)	
Media Studies	MDIA	CONC (p. 605)		Physics	LAS	BSLAS (p. 590), BS (p. 590), Minor (ENGR) (p. 236)	MS (p. 868), PhD (p. 867)
Media and Cinema Studies	MDIA	BS (p. 605)		Physics, Teaching of	LAS	CONC (p. 590)	MS (p. 868)
Medieval Civilization	LAS	CONC (p. 474)		Piano Pedagogy	FAA		CONC (p. 844)
Medieval Studies	LAS		CONC (p. 837)	Plant Biology	LAS		MS (p. 870), PhD (p. 869)
Metals	ENGR	CONC (p. 205)		Plant Biotechnology	LAS		PSM (p. 871)
Metals	FAA		CONC (p. 667)	Plant Biotechnology and Molecular Biology	ACES	CONC (p. 48)	
Microbiology	LAS		MS (p. 839), PhD (p. 839)	Plant Protection	ACES	CONC (p. 48)	
Middle Grades Education	EDUC	BS (p. 133)		Policy, International Trade and Development	ACES	CONC (p. 16)	
Modern German Studies	LAS	CONC (p. 440)		Polish Studies Concentration	LAS	CONC (p. 555)	
Molecular and Cellular Biology	LAS	BSLAS (p. 510), Minor (p. 510)		Political Science	LAS	BALAS (p. 522), Minor (p. 531)	MA (p. 873), PhD (p. 872)
Molecular and Cellular Biology Honors	LAS	CONC (p. 510)		Polymer Science and Engineering	ENGR	Minor (p. 237)	
Molecular and Integrative Physiology	LAS		MS (p. 841), PhD (p. 841)	Polymers	ENGR	CONC (p. 205)	
Museum Studies	LAS		Minor (p. 660)	Portuguese	LAS	BALAS (p. 576), Minor (p. 576)	MA (p. 896), PhD (p. 895)
Music	FAA	BA (p. 283), Minor (p. 284)	MMus (p. 844), AD (p. 844), AMusD (p. 845)	Printmaking	FAA		CONC (p. 667)
Music Composition	FAA		CONC (p. 844)	Psychology	LAS	BSLAS (p. 532), Minor (p. 533)	MS (p. 879), MS (p. 879), PhD (p. 878)
Music Composition - Theory	FAA	BM (p. 283)		Public Health	AHS		MSPH (p. 719), MPH (p. 718)
Music Education	FAA	BME (p. 300)	MME (p. 849), PhD (p. 848)	Public Policy and Law	ACES	CONC (p. 16)	
Music Theory	FAA		CONC (p. 844)	Public Relations	Media	Minor (p. 599)	
Musicology	FAA	BM (p. 283)	PhD (p. 849), CONC (p. 844)	Queer Studies	LAS		Minor (p. 925)
				Railway Engineering	ENG		CONC (p. 707)

Real Estate	BUS		CONC (p. 764)				
Recreation Management	AHS		CONC (p. 99)				
Recreation, Sport and Tourism	AHS	BS (p. 99)		MS (p. 880), PhD (p. 880)			
Regional Planning	FAA			PhD (p. 913)			
Regulation, Sustainability, and Compliance	LAW			CONC (p. 811)			
Rehabilitation	AHS			MS (p. 719)			
Rehabilitation Studies	AHS		CONC (p. 90)				
Religion	LAS	BALAS (p. 546)		MA (p. 881), Minor (p. 882)			
Religious Studies	LAS		Minor (p. 547)				
Resource Conservation and Restoration Ecology	ACES		CONC (p. 70)				
Romance Linguistics	LAS			CONC (p. 882)			
Russian Language and Literature	LAS		CONC (p. 555), Minor (p. 559)				
Russian and East European Studies	LAS		BALAS (p. 547), Minor (p. 548)				
Russian, East European and Eurasian Studies	LAS			MA (p. 884), Minor (p. 885)			
Scandinavian Studies	LAS		CONC (p. 440), Minor (p. 445)				
Scenic Design	FAA		CONC (p. 305)				
Scenic Technology	FAA		CONC (p. 305)				
Science Teaching	LAS			CONC (p. 734)			
Science and Technology in Society	LAS		Minor (p. 474)				
Science of the Earth System	LAS		CONC (p. 549)				
Science, Pre-Veterinary and Medical	ACES		CONC (p. 25)				
Sculpture	FAA	BFA (p. 270)		CONC (p. 667)			
Second Language Acquisition and Teacher Education	LAS			CONC (p. 885)			
Secondary Education	EDUC			EdM (p. 734)			
Secondary School Teaching	EDUC		Minor (p. 139)				
Slavic Language, Literature and Culture	LAS		Minor (p. 559)				
Slavic Languages and Literatures	LAS			MA (p. 888), PhD (p. 888)			
Slavic Studies	LAS		BALAS (p. 555)				
Social Science: History Teaching	LAS		CONC (p. 465)				
Social Studies Teaching	EDUC			EdM (p. 734)			
Social Work	SOCW	BSW (p. 616), Minor (p. 618)		MSW (p. 889), PhD (p. 890)			
Society and the Environment	LAS		CONC (p. 549)				
Sociocultural and Linguistic Anthropology	LAS		CONC (p. 332)				
Sociocultural and Linguistic Anthropology	LAS			CONC (p. 344)			
Sociology	LAS			BALAS (p. 563), Minor (p. 568)		MA (p. 892), PhD (p. 893)	
Sound Design and Technology	FAA			CONC (p. 305)			
South Asian Studies	LAS			Minor (p. 569)			
South Asian and Middle Eastern Studies	LAS					MA (p. 894)	
South Slavic Studies	LAS			CONC (p. 555)			
Spanish	LAS			BALAS (p. 576), Minor (p. 576)		MA (p. 895), PhD (p. 895)	
Spanish Linguistics	LAS					CONC (p. 896)	
Spanish Literatures Cultures	LAS					CONC (p. 896)	
Spanish Teaching	LAS			BA (p. 575)			
Spatial and Quantitative Methods in Natural Resources and Environmental Sciences	ACES			Minor (p. 79)			
Special Education	EDUC		BS (p. 136)			EdM (p. 897), MS (p. 897), CAS (p. 898), PhD (p. 898)	
Speech and Hearing Science	AHS		BS (p. 100), Minor (p. 101)			MA (p. 901), AuD (p. 902), PhD (p. 902)	
Speech-Language Pathology	AHS			CONC (p. 100)			
Sport Management	AHS			CONC (p. 99)			
Stage Management	FAA			CONC (p. 305)			
Statistics	LAS			BSLAS (p. 577), Minor (p. 577)		MS (p. 904), PhD (p. 904), Minor (p. 904)	
Statistics and Computer Science	LAS			BSLAS (p. 580)			
Strategic Brand Communication	BUS/MEDIA					MS (p. 690)	
Structures	FAA					CONC (p. 662)	
Sub-Saharan African Languages	LAS			Minor (p. 495)			
Supply Chain Management	BUS		BS (p. 120)			CONC (p. 688), Minor (p. 690)	
Systems Engineering and Design	ENGR			BS (p. 202)			
Systems and Entrepreneurial Engineering	ENGR					MS (p. 790), PhD (p. 790)	
Taxation	BUS					CONC (p. 635), MS (p. 638)	
Technical Systems Management	ACES		BS (p. 14), Minor (p. 16)			MS (p. 652), PSM (p. 652)	
Technology Management	BUS					MS (p. 692)	
Technology and Management	BUS ENGR			ENGR Minor (p. 237), BUS Minor (p. 125)			

Technology and Management (Animal Science)	ACES	CONC (p. 25)	
Theatre	FAA	BFA (p. 305), Minor (p. 307)	MA (p. 909), MFA (p. 908), PhD (p. 908)
Theoretical and Applied Mechanics	ENGR	MS (p. 836), PhD (p. 832)	
Tourism Management	AHS	CONC (p. 99)	
Translation and Interpreting	LAS	MA (p. 911)	
U.S. Legal Practice Skills	LAW	CONC (p. 812)	
Ukrainian Studies	LAS	CONC (p. 555)	
Urban Planning	FAA	BA (p. 314)	MUP (p. 911), PhD (p. 913)
Veterinary Medical Science - Comparative Biosciences	VMED	MS (p. 917)	
Veterinary Medical Science - Pathobiology	VMED	MS (p. 918)	
Veterinary Medical Sciences - Veterinary Clinical Medicine	VMED	MS (p. 920)	
Veterinary Medicine	VMED	DVM (p. 920)	
Vocal Coaching Accompanying	FAA	CONC (p. 844)	
Voice Performance	FAA	CONC (p. 283)	
World Literatures	LAS	CONC (p. 380)	
Writing Studies	LAS	CONC (p. 922)	

Legend: School/College

ACES	College of Agricultural, Consumer and Environmental Sciences
AHS	College of Applied Health Sciences
BUS	College of Business
EDUC	College of Education
ENGR	College of Engineering
FAA	College of Fine and Applied Arts
Grad	Graduate College
IS	School of Information Sciences
LAS	College of Liberal Arts and Sciences
LAW	College of Law
LER	School of Labor and Employment Relations
MDIA	College of Media
SOCW	School of Social Work

Degrees

AD	Artist Diploma
AMusD	Doctor of Musical Arts
BA	Bachelor of Arts

BALAS	Bachelor of Arts in Liberal Arts and Sciences
BFA	Bachelor of Fine Arts
BLA	Bachelor of Landscape Architecture
BM	Bachelor of Music
BME	Bachelor of Music Education
BS	Bachelor of Science
BSLAS	Bachelor of Science in Liberal Arts and Sciences
BSW	Bachelor of Social Work
CONC	Concentration
CAS	Certificate of Advanced Study
DVM	Doctor of Veterinary Medicine
EdD	Doctor of Education
EdM	Master of Education
JD	Juris Doctorate
JSD	Doctor of the Science of Law
LLM	Master of Laws
MA	Master of Arts
MARCH	Master of Architecture
MAS	Master of Accountancy Science
MBA	Master of Business Administration
MCS	Master of Computer Science
MENG	Master of Engineering
MFA	Master of Fine Arts
MHRIR	Master of Human Resources and Industrial Relations
Minor	Minor
MLA	Master of Landscape Architecture
MMus	Master of Music
MME	Master of Music Education
MPH	Master of Public Health
MS	Master of Science
MSL	Master of Studies in Law
MSPH	Master of Science in Public Health
MSW	Master of Social Work
MUP	Master of Urban Planning
PSM	Professional Science Masters Concentration
PhD	Doctor of Philosophy

INDEX

A

Academic Units	243	Agricultural Production	648
Academic Units	322	Agricultural Science Education Concentration	85
Accountancy	111	Agroecology Concentration	45
Accountancy	635	Air Force Aerospace Studies (AFAS)	961
Accountancy (ACCY)	931	American Civilization Concentration	476
Actuarial Science	502	American Indian Studies (AIS)	962
Advanced Standing MSW, Leadership & Social Change Concentration ..	891	American Indian Studies Program	923
Advertising	598	American Indian Studies, Program in	330
Advertising	639	Animal Biology	655
Advertising (ADV)	935	Animal Sciences	24
Aerospace Engineering	157	Animal Sciences	656
Aerospace Engineering	641	Animal Sciences (ANSC)	963
Aerospace Engineering (AE)	938	Annual Announcement of Copyright Policies	3
African American Studies	323	Anthropology	332
African American Studies	644	Anthropology	658
African American Studies (AFRO)	942	Anthropology (ANTH)	969
African Studies	645	Applied Health Sci Courses (AHS)	979
African Studies (AFST)	947	Applied Health Sciences, College of	87
African Studies, Center for	328	Applied Mathematics Concentration	503
Aging	106	Applied Statistics Track Minor	579
Agr & Consumer Economics (ACE)	948	Arabic (ARAB)	979
Agr, Consumer, & Env Sciences (ACES)	954	Archaeology Concentration	341
Agri-Accounting Concentration	21	Architecture	660
Agribusiness Markets and Management Concentration	21	Architecture	661
Agricultural and Biological Eng (ABE)	959	Architecture (ARCH)	980
Agricultural and Biological Engineering	5	Architecture, School of	243
Agricultural and Biological Engineering	9	Art and Design	664
Agricultural and Biological Engineering	162	Art and Design, School of	248
Agricultural and Biological Engineering	649	Art (ART)	987
Agricultural and Consumer Economics	16	Art Crafts	263
Agricultural and Consumer Economics	652	Art Education	264
Agricultural Communications	79	Art Foundation	264
Agricultural Communications	79	Art History	265
Agricultural Communications (AGCM)	955	Art History	581
Agricultural, Consumer and Environmental Sciences, College of	3	Art–Design (ARTD)	989
Agricultural Education	82	Art–Education (ARTE)	993
Agricultural Education	647	Art–Foundation (ARTF)	995
Agricultural Education (AGED)	956	Art–History (ARTH)	996
Agricultural Engineering Concentration	10	Art–Studio (ARTS)	1000
Agricultural Leadership Education Concentration	84	Asian American Studies	345
		Asian American Studies	923
		Asian American Studies (AAS)	1003

Asian Studies (ASST)	1005	Business, College of	108
Astrochemistry	668	C	
Astronomy	348	Campus Honors Program (CHP)	1029
Astronomy	669	Catalan (CATL)	1029
Astronomy (ASTR)	1006	Cell and Developmental Biology	696
Atmospheric Sciences	351	Cell and Developmental Biology (CDB)	1030
Atmospheric Sciences	671	Center for Advanced Study (CAS)	1030
Atmospheric Sciences (ATMS)	1008	Certificate of Advanced Study (C.A.S.) in Educational Psychology	749
B		Certificate of Advanced Study in Education Policy, Organization & Leadership	747
Bachelor of Arts	277	Certificate of Advanced Study in Educational Psychology, Concentration in African American Studies	749
Bachelor of Arts with a Major in Music	298	Certificate of Advanced Study in Library and Information Science	815
Bachelor of Fine Arts	278	Certificate of Advanced Study in Library and Information Science, Digital Libraries Concentration	815
Bachelor of Science in Computer Science and Crop Science	49	Chemical and Biomolecular Engineering	354
Bachelor of Science in Crop Science	41	Chemical and Biomolecular Engineering	699
Bachelor of Science in Engineering Mechanics	217	Chemical and Biomolecular Engr (CHBE)	1030
Bachelor of Science in Mechanical Engineering	220	Chemical Physics	698
Bamana (BMNA)	1012	Chemistry	361
Basque (BASQ)	1012	Chemistry	701
Behavioral Neuroscience Concentration	540	Chemistry (CHEM)	1033
Biochemistry	674	Chemistry Concentration	365
Biochemistry (BIOC)	1012	Chemistry Teaching Concentration	365
Bioenergy	676	Child and Adolescent Development Concentration	69
Bioengineering	168	Chinese (CHIN)	1038
Bioengineering	234	Cinema Studies	924
Bioengineering	676	Cinema Studies Concentration	610
Bioengineering (BIOE)	1013	Civic Leadership Concentration	530
Biological Engineering Concentration	12	Civil and Environ Engineering (CEE)	1039
Biological Sciences Concentration	45	Civil and Environmental Engineering	173
Biology	584	Civil and Environmental Engineering	704
Biology	682	Classical Archaeology Concentration	372
Biology (BIOL)	1017	Classical Civilization (CLCV)	1047
Biology Teaching	585	Classical Civilization Concentration	372
Biophysics and Quantitative Biology	683	Classics	368
Biophysics (BIOP)	1017	Classics	707
Bosnian-Croatian-Serbian (BCS)	1017	Classics Concentration	372
Bulgarian (BULG)	1018	Clinical/Community Psychology Concentration	541
Business Administration	113	Cognitive Neuroscience Concentration	542
Business Administration	685	Cognitive Psychology Concentration	541
Business Administration - Executive MBA	693	College of Engineering	711
Business Administration - Illinois MBA	694	Committee on Inst Cooperation (CIC)	1049
Business Administration (BADM)	1019	Communication	375
Business and Technical Writing (BTW)	1028		
Business (BUS)	1018		

Communication	712	CS + Chemistry	588
Communication (CMN)	1049	CS + Linguistics	588
Community Health	89	Curriculum and Instruction	729
Community Health	714	Curriculum and Instruction (CI)	1078
Community Health (CHLH)	1055	Curriculum Preparatory to the Teaching of French	415
Companion Animal and Equine Science Concentration	30	Curriculum Preparatory to the Teaching of German	444
Comparative & World Literature (CWL)	1058	Curriculum Preparatory to the Teaching of Latin	373
Comparative and World Literature, Program in	380	Curriculum Preparatory to the Teaching of Spanish	575
Comparative Biosciences	917	Czech (CZCH)	1086
Comparative Biosciences (CB)	1063	Czech Studies Concentration	559
Comparative Literature	720	D	
Comparative Literature Concentration	385	Dance	735
Computational Science and Engineering	238	Dance (DANC)	1086
Computational Science and Engr (CSE)	1065	Dance, Department of	271
Computer Engineering	193	Data Analytics in Accountancy Concentration	639
Computer Science	180	Degree Programs	634
Computer Science	235	Degree Programs Index	1435
Computer Science	722	Dentistry	623
Computer Science and Liberal Arts and Sciences Discipline	585	Departments	5
Computer Science (CS)	1066	Departments	89
Concentration in Accountancy	639	Departments	111
Concentration in Cultural-Linguistic Diversity	104	Departments	157
Concentration in East Asian Languages and Cultures	393	Departments	598
Concentration in Neuroscience of Communication	104	Developmental Psychology Concentration	543
Concentration Preparatory for the Teaching of East Asian Languages ..	393	Dietetics Concentration	62
Concentrations	631	Diversity Science Concentration	543
Concentrations in Audiology and Speech Language Pathology	105	Doctor of Audiology	902
Consumer Economics and Finance Concentration	21	Doctor of Education in Curriculum and Instruction	731
Corporate Law, Commercial Law, and Trade Concentration	810	Doctor of Musical Arts, Choral Music Concentration	846
Courses of Instruction	931	Doctor of Musical Arts Concentration in Vocal Coaching and Accompanying	845
Creative Writing	406	Doctor of Musical Arts in Music	845
Creative Writing	725	Doctor of Musical Arts, Instrumental Conducting Orchestra Concentration	846
Creative Writing (CW)	1072	Doctor of Musical Arts, Instrumental Conducting Wind Band Concentration	846
Creative Writing Minor	409	Doctor of Musical Arts, Jazz Performance Concentration	847
Criminal Law Concentration	811	Doctor of Musical Arts, Music Composition Concentration	847
Crop Agribusiness Concentration	46	Doctor of Musical Arts, Performance and Literature Concentration	848
Crop Sciences	34	Doctor of Philosophy in Art Education	665
Crop Sciences	726	Doctor of Philosophy in Art History	666
Crop Sciences (CPSC)	1073	Doctor of Philosophy in Curriculum and Instruction	732
Crops Concentration	46	Doctor of Philosophy in Educational Psychology, Concentration in African American Studies	751
CS + Anthropology	586		
CS + Astronomy	587		

Doctor of Philosophy in Food Science and Human Nutrition, Food Science Concentration	767	Elementary Education	128
Doctor of Philosophy in Food Science and Human Nutrition, Human Nutrition Concentration	768	Engineering, College of	140
Doctor of Philosophy in French	772	Engineering (ENG)	1127
Doctor of Philosophy in Industrial Engineering	790	Engineering Honors (ENGH)	1129
Doctor of Philosophy in Italian	773	English	396
Doctor of Philosophy in Music Education	848	English	756
Doctor of Philosophy in Musicology	849	English as a Second Language (ESL)	1137
Doctor of Philosophy in Speech and Hearing Science	902	English as an Intl Language (EIL)	1139
Doctor of Philosophy in Systems and Entrepreneurial Engineering	791	English Concentration	408
Doctor of Philosophy, Mechanical Engineering	831	English (ENGL)	1129
Doctor of Philosophy (Ph.D.), Educational Psychology	750	English Teaching Concentration	408
Doctor of Philosophy, Theoretical and Applied Mechanics	832	Entomology	759
Dual Degree in Agricultural & Biological Engineering/Agricultural & Biological Engineering Sciences	13	Entomology (ENT)	1140
E		Environmental Chemistry Concentration	366
E. Asian Languages & Cultures (EALC)	1092	Environmental Economics and Policy	22
Early Childhood Education	127	Environmental Fellows Program (EFP)	622
Earth and Environmental Science Concentration within the Sciences and Letters Curriculum	436	Environmental Geology Concentration within the Specialized Curriculum	437
Earth Science Teaching Concentration within the Sciences and Letters Curriculum	436	Environmental Studies (ENVS)	1140
Earth, Society, & Environment (ESE)	1095	Environmental Sustainability (ENSU)	1141
Earth System, Environment and Society, School of	549	European Union Studies	760
East Asian Languages and Cultures	386	European Union Studies (EURO)	1141
East Asian Languages and Cultures	736	F	
Economics	394	Family Studies Concentration	70
Economics	739	Farm Management Concentration	22
Economics (ECON)	1097	Finance	121
Ed Policy, Org & Ldership (EPOL)	1102	Finance	762
Educ Organization & Leadership (EOL)	1102	Finance (FIN)	1142
Education, College of	125	Finance in Agribusiness Concentration	22
Education (EDUC)	1105	Financial Engineering	765
Education Policy, Organization and Leadership	741	Financial Planning Concentration	22
Educational Policy Studies (EPS)	1105	Fine and Applied Arts, College of	241
Educational Practice (EDPR)	1110	Fine and Applied Arts (FAA)	1148
Educational Psychology	747	Fish and Wildlife Conservation Concentration	77
Educational Psychology (EPSY)	1110	Food and Environmental Systems Minor	85
Electrical and Computer Engineering	186	Food Animal Production and Management	31
Electrical and Computer Engineering	235	Food Science & Human Nutrition (FSHN)	1149
Electrical and Computer Engineering	753	Food Science and Human Nutrition	58
Electrical and Computer Engr (ECE)	1117	Food Science and Human Nutrition	766
Electrical Engineering	195	Food Science Concentration	63
		Foreign Language Teacher Education (FLTE)	1153
		Foreign Language Teaching	410
		French and Italian	410

French and Italian	771	Graduate Concentration in Biomechanics	836
French Commercial Studies Concentration	416	Graduate Concentration in Business and Public Policy	764
French (FR)	1154	Graduate Concentration in Business Data Analytics	687
French Studies Concentration	416	Graduate Concentration in Cancer Nanotechnology	679
G		Graduate Concentration in Corporate Governance and International Business	687
Gender and Women's Studies	418	Graduate Concentration in Finance	764
Gender and Women's Studies	924	Graduate Concentration in Information Technology and Control	688
Gender and Women's Studies (GWS)	1157	Graduate Concentration in Real Estate	764
General Anthropology Concentration	342	Graduate Concentration in Supply Chain Management	688
General Concentration in Political Science	530	Graduate Minor in Balkan Studies	884
General Engineering (GE)	1161	Graduate Minor in Corporate Governance and International Business ...	689
General Geography Concentration	429	Graduate Minor in Dance	736
General Information	1	Graduate Minor in Gender and Women's Studies	924
General Psychology Concentration	540	Graduate Minor in Information Technology and Control	689
General Studies, Division of	320	Graduate Minor in Queer Studies	925
General Studies (GS)	1161	Graduate Minor in Russian, East European, and Eurasian Studies	885
Geographic Information Science Concentration	429	Graduate Minor in Supply Chain Management	690
Geography and Geographic Information Science	423	Graduate Preparatory Concentration	503
Geography and Geographic Information Science	773	Grand Challenge Learning (GCL)	1176
Geography (GEOG)	1162	Graphic Design	266
Geology	432	Greek Concentration	373
Geology	777	Greek (GRK)	1179
Geology Concentration within the Sciences and Letters Curriculum	438	H	
Geology Concentration within the Specialized Curriculum	438	Health Education and Promotion	93
Geology (GEOL)	1167	Health Planning and Administration	93
Geophysics Concentration within the Specialized Curriculum	439	Hebrew, Modern and Classical (HEBR)	1179
German	779	Heritage Studies	925
German Business and Commercial Studies	447	Hindi (HNDI)	1180
German Business and Commercial Studies Concentration	445	History	452
German Culture and Literature Concentration	445	History	781
German Culture and Literature Concentration	447	History Concentration	465
German (GER)	1171	History (HIST)	1180
German Linguistics Concentration	446	Horticultural Food Systems Concentration	47
Germanic (GMC)	1173	Horticulture (HORT)	1194
Germanic Languages and Literatures	440	Hospitality Management Concentration	63
Global Change & Landscape Dynamics	77	Human Dev and Family Studies (HDFS)	1197
Global Markets and Society Minor	451	Human Development and Family Studies	64
Global Studies	448	Human Development and Family Studies	784
Global Studies	925	Human Dimensions of Env Sys (HDES)	1201
Global Studies (GLBL)	1173	Human Dimensions of the Environment Concentration	77
Global Studies Minor	452	Human Evolutionary Biology Concentration	343
Graduate	629	Human Geography Concentration	430
Graduate College (GC)	1176		

Human Nutrition Concentration	63	Justice, Democracy and Legal Rights Concentration	810
Human Resource Development (HRD)	1201	K	
Humanities Courses (HUM)	1204	Kinesiology	93
I		Kinesiology	797
I-Health (IHLT)	1204	Kinesiology and Community Health	89
Illinois Informatics Institute	786	Kinesiology (KIN)	1227
Individual Plans of Study (IPS)	589	Korean (KOR)	1232
Industrial and Enterprise Systems Engineering	197	L	
Industrial and Enterprise Systems Engineering	789	Labor and Employment Relations	801
Industrial Design	266	Labor and Employment Relations (LER)	1233
Industrial Engineering	199	Landscape Architecture	804
Industrial Engineering (IE)	1205	Landscape Architecture, Department of	279
Informatics (INFO)	1208	Landscape Architecture (LA)	1237
Information Sciences (IS)	1209	LAS Specialized Curriculum in Physics	593
Innovation, Leadership, and Engineering Entrepreneurship	238	Latin American & Caribbean St (LAST)	1240
Institute of Communications Research	794	Latin American and Caribbean Studies	806
Instrumental Performance Major	299	Latin American and Caribbean Studies, Center for	479
Integrative Biology Concentration	471	Latin Concentration	374
Integrative Biology Honors Concentration	472	Latin (LAT)	1240
Integrative Biology (IB)	1216	Latina/Latino Studies	481
Integrative Biology, School of	466	Latina/Latino Studies	926
Intellectual Property and Technology Law Concentration	811	Latina/Latino Studies (LLS)	1241
Interdisciplinary Health Sciences	106	Law	623
Interdisciplinary Minor in South Asian Studies	569	Law	808
Interdisciplinary Minor in the Study of the Islamic World	570	Law (LAW)	1245
Interdisciplinary Studies	474	Leadership Studies Minor	87
International and Comparative Law Concentration	811	Learning and Education Studies	129
International Minor	86	Liberal Arts and Sciences, College of	320
International Minor in Engineering	236	Liberal Arts and Sciences (LAS)	1250
Italian	417	Library & Information Science (LIS)	1251
Italian (ITAL)	1222	Library and Information Science	812
J		Lingala (LGLA)	1251
J.D. in Law and M.S. in Chemistry	702	Linguistics	485
J.D. in Law and Master of Human Resources and Industrial Relations ..	803	Linguistics	817
Japanese (JAPN)	1223	Linguistics (LING)	1251
Jazz Performance Major	299	LiteraturesCulturesLinguistics (SLCL)	1255
Jewish Culture and Society, Program in	478	M	
Jewish Studies Concentration	476	M.B.A and Master of Human Resources and Industrial Relations	803
Jewish Studies (JS)	1224	M.B.A. and Masters or Ph.D.	695
Journalism	602	M.B.A. Joint Degree Program	703
Journalism	796	M.P.H. and Ph.D. in Food Science & Human Nutrition, Food Science Concentration	768
Journalism (JOUR)	1225	M.P.H. and Ph.D. in Food Science & Human Nutrition, Human Nutrition Concentration	769
Journalism Minor	605		

M.P.H. and Ph.D. in Social Work	891	Master of Education in Early Childhood Education with teaching licensure	733
M.S. Journalism and J.D.	797	Master of Education in Educational Psychology	751
M.S. Journalism and M.B.A.	797	Master of Education in Educational Psychology, African American Studies Concentration	751
Major in Business Process Management	118	Master of Education in Elementary Education with teaching licensure ..	733
Major in Information Systems and Information Technology	118	Master of Education in Secondary Education with teacher licensure	734
Major in Management	119	Master of Education in Special Education	899
Major in Marketing	120	Master of Engineering, Concentration in Computational Engineering ...	833
Major in Specialized Curriculum in Chemistry	367	Master of Engineering in Bioengineering	680
Major in Supply Chain Management	120	Master of Engineering in Bioengineering with a Bioinstrumentation Concentration	681
Major in Technical Systems Management	14	Master of Engineering in Bioengineering with a Computational Genomics Concentration	682
Management	692	Master of Engineering in Bioengineering with a General Bioengineering Concentration	680
Master of Accounting Science (M.A.S.) in Accountancy	637	Master of Engineering in Bioinstrumentation	679
Master of Accounting Science (M.A.S.) in Accountancy, Taxation Concentration	637	Master of Engineering in Electrical and Computer Engineering	755
Master of Architecture Limited Standing	663	Master of Engineering in Engineering with Concentration in Energy Systems	860
Master of Architecture Professional Degree	663	Master of Engineering in Materials Engineering	822
Master of Arts, Art Education	667	Master of Engineering in Mechanical Engineering	833
Master of Arts in Art History	666	Master of Fine Arts in Art and Design	667
Master of Arts in Classics	709	Master of Fine Arts in Theatre, Acting Concentration	909
Master of Arts in Classics, Greek Concentration	710	Master of Fine Arts in Theatre, Design and Technology Concentration ..	910
Master of Arts in Classics, Latin Concentration	710	Master of Laws	810
Master of Arts in Communication	713	Master of Music, Choral Music Concentration	850
Master of Arts in French	773	Master of Music Education	849
Master of Arts in Geography	776	Master of Music, Instrumental Conducting Band Concentration	850
Master of Arts in Italian	773	Master of Music, Instrumental Conducting Orchestra Concentration ...	850
Master of Arts in Linguistics	819	Master of Music, Jazz Performance Concentration	850
Master of Arts in Political Science	873	Master of Music, Music Composition Concentration	851
Master of Arts in Political Science, Civic Leadership Concentration	873	Master of Music, Music Theory Concentration	851
Master of Arts in Portuguese	896	Master of Music, Musicology Concentration	851
Master of Arts in Psychology	879	Master of Music, Performance and Literature Concentration	852
Master of Arts in Spanish, Spanish Linguistics Concentration	896	Master of Music, Piano Pedagogy Concentration	852
Master of Arts in Spanish, Spanish Literatures and Cultures Concentration	896	Master of Music, Vocal Coaching and Accompanying Concentration ...	852
Master of Arts in Teaching of Latin	710	Master of Public Health	718
Master of Arts in the Teaching of English as a Second Language	819	Master of Science and Master of Arts in Curriculum and Instruction	734
Master of Arts in Theatre	909	Master of Science and Master of Arts in Educational Psychology	752
Master of Arts or Master of Science in Geography	776	Master of Science in Accountancy	638
Master of Business Administration, Full-Time Option	696	Master of Science in Advertising	640
Master of Business Administration, Professional Option	696	Master of Science in Agricultural and Biological Engineering	651
Master of Computer Science	724	Master of Science in Animal Sciences	657
Master of Education in Art Education	667		
Master of Education in Curriculum and Instruction	732		

Master of Science in Applied Mathematics, Actuarial Science Concentration	825	Master of Science in Public Health	719
Master of Science in Applied Mathematics, Applications to the Sciences option	825	Master of Science in Rehabilitation	719
Master of Science in Applied Mathematics, Computational Science and Engineering option	826	Master of Science in Special Education	900
Master of Science in Applied Mathematics, Optimization and Algorithms option	827	Master of Science in Statistics	904
Master of Science in Architectural Science Structures Concentration ...	662	Master of Science in Statistics, Analytics Concentration	905
Master of Science in Architectural Studies	664	Master of Science in Statistics, Applied Statistics Concentration	905
Master of Science in Bioengineering	678	Master of Science in Strategic Brand Communication	690
Master of Science in Bioinformatics, Animal Sciences Concentration ...	658	Master of Science in Systems and Entrepreneurial Engineering	793
Master of Science in Bioinformatics, Bioengineering Concentration	678	Master of Science in Taxation	638
Master of Science in Bioinformatics, Chemical and Biomolecular Engineering Concentration	700	Master of Science in Teaching of Chemistry	703
Master of Science in Bioinformatics, Computer Science Concentration .	724	Master of Science in Teaching of Earth Science	779
Master of Science in Bioinformatics, Crop Sciences Concentration	728	Master of Science in Teaching of Mathematics	827
Master of Science in Bioinformatics, Library and Information Science Concentration	816	Master of Science in Teaching of Physics	868
Master of Science in Business Administration	690	Master of Science in Technical Systems Management	652
Master of Science in Chemical Engineering	701	Master of Science in Technical Systems Management, Professional Science Masters Concentration	652
Master of Science in Chemistry	703	Master of Science in Technology Management	692
Master of Science in Community Health	718	Master of Science, Mathematics	828
Master of Science in Computer Science	725	Master of Science, Mechanical Engineering	833
Master of Science in Crop Sciences	729	Master of Science or Arts in Educational Psychology, African American Studies Concentration	752
Master of Science in Economics	740	Master of Science, Theoretical and Applied Mechanics	836
Master of Science in Economics, Policy Economics Concentration	741	Master of Social Work, Advanced Clinical Concentration	891
Master of Science in Electrical and Computer Engineering	755	Master of Social Work, Leadership & Social Change Concentration	891
Master of Science in Food Science and Human Nutrition, Food Science Concentration	769	Master of Studies in Law	810
Master of Science in Food Science and Human Nutrition, Human Nutrition Concentration	770	Master of Urban Planning in Urban Planning	911
Master of Science in Food Science and Human Nutrition, Professional Science Master's Concentration	770	Masters of Science in Information Management	815
Master of Science in Geology	778	Materials Science & Engr (MSE)	1256
Master of Science in Health Communication	713	Materials Science and Engineering	205
Master of Science in Industrial Engineering	793	Materials Science and Engineering	236
Master of Science in Library and Information Science	816	Materials Science and Engineering	820
Master of Science in Materials Science and Engineering	823	Mathematical Statistics Track Minor	580
Master of Science in Nuclear, Plasma, and Radiological Engineering ...	860	Mathematics	496
Master of Science in Physics	868	Mathematics	824
Master of Science in Plant Biology	870	Mathematics and Computer Science	505
Master of Science in Plant Biotechnology, Professional Science Master's Concentration	871	Mathematics Concentration	504
Master of Science in Psychological Science	879	Mathematics (MATH)	1261
Master of Science in Psychology	879	MBA Program (MBA)	1255
		Mechanical Engineering (ME)	1270
		Mechanical Science and Engineering	213
		Mechanical Science and Engineering	828
		Media and Cinema Studies	605
		Media and Cinema Studies (MACS)	1276

Media, College of	595	Minor in Linguistics	495
Media (MDIA)	1274	Minor in Mathematics	505
Media Studies Concentration	610	Minor in Natural Resource Conservation	78
Medical Scholars Program (MSP)	1279	Minor in Nutrition	64
Medicine	623	Minor in Political and Civic Leadership	531
Medieval Studies	837	Minor in Political Science	531
Medieval Studies Concentration	476	Minor in Portuguese	576
Medieval Studies (MDVL)	1279	Minor in Public Relations	599
Medieval Studies, Program In	508	Minor in Russian Language and Literature	559
Microbiology	838	Minor in Scandinavian Studies	445
Microbiology (MICR)	1281	Minor in Slavic Language, Literature, and Culture	559
Middle Grades Education	133	Minor in Sociology	568
Military Science (MILS)	1281	Minor in Spanish	576
Minor in Agricultural Safety and Health	15	Minor in Spatial and Quantitative Methods in Natural Resources and Environmental Sciences	79
Minor in Arabic Studies	494	Minor in Sub-Saharan African Languages	495
Minor in Art and Design	267	Minor in Technical Systems Management	16
Minor in Art History	319	Minors	621
Minor in Business for Non-Business Majors	124	Minors	922
Minor in Cinema Studies	610	Modern Greek (GRKM)	1282
Minor in Classical Archaeology	374	Molecular and Cell Biology (MCB)	1282
Minor in Classical Civilization	374	Molecular and Cellular Biology Concentration	515
Minor in Community-Based Art Education	267	Molecular and Cellular Biology Honors Concentration	516
Minor in Criminology, Law, and Society	568	Molecular and Cellular Biology, School in	510
Minor in Crop and Soil Management	57	Molecular and Integrative Physiology	840
Minor in Ecology and Conservation Biology	473	Molecul & Integrative Physiol (MIP)	1288
Minor in English	410	Museum Studies (MUSE)	1288
Minor in English as a Second Language	495	Music	842
Minor in Environmental Economics and Law	22	Music Composition-Theory Major	300
Minor in Food and Agribusiness Management	23	Music Education	300
Minor in Food Science	64	Music (MUS)	1289
Minor in French	417	Music, School of	283
Minor in Gender and Women's Studies	422	Musicology Major	303
Minor in German	445	N	
Minor in Greek	374	Natural Resources & Environ Sc (NRES)	1308
Minor in Hindi Studies	495	Natural Resources and Environmental Sciences	70
Minor in Horticulture	57	Natural Resources and Environmental Sciences	853
Minor in Informatics	627	Naval Science (NS)	1314
Minor in Integrative Biology	473	Neuroscience	856
Minor in International Development Economics	23	Neuroscience (NEUR)	1315
Minor in Italian	417	New Media	268
Minor in Latin	374	Nuclear, Plasma, and Radiological Engineering	223
Minor in LGBT/Queer Studies	423	Nuclear, Plasma, and Radiological Engineering	857

Nuclear, Plasma, Radiolg Engr (NPRE)	1316	Political Science (PS)	1334
Nursing	623	Polymer Science and Engineering	237
Nutritional Science	860	Portuguese	576
Nutritional Sciences (NUTR)	1319	Portuguese (PORT)	1343
O		Preprofessional Programs	623
Occupational Therapy	623	Professional Science Master (PSM)	1344
Online and Site-Based Graduate Programs	926	Professional Science Master's	874
Open Studies	304	Professional Science Master's in Geographic Information Science	775
Operations Research Concentration	506	Program in Ecology, Evolution and Conservation Biology	875
Optometry	623	Psychology	531
Organizational Psychology Concentration	544	Psychology	877
P		Psychology (PSYC)	1344
Painting	269	Public Policy and Law Concentration	24
Pathobiology	918	R	
Pathobiology (PATH)	1320	Recreation, Sport and Tourism	98
Persian (PERS)	1324	Recreation, Sport and Tourism	879
Pharmacy	623	Recreation, Sport, and Tourism (RST)	1354
Philosophy	518	Regulation, Sustainability, and Compliance Concentration	811
Philosophy	863	Rehabilitation Counseling (REHB)	1357
Philosophy (PHIL)	1324	Rehabilitation Studies	93
Photography	269	Religion	546
Physical Geography Concentration	431	Religion	881
Physical Therapy	623	Religion (REL)	1358
Physician Assistant	623	Religious Studies (RLST)	1364
Physics	229	Renaissance Studies Concentration	478
Physics	590	Resource Conservation and Restoration Ecology	79
Physics	865	Rhetoric and Composition (RHET)	1364
Physics Concentration within the Sciences and Letters Curriculum	593	Romance Linguistics	882
Physics Minor	236	Romance Linguistics (RMLG)	1364
Physics (PHYS)	1328	Rural Sociology (RSOC)	1365
Physics Teaching Concentration within the Sciences and Letters Curriculum	594	Russian, East European, and Eurasian Center	883
Plant Biology	868	Russian, East European, and Eurasian Studies Center	547
Plant Biology (PBIO)	1333	Russian, East European and Eurasian Studies (REES)	1367
Plant Biotechnology and Molecular Biology Concentration	48	Russian Language, Literature, and Culture Concentration	560
Plant Pathology (PLPA)	1333	Russian (RUSS)	1365
Plant Protection Concentration	48	S	
Policy, International Trade and Development Concentration	24	S. Asian & Middle Eastern (SAME)	1368
Policy Notes	2	Sanskrit (SNSK)	1369
Polish (POL)	1334	Scandinavian (SCAN)	1369
Polish Studies Concentration	560	Scandinavian Studies Concentration	446
Political Science	522	School of Labor & Employment Relations (LER)	627
Political Science	871	Science of the Earth System (SES) Concentration	554
		Science, Pre-Veterinary and Medical Concentration	32

Sculpture	270	Teacher Education Minor in English as a Second Language	496
Second Language Acquisition and Teacher Education (SLATE)	885	Teacher Education Minor in Mathematics, Grades 9-12	507
Second Language Studies (SLS)	1370	Teacher Education Minor in Secondary School Teaching	139
Slavic Languages and Literature	887	Teaching of Biological Science	907
Slavic Languages and Literatures	554	Teaching of Mathematics Concentration	507
Slavic (SLAV)	1371	Technical Systems Management (TSM)	1405
Social Psychology Concentration	545	Technology and Management	237
Social Science: History Teaching Concentration	465	Technology and Management Minor	125
Social Work	889	Technology and Management (TMGT)	1408
Social Work, School of	616	Technology Entrepreneurship (TE)	1407
Social Work (SOCW)	1372	Theatre	908
Social/Personality Psychology Concentration	544	Theatre, Department of	305
Society and the Environment (SAE) Concentration	553	Theatre (THEA)	1408
Sociocultural and Linguistic Anthropology Concentration	344	Theoretical and Appl Mechanics (TAM)	1414
Sociology	562	Translation and Interpreting	910
Sociology	892	Translation Studies (TRST)	1418
Sociology (SOC)	1378	Turkish (TURK)	1419
South Asian and Middle Eastern Studies	893	U	
South Asian and Middle Eastern Studies, Center for	568	U.S. Legal Practice Skills Concentration	812
South Slavic Studies Concentration	561	Ukrainian Studies Concentration	562
Spanish	576	Ukrainian (UKR)	1420
Spanish and Portuguese	570	Urban and Regional Planning	912
Spanish and Portuguese	894	Urban and Regional Planning, Department of	313
Spanish (SPAN)	1385	Urban and Regional Planning (UP)	1420
Special Education	136	V	
Special Education	897	Veterinary Clinical Medicine	920
Special Education (SPED)	1389	Veterinary Clinical Medicine (VCM)	1426
Specialized Curriculum in Biochemistry	517	Veterinary Medical Science	914
Speech and Hearing Science	100	Veterinary Medicine	623
Speech and Hearing Science	900	Veterinary Medicine Courses (VM)	1431
Speech and Hearing Science (SHS)	1393	Vocal Performance Major	304
Statistics	577	W	
Statistics	579	Wolof (WLOF)	1433
Statistics	903	Women and Gender in Global Perspectives (WGGP)	1433
Statistics and Computer Science	580	World Literature Concentration	386
Statistics (STAT)	1398	Writing Studies, Center for	921
Strategic Brand Communication (SBC)	1401	Writing Studies (WRIT)	1433
Swahili (SWAH)	1402	Y	
Systems Engineering and Design	202	Yiddish (YDSH)	1434
Systems Engineering and Design (SE)	1402	Z	
T		Zulu (ZULU)	1434
Teacher Education	623		
Teacher Education	623		